FIEC

Provide Medicaid Coverage to Eligible Low-Income Adults

18-16

2019

Financial Impact Estimating Conference

Provide Medicaid Coverage to Eligible Low-Income Adults
Serial Number 18-16

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Authorization

FLORIDA DEPARTMENT of STATE

RON DESANTIS
Governor

LAUREL M. LEE
Secretary of State

May 28, 2019

Financial Impact Estimating Conference
c/o Amy Baker, Coordinator
Office of Economic and Demographic Research
111 West Madison Street, Ste. 574
Tallahassee, Florida 32399-6588

Dear Ms. Baker:

Section 15.21, Florida Statutes, provides that the Secretary of State shall submit an initiative petition to the Financial Impact Estimating Conference when a sponsoring political committee has met the registration, petition form submission and signature criteria set forth in that section.

The criteria in section 15.21, Florida Statutes, has now been met for the initiative petition titled **Provide Medicaid Coverage to Eligible Low-Income Adults**, Serial Number **18-16**. Therefore, I am submitting the proposed constitutional amendment petition form, along with a status update for the initiative petition, and a chart that provides a statewide signature count and count by congressional districts.

Sincerely,

Laurel M. Lee
Secretary of State

LL/am/ljr

pc: Whitney Untiedt, Chairperson, Florida Decides Healthcare, Inc.

Enclosures

CONSTITUTIONAL AMENDMENT PETITION FORM

Note:

- *All information on this form, including your signature, becomes a public record upon receipt by the Supervisor of Elections.*
- *Under Florida law, it is a first degree misdemeanor, punishable as provided in s. 775.082 or s. 775.08, Florida Statutes, to knowingly sign more than one petition for an issue. [Section 104.185, Florida Statutes]*
- *If all requested information on this form is not completed, the form will not be valid.*

Your name: _____

Please Print Name ***as it appears on your Voter Information Card***

Your address:

_____

City _____ **Zip**_____ **County**_____

☐ Please change my legal residence address on my voter registration record to the above residence address (check box, if applicable).

Voter Registration Number _____ **or Date of Birth** _____

I am a registered voter of Florida and hereby petition the Secretary of State to place the following proposed amendment to the Florida Constitution on the ballot in the general election:

BALLOT TITLE: Provide Medicaid Coverage to Eligible Low-Income Adults.

BALLOT SUMMARY: Requires State to provide Medicaid coverage to individuals over age 18 and under age 65 whose incomes are at or below 138 percent of the federal poverty level and meet other nonfinancial eligibility requirements, with no greater burdens placed on eligibility, enrollment, or benefits for these newly eligible individuals compared to other Medicaid beneficiaries. Directs Agency for Health Care Administration to implement the initiative by maximizing federal financial participation for newly eligible individuals.

ARTICLE AND SECTION BEING CREATED OR AMENDED: Creates New Section 33 in Article X.

FULL TEXT OF THE PROPOSED CONSTITUTIONAL AMENDMENT:

A new Section 33 is added to Article X of the State Constitution, as follows:

SECTION 33. Provide Medicaid Coverage to Eligible Low-Income Adults.–

(a) MEDICAID COVERAGE FOR LOW-INCOME ADULTS. The State shall provide Medicaid benefits to Low Income Adults over age 18 and under age 65 whose income is one-hundred thirty-eight percent (138%) of the federal poverty level or below, and who meet other nonfinancial eligibility requirements of the federal Medicaid statute. The State shall not impose on Low Income Adults any greater or additional burdens or restrictions on eligibility, enrollment, or benefits than on any other population eligible for medical assistance.

(Continues on back)

(Continued from front)

(b) DEFINITIONS. For the purposes of this section, the following words and terms shall have the stated meanings:

(1) "Low Income Adults" refers to those individuals over age 18 and under age 65, whose income is one-hundred thirty-eight percent (138%) of the federal poverty level or below, as described by and using the income methodology provided for by the federal Medicaid statute at 42 U.S.C. § 1396a(a)(10)(A)(i)(VIII), and who meet applicable non-financial eligibility conditions for Medicaid under 42 CFR Part 435, Subpart E.

(2) "Agency for Health Care Administration" or "Agency" refers to the single State agency responsible for administering Florida's Medicaid plan pursuant to 42 U.S.C. § 1396a(a)(5) and § 409.902, Fla. Stat.

(3) "State Plan Amendment" refers to the document(s) the State submits to the Centers for Medicare and Medicaid Services (CMS) for review and approval before making a change to its program policies, including setting forth the groups of individuals to be covered.

(4) "Centers for Medicare and Medicaid Services" refers to the agency responsible for administering the Medicaid program at the federal level, including review and approval of State Plan Amendments.

(c) IMPLEMENTATION.

(1) Within 90 days of voter approval of this Section, in order to implement the provision of Medicaid coverage to Low Income Adults and obtain Federal Medical Assistance Percentage funds for the cost of their coverage, the Agency for Health Care Administration shall submit a State Plan Amendment and all other necessary documents, as well as take any additional necessary steps to seek required approvals from the Centers for Medicare and Medicaid Services to include Low Income Adults as a coverage group in Florida's Medicaid program.

(2) Nothing in this Section shall limit the Legislature from enacting laws consistent with this Section. Specifically, it is consistent with this section to add a new subsection (section (9) below) to Fla. Stat. 409.903 Mandatory payments for eligible persons.—

(9) A person over age 18 and under age 65 whose income is 138 percent of the poverty level or below.

_____ X_____

DATE OF SIGNATURE **SIGNATURE OF REGISTERED VOTER**

Initiative petition sponsored by Florida Decides Healthcare, Inc., P.O. Box 15415, Coral Gables, FL 33114-5415.

Return signed form to:
Florida Decides Healthcare, Inc.
P.O. Box 15415
Coral Gables, FL 33114-5415

If paid petition circulator is used:

Circulator's name_____

Circulator's address_____

_____

For Official Use Only:

Serial Number: 18-16

Date Approved: 12/12/2018

FLORIDA DEPARTMENT OF STATE
DIVISION OF ELECTIONS

SUMMARY OF PETITION SIGNATURES

Political Committee: **Florida Decides Healthcare, Inc.**

Amendment Title: **Provide Medicaid Coverage to Eligible Low-Income Adults**

Congressional District	Voting Electors in 2016 Presidential Election	For Review 10% of 8% Required By Section 15 21 Florida Statutes	For Ballot 8% Required By Article XI, Section 3 Florida Constitution	Signatures Certified	
FIRST	386,504	3,093	30,921	872	
SECOND	360,098	2,881	28,808	1,240	
THIRD	356,715	2,854	28,538	3,467	***
FOURTH	428,190	3,426	34,256	1,731	
FIFTH	316,115	2,529	25,290	3,509	***
SIXTH	385,918	3,088	30,874	1,544	
SEVENTH	370,466	2,964	29,638	3,206	***
EIGHTH	409,569	3,277	32,766	4,955	***
NINTH	362,593	2,901	29,008	7,347	***
TENTH	320,548	2,565	25,644	3,975	***
ELEVENTH	417,253	3,339	33,381	1,996	
TWELFTH	386,775	3,095	30,942	795	
THIRTEENTH	367,818	2,943	29,426	4,761	***
FOURTEENTH	336,289	2,691	26,904	4,116	***
FIFTEENTH	340,331	2,723	27,227	2,812	***
SIXTEENTH	403,805	3,231	32,305	2,825	
SEVENTEENTH	360,061	2,881	28,805	3,296	***
EIGHTEENTH	388,772	3,111	31,102	1,888	
NINETEENTH	389,415	3,116	31,154	3,519	***
TWENTIETH	291,984	2,336	23,359	5,714	***
TWENTY-FIRST	355,842	2,847	28,468	2,504	
TWENTY-SECOND	361,305	2,891	28,905	2,229	
TWENTY-THIRD	342,784	2,743	27,423	2,486	
TWENTY-FOURTH	269,446	2,156	21,556	5,872	***
TWENTY-FIFTH	269,983	2,160	21,599	936	
TWENTY-SIXTH	294,742	2,358	23,580	1,994	
TWENTY-SEVENTH	304,012	2,433	24,321	1,992	
TOTAL:	**9,577,333**	**76,632**	**766,200**	**81,581**	

Date: 5/30/2019 3.28 53 PM

Attachment for Initiative Petition

Provide Medicaid Coverage to Eligible Low-Income Adults
Serial Number 18-16

1. **Name and address of the sponsor of the initiative petition:**
   Whitney Untiedt, Chairperson
   Florida Decides Healthcare, Inc.
   2 South Biscayne Boulevard
   Suite 3100
   Miami, Florida 33131

2. **Name and address of the sponsor's attorney, if the sponsor is represented:** Unknown

3. **A statement as to whether the sponsor has obtained the requisite number of signatures on the initiative petition to have the proposed amendment put on the ballot:** As of May 28, 2019, the sponsor has not obtained the requisite number of signatures to have the proposed amendment placed on the ballot. A total of 766,200 valid signatures are required for placement on the 2020 general election ballot.

4. **If the sponsor has not obtained the requisite number of signatures on the initiative petition to have the proposed amendment put on the ballot, the current status of the signature-collection process:** As of May 28, 2019, Supervisors of Elections have certified a total of 81,581 valid petition signatures to the Division of Elections for this initiative petition. This number represents more than 10% of the total number of valid signatures needed from electors statewide and in at least one-fourth of the congressional districts in order to have the initiative placed on the 2020 general election ballot.

5. **The date of the election during which the sponsor is planning to submit the proposed amendment to the voters:** Unknown. The earliest date of election that this proposed amendment can be placed on the ballot is November 3, 2020, provided the sponsor successfully obtains the requisite number of valid signatures by February 1, 2020.

6. **The last possible date that the ballot for the target election can be printed in order to be ready for the election:** Unknown

7. **A statement identifying the date by which the Financial Impact Statement will be filed, if the Financial Impact Statement is not filed concurrently with the request:** The Secretary of State forwarded a letter to the Financial Impact Estimating Conference in the care of the coordinator on May 28, 2019.

8. **The names and complete mailing addresses of all of the parties who are to be served:** This information is unknown at this time.

Tab 2

Current Law

(14) Income determined using modified adjusted gross income.-

(A) In general.-Notwithstanding subsection (r) or any other provision of this subchapter, except as provided in subparagraph (D), for purposes of determining income eligibility for medical assistance under the State plan or under any waiver of such plan and for any other purpose applicable under the plan or waiver for which a determination of income is required, including with respect to the imposition of premiums and cost-sharing, a State shall use the modified adjusted gross income of an individual and, in the case of an individual in a family greater than 1, the household income of such family. A State shall establish income eligibility thresholds for populations to be eligible for medical assistance under the State plan or a waiver of the plan using modified adjusted gross income and household income that are not less than the effective income eligibility levels that applied under the State plan or waiver on March 23, 2010. For purposes of complying with the maintenance of effort requirements under subsection (gg) during the transition to modified adjusted gross income and household income, a State shall, working with the Secretary, establish an equivalent income test that ensures individuals eligible for medical assistance under the State plan or under a waiver of the plan on March 23, 2010, do not lose coverage under the State plan or under a waiver of the plan. The Secretary may waive such provisions of this subchapter and subchapter XXI as are necessary to ensure that States establish income and eligibility determination systems that protect beneficiaries.

(B) No income or expense disregards.-Subject to subparagraph (I), no type of expense, block, or other income disregard shall be applied by a State to determine income eligibility for medical assistance under the State plan or under any waiver of such plan or for any other purpose applicable under the plan or waiver for which a determination of income is required.

(C) No assets test.-A State shall not apply any assets or resources test for purposes of determining eligibility for medical assistance under the State plan or under a waiver of the plan.

(D) Exceptions.-

(i) Individuals eligible because of other aid or assistance, elderly individuals, medically needy individuals, and individuals eligible for medicare cost-sharing.-Subparagraphs (A), (B), and (C) shall not apply to the determination of eligibility under the State plan or under a waiver for medical assistance for the following:

(I) Individuals who are eligible for medical assistance under the State plan or under a waiver of the plan on a basis that does not require a determination of income by the State agency administering the State plan or waiver, including as a result of eligibility for, or receipt of, other Federal or State aid or assistance, individuals who are eligible on the basis of receiving (or being treated as if receiving) supplemental security income benefits under subchapter XVI, and individuals who are eligible as a result of being or being deemed to be a child in foster care under the responsibility of the State.

(II) Individuals who have attained age 65.

(III) Individuals who qualify for medical assistance under the State plan or under any waiver of such plan on the basis of being blind or disabled (or being treated as being blind or disabled) without regard to whether the individual is eligible for supplemental security income benefits under subchapter XVI on the basis of being blind or disabled and including an individual who is eligible for medical assistance on the basis of paragraph (3).

(IV) Individuals described in subsection (a)(10)(C).

(V) Individuals described in any clause of subsection (a)(10)(E).

(ii) Express lane agency findings.-In the case of a State that elects the Express Lane option under paragraph (13), notwithstanding subparagraphs (A), (B), and (C), the State may rely on a finding made by an Express Lane

agency in accordance with that paragraph relating to the income of an individual for purposes of determining the individual's eligibility for medical assistance under the State plan or under a waiver of the plan.

(iii) Medicare prescription drug subsidies determinations.-Subparagraphs (A), (B), and (C) shall not apply to any determinations of eligibility for premium and cost-sharing subsidies under and in accordance with section 1395w–114 of this title made by the State pursuant to section 1396u–5(a)(2) of this title.

(iv) Long-term care.-Subparagraphs (A), (B), and (C) shall not apply to any determinations of eligibility of individuals for purposes of medical assistance for nursing facility services, a level of care in any institution equivalent to that of nursing facility services, home or community-based services furnished under a waiver or State plan amendment under section 1396n of this title or a waiver under section 1315 of this title, and services described in section 1396p(c)(1)(C)(ii) of this title.

(v) Grandfather of current enrollees until date of next regular redetermination.-An individual who, on January 1, 2014, is enrolled in the State plan or under a waiver of the plan and who would be determined ineligible for medical assistance solely because of the application of the modified adjusted gross income or household income standard described in subparagraph (A), shall remain eligible for medical assistance under the State plan or waiver (and subject to the same premiums and cost-sharing as applied to the individual on that date) through March 31, 2014, or the date on which the individual's next regularly scheduled redetermination of eligibility is to occur, whichever is later.

(E) Transition planning and oversight.-Each State shall submit to the Secretary for the Secretary's approval the income eligibility thresholds proposed to be established using modified adjusted gross income and household income, the methodologies and procedures to be used to determine income eligibility using modified adjusted gross income and household income and, if applicable, a State plan amendment establishing an optional eligibility category under subsection (a)(10)(A)(ii)(XX). To the extent practicable, the State shall use the same methodologies and procedures for purposes of making such determinations as the State used on March 23, 2010. The Secretary shall ensure that the income eligibility thresholds proposed to be established using modified adjusted gross income and household income, including under the eligibility category established under subsection (a)(10)(A)(ii)(XX), and the methodologies and procedures proposed to be used to determine income eligibility, will not result in children who would have been eligible for medical assistance under the State plan or under a waiver of the plan on March 23, 2010, no longer being eligible for such assistance.

(F) Limitation on secretarial authority.-The Secretary shall not waive compliance with the requirements of this paragraph except to the extent necessary to permit a State to coordinate eligibility requirements for dual eligible individuals (as defined in section 1396n(h)(2)(B) of this title) under the State plan or under a waiver of the plan and under subchapter XVIII and individuals who require the level of care provided in a hospital, a nursing facility, or an intermediate care facility for the mentally retarded.

(G) Definitions of modified adjusted gross income and household income.-In this paragraph, the terms "modified adjusted gross income" and "household income" have the meanings given such terms in section 36B(d)(2) of the Internal Revenue Code of 1986.

(H) Continued application of medicaid rules regarding point-in-time income and sources of income.-The requirement under this paragraph for States to use modified adjusted gross income and household income to determine income eligibility for medical assistance under the State plan or under any waiver of such plan and for any other purpose applicable under the plan or waiver for which a determination of income is required shall not be construed as affecting or limiting the application of-

(i) the requirement under this subchapter and under the State plan or a waiver of the plan to determine an individual's income as of the point in time at which an application for medical assistance under the State plan or a waiver of the plan is processed; or

(ii) any rules established under this subchapter or under the State plan or a waiver of the plan regarding sources of countable income.

(I) Treatment of portion of modified adjusted gross income.-For purposes of determining the income eligibility of an individual for medical assistance whose eligibility is determined based on the application of modified adjusted gross income under subparagraph (A), the State shall-

(i) determine the dollar equivalent of the difference between the upper income limit on eligibility for such an individual (expressed as a percentage of the poverty line) and such upper income limit increased by 5 percentage points; and

(ii) notwithstanding the requirement in subparagraph (A) with respect to use of modified adjusted gross income, utilize as the applicable income of such individual, in determining such income eligibility, an amount equal to the modified adjusted gross income applicable to such individual reduced by such dollar equivalent amount.

(J) Exclusion of parent mentor compensation from income determination.-Any nominal amount received by an individual as compensation, including a stipend, for participation as a parent mentor (as defined in paragraph (5) of section 1397mm(f) of this title) in an activity or program funded through a grant under such section shall be disregarded for purposes of determining the income eligibility of such individual for medical assistance under the State plan or any waiver of such plan.

(K) Treatment of certain lottery winnings and income received as a lump sum.-

(i) In general.-In the case of an individual who is the recipient of qualified lottery winnings (pursuant to lotteries occurring on or after January 1, 2018) or qualified lump sum income (received on or after such date) and whose eligibility for medical assistance is determined based on the application of modified adjusted gross income under subparagraph (A), a State shall, in determining such eligibility, include such winnings or income (as applicable) as income received-

(I) in the month in which such winnings or income (as applicable) is received if the amount of such winnings or income is less than $80,000;

(II) over a period of 2 months if the amount of such winnings or income (as applicable) is greater than or equal to $80,000 but less than $90,000;

(III) over a period of 3 months if the amount of such winnings or income (as applicable) is greater than or equal to $90,000 but less than $100,000; and

(IV) over a period of 3 months plus 1 additional month for each increment of $10,000 of such winnings or income (as applicable) received, not to exceed a period of 120 months (for winnings or income of $1,260,000 or more), if the amount of such winnings or income is greater than or equal to $100,000.

(ii) Counting in equal installments.-For purposes of subclauses (II), (III), and (IV) of clause (i), winnings or income to which such subclause applies shall be counted in equal monthly installments over the period of months specified under such subclause.

(iii) Hardship exemption.-An individual whose income, by application of clause (i), exceeds the applicable eligibility threshold established by the State, shall continue to be eligible for medical assistance to the extent that the State determines, under procedures established by the State (in accordance with standards specified by the

Secretary), that the denial of eligibility of the individual would cause an undue medical or financial hardship as determined on the basis of criteria established by the Secretary.

(iv) Notifications and assistance required in case of loss of eligibility.-A State shall, with respect to an individual who loses eligibility for medical assistance under the State plan (or a waiver of such plan) by reason of clause (i)-

(I) before the date on which the individual loses such eligibility, inform the individual-

(aa) of the individual's opportunity to enroll in a qualified health plan offered through an Exchange established under title I of the Patient Protection and Affordable Care Act during the special enrollment period specified in section 9801(f)(3) of title 26 (relating to loss of Medicaid or CHIP coverage); and

(bb) of the date on which the individual would no longer be considered ineligible by reason of clause (i) to receive medical assistance under the State plan or under any waiver of such plan and be eligible to reapply to receive such medical assistance; and

(II) provide technical assistance to the individual seeking to enroll in such a qualified health plan.

(v) Qualified lottery winnings defined.-In this subparagraph, the term "qualified lottery winnings" means winnings from a sweepstakes, lottery, or pool described in paragraph (3) of section 4402 of title 26 or a lottery operated by a multistate or multijurisdictional lottery association, including amounts awarded as a lump sum payment.

(vi) Qualified lump sum income defined.-In this subparagraph, the term "qualified lump sum income" means income that is received as a lump sum from monetary winnings from gambling (as defined by the Secretary and including gambling activities described in section 1955(b)(4) of title 18).

42 USC 1396a: State plans for medical assistance Text contains those laws in effect on June 6, 2019
From Title 42-THE PUBLIC HEALTH AND WELFARECHAPTER 7-SOCIAL SECURITYSUBCHAPTER XIX-GRANTS TO STATES FOR MEDICAL ASSISTANCE PROGRAMS
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§1396a. State plans for medical assistance

(a) Contents

A State plan for medical assistance must-

(1) provide that it shall be in effect in all political subdivisions of the State, and, if administered by them, be mandatory upon them;

(2) provide for financial participation by the State equal to not less than 40 per centum of the non-Federal share of the expenditures under the plan with respect to which payments under section 1396b of this title are authorized by this subchapter; and, effective July 1, 1969, provide for financial participation by the State equal to all of such non-Federal share or provide for distribution of funds from Federal or State sources, for carrying out the State plan, on an equalization or other basis which will assure that the lack of adequate funds from local sources will not result in lowering the amount, duration, scope, or quality of care and services available under the plan;

(3) provide for granting an opportunity for a fair hearing before the State agency to any individual whose claim for medical assistance under the plan is denied or is not acted upon with reasonable promptness;

(4) provide (A) such methods of administration (including methods relating to the establishment and maintenance of personnel standards on a merit basis, except that the Secretary shall exercise no authority with respect to the selection, tenure of office, and compensation of any individual employed in accordance with such methods, and including provision for utilization of professional medical personnel in the administration and, where administered locally, supervision of administration of the plan) as are found by the Secretary to be necessary for the proper and efficient operation of the plan, (B) for the training and effective use of paid subprofessional staff, with particular emphasis on the full-time or part-time employment of recipients and other persons of low income, as community service aides, in the administration of the plan and for the use of nonpaid or partially paid volunteers in a social service volunteer program in providing services to applicants and recipients and in assisting any advisory committees established by the State agency, (C) that each State or local officer, employee, or independent contractor who is responsible for the expenditure of substantial amounts of funds under the State plan, each individual who formerly was such an officer, employee, or contractor, and each partner of such an officer, employee, or contractor shall be prohibited from committing any act, in relation to any activity under the plan, the commission of which, in connection with any activity concerning the United States Government, by an officer or employee of the United States Government, an individual who was such an officer or employee, or a partner of such an officer or employee is prohibited by section 207 or 208 of title 18, and (D) that each State or local officer, employee, or independent contractor who is responsible for selecting, awarding, or otherwise obtaining items and services under the State plan shall be subject to safeguards against conflicts of interest that are at least as stringent as the safeguards that apply under chapter 21 of title 41 to persons described in section 2102(a)(3) of title 41;

(5) either provide for the establishment or designation of a single State agency to administer or to supervise the administration of the plan; or provide for the establishment or designation of a single State agency to administer or to supervise the administration of the plan, except that the determination of eligibility for medical assistance under the plan shall be made by the State or local agency administering the State plan approved under subchapter I or XVI (insofar as it relates to the aged) if the State is eligible to participate in the State plan program established under subchapter XVI, or by the agency or agencies administering the supplemental security income program established under subchapter XVI or the State plan approved under part A of

subchapter IV if the State is not eligible to participate in the State plan program established under subchapter XVI;

(6) provide that the State agency will make such reports, in such form and containing such information, as the Secretary may from time to time require, and comply with such provisions as the Secretary may from time to time find necessary to assure the correctness and verification of such reports;

(7) provide-

(A) safeguards which restrict the use or disclosure of information concerning applicants and recipients to purposes directly connected with-

(i) the administration of the plan; and

(ii) the exchange of information necessary to certify or verify the certification of eligibility of children for free or reduced price breakfasts under the Child Nutrition Act of 1966 [42 U.S.C. 1771 et seq.] and free or reduced price lunches under the Richard B. Russell National School Lunch Act [42 U.S.C. 1751 et seq.], in accordance with section 9(b) of that Act [42 U.S.C. 1758(b)], using data standards and formats established by the State agency; and

(B) that, notwithstanding the Express Lane option under subsection (e)(13), the State may enter into an agreement with the State agency administering the school lunch program established under the Richard B. Russell National School Lunch Act under which the State shall establish procedures to ensure that-

(i) a child receiving medical assistance under the State plan under this subchapter whose family income does not exceed 133 percent of the poverty line (as defined in section 9902(2) of this title, including any revision required by such section), as determined without regard to any expense, block, or other income disregard, applicable to a family of the size involved, may be certified as eligible for free lunches under the Richard B. Russell National School Lunch Act and free breakfasts under the Child Nutrition Act of 1966 without further application; and

(ii) the State agencies responsible for administering the State plan under this subchapter, and for carrying out the school lunch program established under the Richard B. Russell National School Lunch Act (42 U.S.C. 1751 et seq.) or the school breakfast program established by section 4 of the Child Nutrition Act of 1966 (42 U.S.C. 1773), cooperate in carrying out paragraphs (3)(F) and (15) of section 9(b) of that Act [42 U.S.C. 1758(b)];

(8) provide that all individuals wishing to make application for medical assistance under the plan shall have opportunity to do so, and that such assistance shall be furnished with reasonable promptness to all eligible individuals;

(9) provide-

(A) that the State health agency, or other appropriate State medical agency (whichever is utilized by the Secretary for the purpose specified in the first sentence of section 1395aa(a) of this title), shall be responsible for establishing and maintaining health standards for private or public institutions in which recipients of medical assistance under the plan may receive care or services,

(B) for the establishment or designation of a State authority or authorities which shall be responsible for establishing and maintaining standards, other than those relating to health, for such institutions,

(C) that any laboratory services paid for under such plan must be provided by a laboratory which meets the applicable requirements of section 1395x(e)(9) of this title or paragraphs (16) and (17) of section 1395x(s) of

this title, or, in the case of a laboratory which is in a rural health clinic, of section 1395x(aa)(2)(G) of this title, and

(D) that the State maintain a consumer-oriented website providing useful information to consumers regarding all skilled nursing facilities and all nursing facilities in the State, including for each facility, Form 2567 State inspection reports (or a successor form), complaint investigation reports, the facility's plan of correction, and such other information that the State or the Secretary considers useful in assisting the public to assess the quality of long term care options and the quality of care provided by individual facilities;

(10) provide-

(A) for making medical assistance available, including at least the care and services listed in paragraphs (1) through (5), (17), (21), (28), and (29) of section 1396d(a) of this title, to-

(i) all individuals-

(I) who are receiving aid or assistance under any plan of the State approved under subchapter I, X, XIV, or XVI, or part A or part E of subchapter IV (including individuals eligible under this subchapter by reason of section 602(a)(37),[1] 606(h),[1] or 673(b) of this title, or considered by the State to be receiving such aid as authorized under section 682(e)(6)[1] of this title),

(II)(aa) with respect to whom supplemental security income benefits are being paid under subchapter XVI (or were being paid as of the date of the enactment of section 211(a) of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (P.L. 104–193) and would continue to be paid but for the enactment of that section), (bb) who are qualified severely impaired individuals (as defined in section 1396d(q) of this title), or (cc) who are under 21 years of age and with respect to whom supplemental security income benefits would be paid under subchapter XVI if subparagraphs (A) and (B) of section 1382(c)(7) of this title were applied without regard to the phrase "the first day of the month following",

(III) who are qualified pregnant women or children as defined in section 1396d(n) of this title,

(IV) who are described in subparagraph (A) or (B) of subsection (l)(1) and whose family income does not exceed the minimum income level the State is required to establish under subsection (l)(2)(A) for such a family; [2]

(V) who are qualified family members as defined in section 1396d(m)(1) of this title,

(VI) who are described in subparagraph (C) of subsection (l)(1) and whose family income does not exceed the income level the State is required to establish under subsection (l)(2)(B) for such a family,

(VII) who are described in subparagraph (D) of subsection (l)(1) and whose family income does not exceed the income level the State is required to establish under subsection (l)(2)(C) for such a family; [2]

(VIII) beginning January 1, 2014, who are under 65 years of age, not pregnant, not entitled to, or enrolled for, benefits under part A of subchapter XVIII, or enrolled for benefits under part B of subchapter XVIII, and are not described in a previous subclause of this clause, and whose income (as determined under subsection (e)(14)) does not exceed 133 percent of the poverty line (as defined in section 1397jj(c)(5) of this title) applicable to a family of the size involved, subject to subsection (k); [2] or

Subpart E—General Eligibility Requirements

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§435.400 Scope.

This subpart prescribes general requirements for determining the eligibility of both categorically and medically needy individuals specified in subparts B, C, and D of this part.

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§435.401 General rules.

(a) A Medicaid agency may not impose any eligibility requirement that is prohibited under Title XIX of the Act.

(b) The agency must base any optional group covered under subparts B and C of this part on reasonable classifications that do not result in arbitrary or inequitable treatment of individuals and groups and that are consistent with the objectives of Title XIX.

(c) The agency must not use requirements for determining eligibility for optional coverage groups that are—

(1) [Reserved]

(2) For aged, blind, and disabled individuals, more restrictive than those used under SSI, except for individuals receiving an optional State supplement as specified in §435.230 or individuals in categories specified by the agency under §435.121.

[43 FR 45204, Sept. 29, 1978, as amended at 81 FR 86454, Nov. 30, 2016]

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§435.402 [Reserved]

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§435.403 State residence.

(a) *Requirement.* The agency must provide Medicaid to eligible residents of the State, including residents who are absent from the State. The conditions under which payment for services is provided to out-of-State residents are set forth in §431.52 of this chapter.

(b) *Definition.* For purposes of this section—*Institution* has the same meaning as *Institution* and *Medical institution,* as defined in §435.1010. For purposes of State placement, the term also includes *foster care homes,* licensed as set forth in 45 CFR 1355.20, and providing food, shelter and supportive services to one or more persons unrelated to the proprietor.

(c) *Incapability of indicating intent.* For purposes of this section, an individual is considered incapable of indicating intent if the individual—

(1) Has an I.Q. of 49 or less or has a mental age of 7 or less, based on tests acceptable to the Intellectual Disability agency in the State:

(2) Is judged legally incompetent; or

(3) Is found incapable of indicating intent based on medical documentation obtained from a physician, psychologist, or other person licensed by the State in the field of intellectual disability.

(d) *Who is a State resident.* A resident of a State is any individual who:

(1) Meets the conditions in paragraphs (e) through (i) of this section; or

(2) Meets the criteria specified in an interstate agreement under paragraph (k) of this section.

(e) *Placement by a State in an out-of-State institution*—(1) *General rule.* Any agency of the State, including an entity recognized under State law as being under contract with the State for such purposes, that arranges for an individual to be placed in an institution located in another State, is recognized as acting on behalf of the State in making a placement. The State arranging or actually making the placement is considered as the individual's State of residence.

(2) Any action beyond providing information to the individual and the individual's family would constitute arranging or making a State placement. However, the following actions do not constitute State placement:

(i) Providing basic information to individuals about another State's Medicaid program, and information about the availability of health care services and facilities in another State.

(ii) Assisting an individual in locating an institution in another State, provided the individual is capable of indicating intent and independently decides to move.

(3) When a competent individual leaves the facility in which the individual is placed by a State, that individual's State of residence for Medicaid purposes is the State where the individual is physically located.

(4) Where a placement is initiated by a State because the State lacks a sufficient number of appropriate facilities to provide services to its residents, the State making the placement is the individual's State of residence for Medicaid purposes.

(f) *Individuals receiving a State supplementary payment (SSP).* For individuals of any age who are receiving an SSP, the State of residence is the State paying the SSP.

(g) *Individuals receiving Title IV-E payments.* For individuals of any age who are receiving Federal payments for foster care and adoption assistance under title IV-E of the Social

Security Act, the State of residence is the State where the child lives.

(h) *Individuals age 21 and over.* Except as provided in paragraph (f) of this section, with respect to individuals age 21 and over —

(1) For an individual not residing in an institution as defined in paragraph (b) of this section, the State of residence is the State where the individual is living and—

(i) Intends to reside, including without a fixed address; or

(ii) Has entered the State with a job commitment or seeking employment (whether or not currently employed).

(2) For an individual not residing in an institution as defined in paragraph (b) of this section who is not capable of stating intent, the State of residency is the State where the individual is living.

(3) For any institutionalized individual who became incapable of indicating intent before age 21, the State of residence is—

(i) That of the parent applying for Medicaid on the individual's behalf, if the parents reside in separate States (if a legal guardian has been appointed and parental rights are terminated, the State of residence of the guardian is used instead of the parent's);

(ii) The parent's or legal guardian's State of residence at the time of placement (if a legal guardian has been appointed and parental rights are terminated, the State of residence of the guardian is used instead of the parent's); or

(iii) The current State of residence of the parent or legal guardian who files the application if the individual is institutionalized in that State (if a legal guardian has been appointed and parental rights are terminated, the State of residence of the guardian is used instead of the parent's).

(iv) The State of residence of the individual or party who files an application is used if the individual has been abandoned by his or her parent(s), does not have a legal guardian and is institutionalized in that State.

(4) For any institutionalized individual who became incapable of indicating intent at or after age 21, the State of residence is the State in which the individual is physically present, except where another State makes a placement.

(5) For any other institutionalized individual, the State of residence is the State where the individual is living and intends to reside.

(i) *Individuals under age 21.* For an individual under age 21 who is not eligible for Medicaid based on receipt of assistance under title IV-E of the Act, as addressed in paragraph (g) of this section, and is not receiving a State supplementary payment, as addressed in paragraph (f) of this section, the State of residence is as follows:

(1) For an individual who is capable of indicating intent and who is emancipated from his or her parent or who is married, the State of residence is determined in accordance with paragraph (h)(1) of this section.

(2) For an individual not described in paragraph (i)(1) of this section, not living in an institution as defined in paragraph (b) of this section and not eligible for Medicaid based on receipt of assistance under title IV-E of the Act, as addressed in paragraph (g) of this section, and is not receiving a State supplementary payment, as addressed in paragraph (f) of this section, the State of residence is:

(i) The State where the individual resides, including without a fixed address; or

(ii) The State of residency of the parent or caretaker, in accordance with paragraph (h)(1) of this section, with whom the individual resides.

(3) For any institutionalized individual who is neither married nor emancipated, the State of residence is—

(i) The parent's or legal guardian's State of residence at the time of placement (if a legal guardian has been appointed and parental rights are terminated, the State of residence of the guardian is used instead of the parent's); or

(ii) The current State of residence of the parent or legal guardian who files the application if the individual is institutionalized in that State (if a legal guardian has been appointed and parental rights are terminated, the State or residence of the guardian is used instead of the parent's).

(iii) The State of residence of the individual or party who files an application is used if the individual has been abandoned by his or her parent(s), does not have a legal guardian and is institutionalized in that State.

(j) *Specific prohibitions.* (1) The agency may not deny Medicaid eligibility because an individual has not resided in the State for a specified period.

(2) The agency may not deny Medicaid eligibility to an individual in an institution, who satisfies the residency rules set forth in this section, on the grounds that the individual did not establish residence in the State before entering the institution.

(3) The agency may not deny or terminate a resident's Medicaid eligibility because of that person's temporary absence from the State if the person intends to return when the purpose of the absence has been accomplished, unless another State has determined that the person is a resident there for purposes of Medicaid.

(k) *Interstate agreements.* A State may have a written agreement with another State setting forth rules and procedures resolving cases of disputed residency. These agreements may establish criteria other than those specified in paragraphs (c) through (i) of this section, but must not include criteria that result in loss of residency in both States or that are prohibited by paragraph (j) of this section. The agreements must contain a procedure for providing

Medicaid to individuals pending resolution of the case. States may use interstate agreements for purposes other than cases of disputed residency to facilitate administration of the program, and to facilitate the placement and adoption of title IV-E individuals when the child and his or her adoptive parent(s) move into another State.

(l) *Continued Medicaid for institutionalized beneficiaries.* If an agency is providing Medicaid to an institutionalized beneficiary who, as a result of this section, would be considered a resident of a different State—

(1) The agency must continue to provide Medicaid to that beneficiary from June 24, 1983 until July 5, 1984, unless it makes arrangements with another State of residence to provide Medicaid at an earlier date: and

(2) Those arrangements must not include provisions prohibited by paragraph (i) of this section.

(m) *Cases of disputed residency.* Where two or more States cannot resolve which State is the State of residence, the State where the individual is physically located is the State of residence.

[49 FR 13531, Apr. 5, 1984, as amended at 55 FR 48609, Nov. 21, 1990; 71 FR 39222, July 12, 2006; 77 FR 17206, Mar. 23, 2012]

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§435.404 Applicant's choice of category.

The agency must allow an individual who would be eligible under more than one category to have his eligibility determined for the category he selects.

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§435.406 Citizenship and non-citizen eligibility.

(a) The agency must provide Medicaid to otherwise eligible individuals who are—

(1) Citizens and nationals of the United States, provided that—

(i) The individual has made a declaration of United States citizenship, as defined in §435.4, or an individual described in paragraph (a)(3) of this section has made such declaration on the individual's behalf, and such status is verified in accordance with paragraph (c) of this section; and

(ii) For purposes of the declaration and citizenship verification requirements discussed in paragraphs (a)(1)(i) of this section, an individual includes applicants under a section 1115 demonstration (including a family planning demonstration project) for which a State receives Federal financial participation in its expenditures.

(iii) The following groups of individuals are exempt from the requirement to provide documentation to verify citizenship in paragraph (c) of this section:

(A) Individuals receiving SSI benefits under title XVI of the Act.

(B) Individuals entitled to or enrolled in any part of Medicare.

(C) Individuals receiving disability insurance benefits under section 223 of the Act or monthly benefits under section 202 of the Act, based on the individual's disability (as defined in section 223(d) of the Act).

(D) Individuals who are in foster care and who are assisted under Title IV-B of the Act, and individuals who are beneficiaries of foster care maintenance or adoption assistance payments under Title IV-E of the Act.

(E)(*1*) Individuals who are or were deemed eligible for Medicaid in the State under §435.117 or §457.360 of this chapter on or after July 1, 2006, based on being born to a pregnant woman eligible under the State's Medicaid or CHIP state plan or waiver of such plan;

(*2*) At State option, individuals who were deemed eligible for coverage under §435.117 or §457.360 of this chapter in another State on or after July 1, 2006, provided that the agency verifies such deemed eligibility.

(2)(i) Except as specified in 8 U.S.C. 1612(b)(1) (permitting States an option with respect to coverage of certain qualified non-citizens), qualified non-citizens as described in section 431 of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (8 U.S.C. 1641) (including qualified non-citizens subject to the 5-year bar) who have provided satisfactory documentary evidence of Qualified Non-Citizen status, which status has been verified with the Department of Homeland Security (DHS) under a declaration required by section 1137(d) of the Act that the applicant or beneficiary is an non-citizen in a satisfactory immigration status.

(ii) The eligibility of qualified non-citizens who are subject to the 5-year bar in 8 U.S.C. 1613 is limited to the benefits described in paragraph (b) of this section.

(3) For purposes of paragraphs (a)(1) and (2), of this section, a declaration of citizenship or satisfactory immigration status may be provided, in writing and under penalty of perjury, by an adult member of the individual's household, an authorized representative, as defined in §435.923, or if the applicant is a minor or incapacitated, someone acting responsibly for the applicant provided that such individual attests to having knowledge of the individual's status.

(b) The agency must provide payment for the services described in §440.255(c) of this chapter to residents of the State who otherwise meet the eligibility requirements of the State plan (except for receipt of AFDC, SSI, or State Supplementary payments) who are qualified non-citizens subject to the 5-year bar or who are non-qualified non-citizens who meet all Medicaid eligibility criteria, except non-qualified non-citizens need not present a social security number or document immigration status.

(c) The agency must verify the declaration of citizenship or satisfactory immigration status under paragraph (a)(1) or (2) of this section in accordance with §435.956.

[55 FR 36819, Sept. 7, 1990, as amended at 56 FR 10807, Mar. 14, 1991; 71 FR 39222, July 12, 2006; 72 FR 38691, July 13, 2007; 81 FR 86454, Nov. 30, 2016]

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§435.407 Types of acceptable documentary evidence of citizenship.

(a) *Stand-alone evidence of citizenship.* The following must be accepted as sufficient documentary evidence of citizenship:

(1) A U.S. passport, including a U.S. Passport Card issued by the Department of State, without regard to any expiration date as long as such passport or Card was issued without limitation.

(2) A Certificate of Naturalization.

(3) A Certificate of U.S. Citizenship.

(4) A valid State-issued driver's license if the State issuing the license requires proof of U.S. citizenship, or obtains and verifies a SSN from the applicant who is a citizen before issuing such license.

(5)(i) Documentary evidence issued by a Federally recognized Indian Tribe identified in the FEDERAL REGISTER by the Bureau of Indian Affairs within the U.S. Department of the Interior, and including Tribes located in a State that has an international border, which—

(A) Identifies the Federally recognized Indian Tribe that issued the document;

(B) Identifies the individual by name; and

(C) Confirms the individual's membership, enrollment, or affiliation with the Tribe.

(ii) Documents described in paragraph (a)(5)(i) of this section include, but are not limited to:

(A) A Tribal enrollment card;

(B) A Certificate of Degree of Indian Blood;

(C) A Tribal census document;

(D) Documents on Tribal letterhead, issued under the signature of the appropriate Tribal official, that meet the requirements of paragraph (a)(5)(i) of this section.

(6) A data match with the Social Security Administration.

(b) *Evidence of citizenship.* If an applicant does not provide documentary evidence from the list in paragraph (a) of this section, the following must be accepted as satisfactory evidence to establish citizenship if also accompanied by an identity document listed in paragraph (c) of this section—

(1) A U.S. public birth certificate showing birth in one of the 50 States, the District of Columbia, Guam, American Samoa, Swain's Island, Puerto Rico (if born on or after January 13, 1941), the Virgin Islands of the U.S. or the CNMI (if born after November 4, 1986, (CNMI local time)). The birth record document may be issued by a State, Commonwealth, Territory, or local jurisdiction. If the document shows the individual was born in Puerto Rico or the Northern Mariana Islands before the applicable date referenced in this paragraph, the individual may be a collectively naturalized citizen. The following will establish U.S. citizenship for collectively naturalized individuals:

(i) *Puerto Rico:* Evidence of birth in Puerto Rico and the applicant's statement that he or she was residing in the U.S., a U.S. possession, or Puerto Rico on January 13, 1941.

(ii) *Northern Mariana Islands (NMI) (formerly part of the Trust Territory of the Pacific Islands (TTPI)):*

(A) Evidence of birth in the NMI, TTPI citizenship and residence in the NMI, the U.S., or a U.S. Territory or possession on November 3, 1986, (NMI local time) and the applicant's statement that he or she did not owe allegiance to a foreign State on November 4, 1986 (NMI local time);

(B) Evidence of TTPI citizenship, continuous residence in the NMI since before November 3, 1981 (NMI local time), voter registration before January 1, 1975, and the applicant's statement that he or she did not owe allegiance to a foreign State on November 4, 1986 (NMI local time);

(C) Evidence of continuous domicile in the NMI since before January 1, 1974, and the applicant's statement that he or she did not owe allegiance to a foreign State on November 4, 1986 (NMI local time). Note: If a person entered the NMI as a nonimmigrant and lived in the NMI since January 1, 1974, this does not constitute continuous domicile and the individual is not a U.S. citizen.

(2) At State option, a cross match with a State vital statistics agency documenting a record of birth.

(3) A Certification of Report of Birth, issued to U.S. citizens who were born outside the U.S.

(4) A Report of Birth Abroad of a U.S. Citizen.

(5) A Certification of birth in the United States.

(6) A U.S. Citizen I.D. card.

(7) A Northern Marianas Identification Card issued by the U.S. Department of Homeland Security (or predecessor agency).

(8) A final adoption decree showing the child's name and U.S. place of birth, or if an adoption is not final, a Statement from a State-approved adoption agency that shows the child's name and U.S. place of birth.

(9) Evidence of U.S. Civil Service employment before June 1, 1976.

(10) U.S. Military Record showing a U.S. place of birth.

(11) A data match with the SAVE Program or any other process established by DHS to verify that an individual is a citizen.

(12) Documentation that a child meets the requirements of section 101 of the Child Citizenship Act of 2000 as amended (8 U.S.C. 1431).

(13) Medical records, including, but not limited to, hospital, clinic, or doctor records or admission papers from a nursing facility, skilled care facility, or other institution that indicate a U.S. place of birth.

(14) Life, health, or other insurance record that indicates a U.S. place of birth.

(15) Official religious record recorded in the U.S. showing that the birth occurred in the U.S.

(16) School records, including pre-school, Head Start and daycare, showing the child's name and U.S. place of birth.

(17) Federal or State census record showing U.S. citizenship or a U.S. place of birth.

(18) If the applicant does not have one of the documents listed in paragraphs (a) or (b)(1) through (17) of this section, he or she may submit an affidavit signed by another individual under penalty of perjury who can reasonably attest to the applicant's citizenship, and that contains the applicant's name, date of birth, and place of U.S. birth. The affidavit does not have to be notarized.

(c) *Evidence of identity.* (1) The agency must accept the following as proof of identity, provided such document has a photograph or other identifying information sufficient to establish identity, including, but not limited to, name, age, sex, race, height, weight, eye color, or address:

(i) Identity documents listed at 8 CFR 274a.2 (b)(1)(v)(B)(1), except a driver's license issued by a Canadian government authority.

(ii) Driver's license issued by a State or Territory.

(iii) School identification card.

(iv) U.S. military card or draft record.

(v) Identification card issued by the Federal, State, or local government.

(vi) Military dependent's identification card.

(vii) U.S. Coast Guard Merchant Mariner card.

(viii) For children under age 19, a clinic, doctor, hospital, or school record, including preschool or day care records.

(ix) A finding of identity from an Express Lane agency, as defined in section 1902(e)(13)(F) of the Act.

(x) Two other documents containing consistent information that corroborates an applicant's identity. Such documents include, but are not limited to, employer identification cards; high school, high school equivalency and college diplomas; marriage certificates; divorce decrees; and property deeds or titles.

(2) Finding of identity from a Federal or State governmental agency. The agency may accept as proof of identity a finding of identity from a Federal agency or another State agency (not described in paragraph (c)(1)(ix) of this section), including but not limited to a public assistance, law enforcement, internal revenue or tax bureau, or corrections agency, if the agency has verified and certified the identity of the individual.

(3) If the applicant does not have any document specified in paragraph (c)(1) of this section and identity is not verified under paragraph (c)(2) of this section, the agency must accept an affidavit signed, under penalty of perjury, by a person other than the applicant who can reasonably attest to the applicant's identity. Such affidavit must contain the applicant's name and other identifying information establishing identity, as described in paragraph (c)(1) of this section. The affidavit does not have to be notarized.

(d) *Verification of citizenship by a Federal agency or another State.* The agency may rely, without further documentation of citizenship or identity, on a verification of citizenship made by a Federal agency or another State agency, if such verification was done on or after July 1, 2006.

(e) *Assistance with obtaining documentation.* States must provide assistance to individuals who need assistance in securing satisfactory documentary evidence of citizenship in a timely manner.

(f) *Documentary evidence.* A photocopy, facsimile, scanned or other copy of a document must be accepted to the same extent as an original document under this section, unless information on the copy submitted is inconsistent with other information available to the agency or the agency otherwise has reason to question the validity of, or the information in, the document.

[81 FR 86455, Nov. 30, 2016]

Tab 3

Prior State Reports for Reference

Impact of Medicaid Expansion 2015
Part 1: Simple Expansion

(does not address the specifics of any proposed legislation)

March 25, 2015

Presented by:

The Florida Legislature
Office of Economic and
Demographic Research
850.487.1402
http://edr.state.fl.us

Medicaid Base Population...

Total Population	2009-11 ACS PUMS	2011-13 ACS PUMS
Florida Resident		
Population	18,849,600	19,319,031
Insured	14,808,869	15,326,577
Medicaid, etc.**	2,947,715	3,342,015
Other health insurance	11,861,154	11,984,562
Uninsured	4,040,731	3,992,454
Florida Resident Citizens*		
Population	16,986,587	17,493,281
Insured	13,977,342	14,493,194
Medicaid, etc.**	2,770,954	3,139,393
Other health insurance	11,206,388	11,353,801
Uninsured	3,009,245	3,000,087

* Excludes individuals who are not a citizen of the US, inclusive of legal and illegal residents

**Medicaid, etc. = Medicaid, medical assistance, or any kind of government-assistance plan for those with low incomes or a disability

Source: US Census Bureau, American Community Survey, Public Use Microdata Sample (ACS PUMS)

While the 2011-13 ACS PUMS data represents a later period than the earlier EDR analysis, it would still reflect coverage prior to the Affordable Care Act (ACA) Exchange activities.

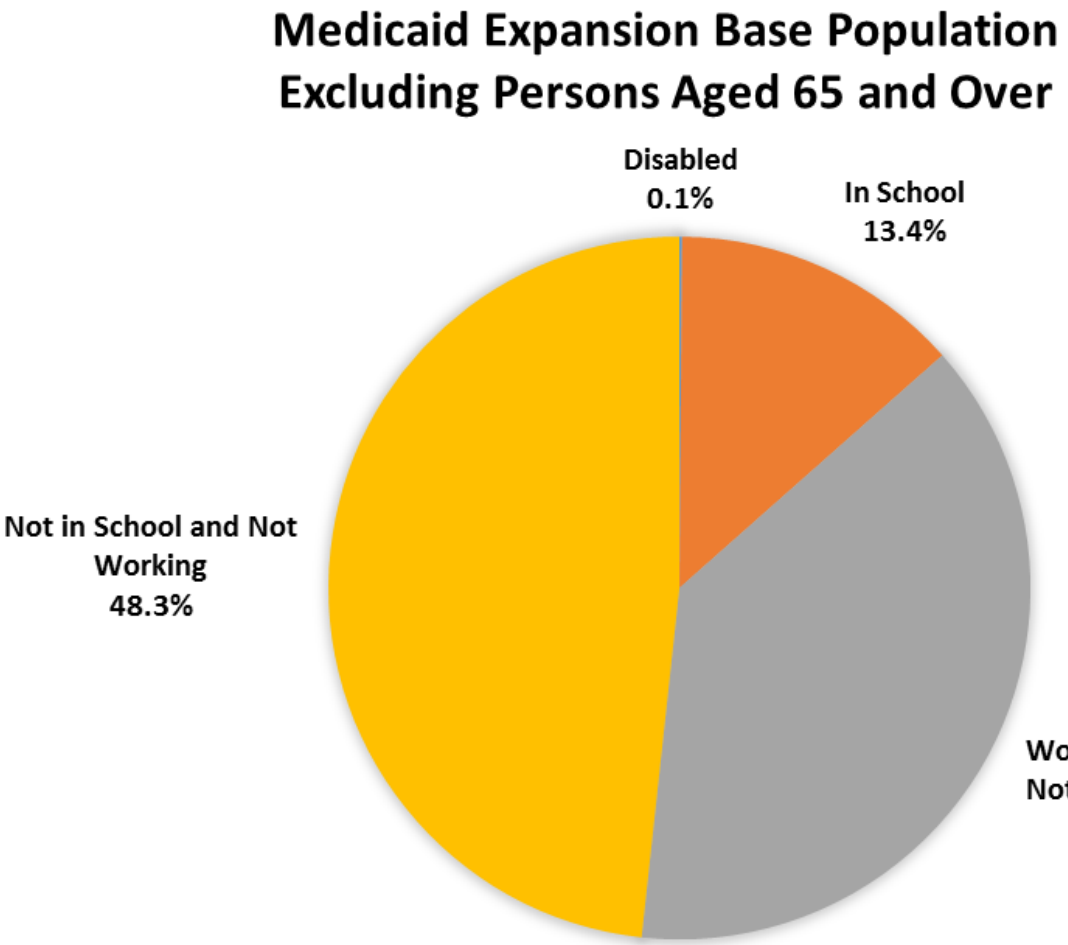
Medicaid Expansion Base Population...

Medicaid Expansion Base Population	Using Same Assumptions as EDR's March 4, 2013 Analysis		Difference between 2011-13 and 2009-2011 ACS PUMS using EDR's March 4, 2013 Assumptions	Using New Thresholds	Difference between 2011-13 ACS PUMS using both the New Thresholds and EDR's March 4, 2013 Assumptions
Group	2009-11 ACS PUMS (A)	2011-13 ACS PUMS (B)	(C)=(B)-(A)	2011-13 ACS PUMS (D)	(E)=(D)-(B)
Infants	0	0	0	Already Covered	0
Children Aged 1-5	2,546	1,807	-739		-1,807
Children Aged 6-18	56,254	68,278	12,024		-68,278
Aged 19-20	50,717	49,892	-825	48,269	-1,623
Pregnant Women	0	0	0	0	0
SSI	901	1,000	99	968	-32
Parents	193,206	187,972	-5,234	179,297	-8,675
Childless Adults	574,795	631,490	56,695	608,022	-23,468
Total	**878,419**	**940,439**	**62,020**	**836,556**	**-103,883**

Assumptions	EDR March 4, 2013 Analysis	EDR March 24, 2015 Analysis
Expansion Level	Less than 138% FPL	Less than 133% FPL
Ages 19-20	Less than 22% FPL	Less than 18% FPL
Parents	Less than 22% FPL	Less than 18% FPL

The 2011-13 Medicaid Expansion base population of 836,556 was further screened to exclude persons aged 65 or older, resulting in a new base population of 829,802.

Characteristics of the Expansion Base Population...



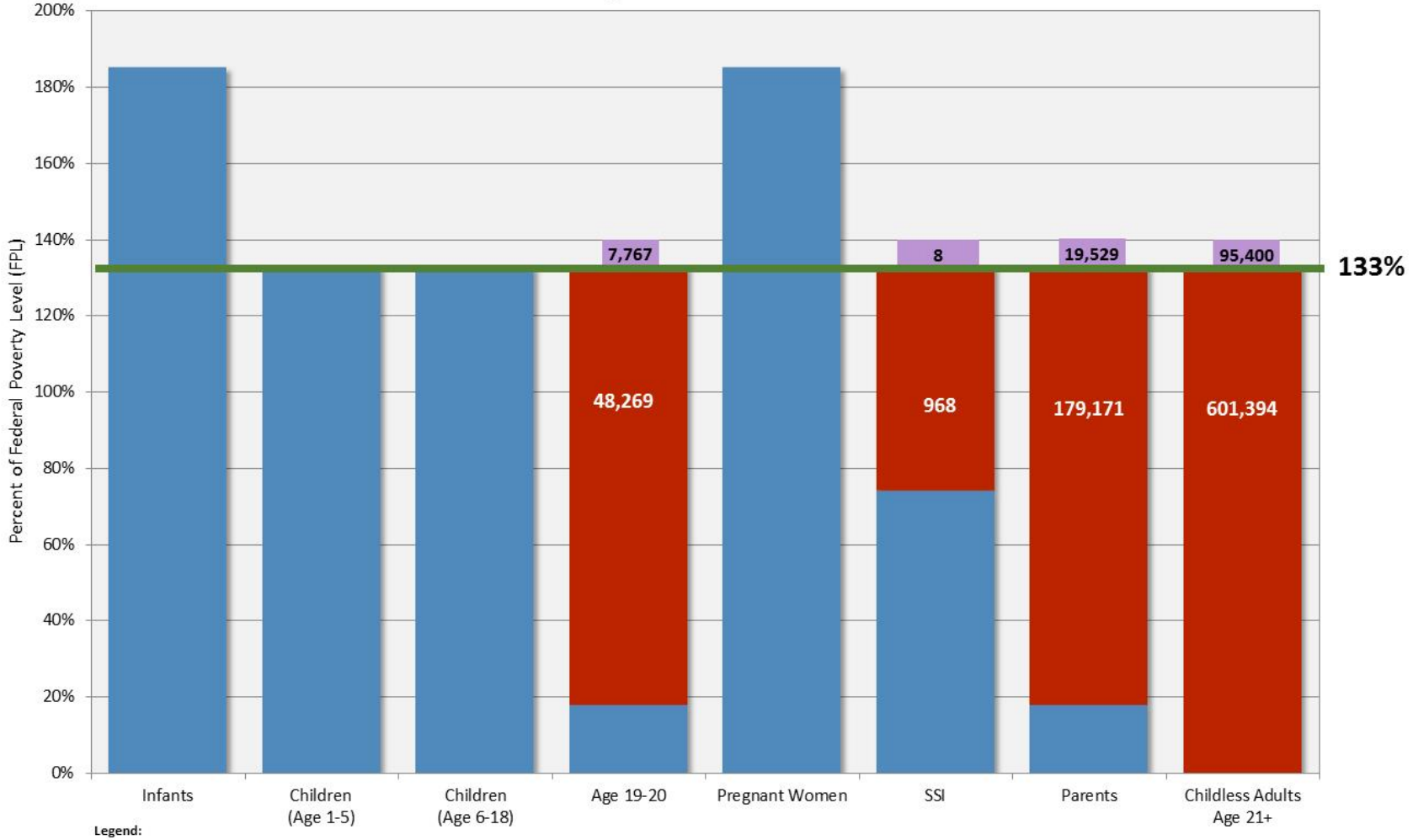
Population of 829,802

Crowd Out Population...

- The crowd out population is individuals who are only paying for private health insurance today and who would qualify for Medicaid coverage under expansion.

- Using the 2011-13 ACS PUMS data, there were 122,704 individuals who would be classified as crowd out population.

Medicaid Expansion Base Population
Excluding those Aged 65 and Over
Including Crowd Out



Legend:

Blue Bars: Medicaid enrolled
Red Bars with White Labels: Newly eligible
Purple Box with Black Labels: Crowd Out related to expansion
Green Line: 133% Federal Poverty Level

Source: U.S. Census Bureau, 2011-13 3-year American Community Survey Public Use Microdata Sample

Medicaid Base Expansion Population and Likely Presenters...

- Crowd out Population:
  - The analysis assumes that 100% of the crowd out population would present because they have insurance today.
- Medicaid Expansion Base Population:
  - A take-up rate of 85.8% was applied to the Medicaid Expansion population, derived from the health insurance participation rate of today's Medicaid eligible population.
- The total number of likely presenters is 834,674. This number is subsequently adjusted for population growth.

	2009-11 ACS PUMS		2011-13 ACS PUMS		2011-13 ACS PUMS Excluding Persons Aged 65 and Over	
Medicaid Expansion Base Population	878,419		836,556		829,802	
Likely Presenters	**Population**	**Take-up Rate**	**Population**	**Take-up Rate**	**Population**	**Take-up Rate**
CHIP "Woodworking Shift"	14,700	25.0%	**Already Covered**		**Already Covered**	
Uninsured Presenters	653,236	79.7%	717,765	85.8%	711,970	85.8%
Crowd Out	131,791	100.0%	125,225	100.0%	122,704	100.0%
Total	799,727		842,990		834,674	

2009-11 analysis shows CHIP "Woodworking Shift" which is only applicable to Children Aged 1-5 and 6-18

Expansion Expenditures with Caseload... (New Participants in Medicaid)

	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY19-20
Uninsured Presenters	742,677	753,446	764,167	774,835	785,423
Total expenditures	$2,872,367,920	$3,004,377,283	$3,132,873,391	$3,266,016,165	$3,403,809,912
Crowd Out	122,704	122,704	122,704	122,704	122,704
Total expenditures	$472,569,192	$487,221,758	$500,933,418	$515,030,960	$529,525,241
Total	865,381	876,150	886,871	897,539	908,127
Total expenditures	$3,344,937,112	$3,491,599,041	$3,633,806,809	$3,781,047,125	$3,933,335,153
Expansion FMAP	100%	97.50%	94.50%	93.50%	91.50%
Federal Expenditures	$3,344,937,112	$3,404,309,065	$3,433,947,435	$3,535,279,062	$3,599,001,665
State Expenditures	**$0**	**$87,289,976**	**$199,859,374**	**$245,768,063**	**$334,333,488**

Medically Needy…

- Non-pregnant adults aged 19-64 under 133% FPL would automatically transition from the Medically Needy Program to Medicaid Expansion.
- Because this is a shift from one Medicaid Program to another, there would be no change to the overall Medicaid caseload.
- Transition of these individuals would result in state savings due to the different federal participation matching rates.

Medically Needy Expenditures and Savings with Caseload...

	FY15-16	FY16-17	FY17-18	FY18-19	FY19-20
Caseload	25,964	25,886	25,808	25,731	25,653
Per Capita Expenditures	$23,157	$23,273	$23,389	$23,506	$23,624
Total Expenditures	$601,244,252	$602,437,722	$603,633,560	$604,831,773	$606,032,364
Non-expansion Medically Needy FMAP	60.51%	61.17%	61.33%	61.50%	61.74%
Non-expansion Federal Expenditures	$363,812,897	$368,511,154	$370,208,463	$371,971,540	$374,164,382
Non-expansion State Expenditures	$237,431,355	$233,926,568	$233,425,097	$232,860,233	$231,867,982
Expansion FMAP	100.0%	97.5%	94.5%	93.5%	91.5%
Expansion Federal Expenditures	$601,244,252	$587,376,779	$570,433,715	$565,517,708	$554,519,613
Expansion State Expenditures	$0	$15,060,943	$33,199,845	$39,314,065	$51,512,751
Expansion State Savings	**$237,431,355**	**$218,865,625**	**$200,225,252**	**$193,546,168**	**$180,355,231**

Substance Abuse and Mental Health Treatment from DCF...

- Non-pregnant clients aged 19-64 under 133% FPL would automatically transition from state supported substance abuse and mental health program services to eligible Medicaid services under Medicaid Expansion.

- Much of the Department of Children and Families' behavioral health funding comes from the federal government in the form of block grants. For FY 2013-14:
  - The Substance Abuse Prevention and Treatment block grant represented approximately $100 million.
  - The Community Mental Health block grant was approximately $29 million.

- These grants require maintenance of effort (MOE) funding from the state based on a rolling two-year average.

Substance Abuse and Mental Health MOE...

- Community Mental Health Block Grant:
  - For FY 2014-15 the state MOE is $73 million.
  - State dollars spent at other agencies can count towards DCF's MOE for the block grant.

- Substance Abuse Prevention and Treatment Block Grant:
  - For FY 2014-15 the state MOE is $96 million.
  - State dollars spent at other agencies cannot count towards DCF's MOE for the block grant. Only dollars that flow through DCF can count.
  - For the past several years the Department has fallen short of the MOE ($4-14 Million). The Department has had to request a waiver from the federal government in order to keep the block grant.

- Freed MOE dollars will have to be used for wraparound services not covered by Medicaid and new or additional services not offered by the state today. For the purposes of this analysis, no state savings are assumed.

Agency for Persons with Disabilities...

- Non-pregnant adults aged 19-64 under 133% FPL would automatically transition from the waitlist for the Developmental Disabilities Home and Community-Based Services Waiver to Medicaid Expansion.

- The Agency for Persons with Disabilities (APD) does not have current income information on waitlist clients. When a waiver slot becomes available, individuals on the waitlist go through a determination process to confirm eligibility for the waiver. At that time, income information is obtained.

- In a preliminary analysis, APD compiled data on FY 2012-13 expenditures for Individual and Family Supports (IFS) services provided to waitlist members, and classified those services as those that are covered under the Medicaid State Plan and those that are not. Services that were classified as potentially Medicaid covered include transportation, supplies and equipment, and home assistance.

- An analysis prepared several years ago was based on an assumption of Medicaid coverage up to 138% FPL.

Agency for Persons with Disabilities...

(A) Current Law and Current Administration

SFY 2012-2013	Unique IFS Service Users[1]	Total IFS Expenditures	Medicaid Covered[2]	Not Medicaid Covered	Annual Expenditure per User Covered	Annual Expenditure per User Not Covered
Under Age 21	878	$1,022,223	$483,755	$538,468	$550.97	$613.29
Ages 21 - 64	1,341	$4,480,695	$1,172,418	$3,308,277	$874.29	$2,467.02
Ages 65 and Older	45	$314,854	$33,981	$280,872	$755.14	$6,241.61
Total	**2,264**	**$5,817,772**	**$1,690,154**	**$4,127,618**	**$746.53**	**$1,823.15**

[1]Data consists of non-waiver clients who are currently not Medicaid eligible

[2]Determination based on high-level review only. More definitive results would require more extensive analysis of specific services and provider types.

(B) Expand Medicaid to 138% FPL and Provide Services through Medicaid

	Low (50%)	High (75%)	Upper Bound (100%)
Population Shifting to Medicaid	1,110	1,664	2,219
Annual Expenditure per Client	$746.36	$746.36	$746.36
Expenditures shifting to Medicaid	$828,086	$1,242,130	$1,656,173

For the purposes of this analysis, no state savings are assumed.

Department of Corrections...

- The state inmate population is not included in the Medicaid Expansion population because their inclusion would require additional actions by the Legislature and federal approval.

- Currently, inmate health care services under the Department of Corrections are paid for with state General Revenue Funds.

- While there is federal authorization for Medicaid to cover inpatient hospital services provided to eligible inmates in non-correctional inpatient hospital settings, the federal option has not been exercised in Florida.

- Implementation of this issue would require administrative issues to be addressed:
  - Overlay with current contracts for privatized health care services for the DOC population, and
  - Administrative process for eligibility determination among AHCA, DOC, DCF, and the private companies involved in inmate health care.

- An analysis prepared several years ago was based on an assumption of Medicaid coverage up to 138% FPL.

Department of Corrections...

(A) Current Law and Current Administration

	October 2013 Caseload	Assumed Income Distribution* Below 138%FPL	Above 138%FPL		Annual Inpatient & Related Physician Expenditures (5 year average)	
Non Pregnant adults < 21	2,979	2,830	149		General Revenue	**$65,084,627**
Non Pregnant adults 21-64	95,758	90,970	4,788		Annual Days	15,808
Pregnant Women	29	28	1		Cost per Day	$4,117
Adults 65+	2,358	2,240	118		Annual Exp per Inmate	$644
Total	**101,124**	**96,068**	**5,056**			

Potentially Eligible for Medicaid Expansion

*The Department of Corrections does not have information on inmate income status prior to incarceration. For purposes of this cost savings analysis, DOC has made the assumption that 95% of the inmate population meets the 138% FPL eligibility requirement.

(B) Expand Medicaid to 138% FPL and Provide Inmate Hospital Inpatient Services through Medicaid

Population Shifting to Medicaid	93,828	
Annual Expenditure per Inmate	$643.61	
DOC Expenditures shifting to Medicaid	$60,388,640	General Revenue

Medicaid Expansion Cost Summary...

	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY19-20
Total caseload	**891,345**	**902,036**	**912,679**	**923,270**	**933,780**
Uninsured Presenters and Crowd Out	865,381	876,150	886,871	897,539	908,127
Medically Needy	25,964	25,886	25,808	25,731	25,653
Total expenditures (millions)	**$3,946.1**	**$4,094.0**	**$4,237.4**	**$4,385.8**	**$4,539.3**
Uninsured Presenters and Crowd Out	$3,344.9	$3,491.6	$3,633.8	$3,781.0	$3,933.3
Medically Needy	$601.2	$602.4	$603.6	$604.8	$606.0
State Expenditures (millions)	**$0**	**$102.4**	**$233.1**	**$285.1**	**$385.8**
State Expenditures per capita (dollars)	**$0**	**$113**	**$255**	**$309**	**$413**

This chart reflects the costs (state and federal) directly associated with the Expansion Program and does not include the savings generated from the Medically Needy Program.

Insurance Premium Tax: Affordable Care Act Adjustment...

- The current revenue forecast assumes 1.44 million individuals are induced by the Affordable Care Act to obtain private insurance that is subject to the Insurance Premium Tax in the 2015 calendar year.

- This analysis assumes that 234,284 of the 1.44 million individuals would qualify for and move to Medicaid under Expansion in lieu of seeking private insurance. This number grows and is included within the uninsured presenters.

- By enacting Medicaid Expansion, the premiums and tax collections from the underlying Insurance Premium Tax forecast associated with these individuals would be removed.

Insurance Premium Tax: Crowd Out Adjustment...

- 122,704 persons currently have private individual insurance and would qualify for Medicaid under Expansion.

- This analysis assumes this cohort of 122,704 would forgo private insurance for Medicaid, removing them from the current pool of privately insured.

- By enacting Medicaid Expansion, the premiums and tax collections from the underlying Insurance Premium Tax forecast associated with the 122,704 would be removed.

Medicaid Expansion Revenue Summary: Insurance Premium Tax...

Insurance Premium Tax Collections

	2015-16	2016-17	2017-18	2018-19	2019-20
March 2015 GR Estimating Conference					
Insurance Premium Tax ACA Baseline	$55,236,517	$46,126,417	$50,153,552	$52,159,694	$54,246,081
Newly Insured Impact	($7,226,394)	($6,187,003)	($6,570,490)	($6,807,356)	($7,108,618)
Existing Insured Crowd Out Impact	($1,722,352)	($1,777,489)	($1,831,001)	($1,885,844)	($1,942,432)
Total Cash Impact	($8,948,746)	($7,964,492)	($8,401,492)	($8,693,199)	($9,051,049)
New Insurance Premium Tax ACA Baseline	$46,287,771	$38,161,925	$41,752,060	$43,466,495	$45,195,032

Overall Fiscal Impact...

Expansion Program	2015-16		2016-17		2017-18		2018-19		2019-20	
	Caseload	State $$$	Caseload	State $$$	Caseload	State $$$	Caseload	State $$$	Caseload	State $$$
*Uninsured Presenters (new)**	742,677	-	753,446	(75.1)	764,167	(172.3)	774,835	(212.3)	785,423	(289.3)
Crowd-Out (new)	122,704	-	122,704	(12.2)	122,704	(27.6)	122,704	(33.5)	122,704	(45.0)
*Medically Needy Shift (net)***	-	237.4	-	218.9	-	200.2	-	193.5	-	180.4
Medicaid Subtotal	865,381	237.4	876,150	131.6	886,871	0.3	897,539	-52.3	908,127	-153.9
Insurance Premium Revenue Adj.	-	(8.9)	-	(8.0)	-	(8.4)	-	(8.7)	-	(9.1)
Total	865,381	228.5	876,150	123.6	886,871	(8.1)	897,539	(61.0)	908,127	(163.0)

Note: Dollars in Millions; Positive Total = Surplus; Negative Total = Shortfall

*Includes qualifying persons on the waitlist for the APD Developmental Services Waiver and service recipients in the DCF Substance Abuse and Mental Health Program.
**Assumes approximately 26,000 non-pregnant adults aged 19-64 shift from the Medically Needy Program to the Expansion Program, with no other changes.

Shifted Medically Needy	25,964	25,886	25,808	25,731	25,653
Expansion Program Count	891,345	902,036	912,679	923,270	933,780

Impact of Medicaid Expansion 2015
Part 2: Phase 1 & Phase 2

(reflects the impact of SB 2512 First Engrossed in FY 2015-16)

Phase 1 – Simple Expansion
Phase 2 – FHIX

April 6, 2015

Presented by:

The Florida Legislature
Office of Economic and Demographic Research
850.487.1402
http://edr.state.fl.us

Phase 1 – Simple Expansion Assumptions…

July 1, 2015 to no later than April 1, 2016

- Simple expansion with the exception that the Crowd Out population has a new decision framework that causes them not to present during Phase 1.
  - Underlying Expansion Population...
    - Uninsured Presenters have a take-up rate of 85.8%.
    - 50% present July 1, 2015; the remainder are split evenly to present on August 1, 2015; September 1, 2015; October 1, 2015.
  - Crowd Out...
    - Since this group already has insurance, they will wait for the FHIX options to become known and then make a decision at the beginning of Phase 2.
  - Medically Needy...
    - Splits into three groups:
      - Group 1 – Children under the age of 19 and Pregnant Women who do not otherwise qualify for Medicaid are enrolled until October 1, 2019.
      - Group 2 – Persons aged 19-64 above 133% FPL and Seniors at all income levels are disenrolled on October 1, 2015.
      - Group 3 – Persons aged 19-64 below 133% FPL move to Phase 1 – Simple Expansion on July 1, 2015 with a take-up rate 100% (shift population).

Phase 1 – Simple Expansion Enrollees…

Expansion Population in Phase 1 - Simple Expansion	**Assumptions**	**FY 2015-16**
Eligible Universe		865,591
Take-Up Rate (85.8%)	85.8%	742,677
Phase 1 - Uninsured Presenters (100.0%) present July-October 2015	100.0%	742,677

Crowd Out in Phase 1 - Simple Expansion	**Assumptions**	**FY 2015-16**
Eligible Universe		122,704
Take-Up Rate (0.0%)	0.0%	-
Phase 1 - Crowd Out Enrollees (100.0%)	100.0%	-

Medically Needy in Phase 1 - Simple Expansion	**Assumptions**	**FY 2015-16**
Shift Population		25,964
Take-Up Rate (100.0%)	100.0%	25,964
Phase 1 - Medically Needy Enrollees (100.0%) present July 1, 2015	100.0%	25,964

Phase 1 - Simple Expansion Total Enrollees	768,641

Phase 2 – FHIX Assumptions…

Beginning January 1, 2016

- Phase 2 Expansion Enrollees - Uninsured Presenters from Phase 1 are:
  - Reduced for Constraints (64.4% remain).
    - School
    - Employment by hours for parents and others
    - Job Seekers
    - Disabled
  - Increased for Caregivers (estimated to be 6,857 in the base population).
  - Further reduced for attrition between Phase 1 and Phase 2 (70.0% remain).
  - Participants present evenly during the months of January through March 2016
    - Some Phase 1 Uninsured Presenters disenroll, while others transition to FHIX.
- Crowd Out...
  - The Eligible Universe was screened to determine those most likely to stay with private insurance (approximately 67% based on school status, youth, and probability of constraint failure).
  - The remaining population was reduced again by 50% to reflect those making a case by case decision based on specific FHIX offerings.
  - This population presents evenly during the months of January through March 2016.
- Medically Needy...
  - Group 3 transitions from Phase 1 to Phase 2 during the months of January through March 2016 (33.33% each month).

Phase 2 – FHIX Assumptions…

Beginning January 1, 2016

- Assumptions (continued):
  - It is unclear what the insurance coverage options will be for those enrolled in Phase 1 who do not transition to Phase 2. At least Phase 1 will be deemed a Medicaid program; the status of Phase 2 is unknown until federal approval is given. If Phase 2 is also deemed to be a Medicaid program, potential enrollees may no longer be eligible for subsidies through the Exchange.
  - All Phase 2 participants continue to pay premiums in a timely manner.
  - Premiums are deducted from total expenses before application of Federal/State split, mirroring the Healthy Kids program.
  - Phase 2 continues for the duration of this analysis.

Phase 2 – FHIX Enrollees…

Expansion Population in Phase 2 - FHIX	**FY 2015-16**	**FY 2016-17**	**FY 2017-18**	**FY 2017-18**	**FY 2018-19**
Eligibile Universe	865,591	878,142	890,637	903,071	915,411
Take-Up Rate (85.8%)	742,677	753,446	764,167	774,835	785,423
Meet School and Working Constraints (64.4%)	478,284	485,219	492,124	498,994	505,812
Add-in Adjustment for Caregivers	7,153	7,257	7,360	7,463	7,565
Subtotal	485,437	492,476	499,484	506,457	513,377
Phase 2 - Expansion Enrollees (70.0%)	339,806	344,733	349,639	354,520	359,364

Crowd Out Population in Phase 2 - FHIX	**FY 2015-16**	**FY 2016-17**	**FY 2017-18**	**FY 2017-18**	**FY 2018-19**
Eligibile Universe	122,704	122,704	122,704	122,704	122,704
Take-Up Rate (100.0%)	122,704	122,704	122,704	122,704	122,704
Adjustment to Account for Initial Screening (approximately 32.6%)	40,062	40,062	40,062	40,062	40,062
Phase 2 - Crowd Out Enrollees (50.0%)	20,031	20,031	20,031	20,031	20,031

Medically Needy in Phase 2 - FHIX	**FY 2015-16**	**FY 2016-17**	**FY 2017-18**	**FY 2017-18**	**FY 2018-19**
Shift Population (Group 3)	25,964	25,886	25,808	25,731	25,653
Take-Up Rate (100.0%)	25,964	25,886	25,808	25,731	25,653
Phase 2 - Medically Needy Enrollees (100.0%)	25,964	25,886	25,808	25,731	25,653

Phase 2 - FHIX Total Enrollees	385,801	390,650	395,478	400,282	405,048

Note: FY 2015-16 figures represent enrollment on June 30, 2016.

Phase 1 & Phase 2 – FY 2015-16 Worksheet…

FY 2015-16 Expenditures

	Total	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Phase 1 Expansion Enrollees[1]	**742,677**	371,339	495,366	619,393	742,677	742,677	742,677	495,143	247,609	0	0	0	0
Phase-in pattern		*50%*	*16.7%*	*16.7%*	*16.6%*	*0%*	*0%*						
Phase-out pattern								*-33.3%*	*-33.3%*	*-33.3%*	*0%*	*0%*	*0%*
Phase 1 Crowd out Enrollees[2]	**0**	0	0	0	0	0	0	0	0	0	0	0	0
Phase 1 Medically Needy Enrollees[3]	**25,964**	25,964	25,964	25,964	25,964	25,964	25,964	17,310	8,656	0	0	0	0
Phase-in pattern		*100.0%*	*0.0%*	*0.0%*	*0.0%*	*0%*	*0%*						
Phase-out pattern								*-33.3%*	*-33.3%*	*-33.3%*	*0%*	*0%*	*0%*
Monthly per capita Expansion and Crowd out		$320.86	$320.86	$320.86	$320.86	$320.86	$320.86	$320.86	$320.86				
Monthly per capita Medically Needy		$1,929.76	$1,929.76	$1,929.76	$1,929.76	$1,929.76	$1,929.76	$1,929.76	$1,929.76				
Total Expenditures Phase 1 Expansion	$1,430,038,245	$119,148,115	$158,943,513	$198,738,912	$238,295,910	$238,295,910	$238,295,910	$158,871,962	$79,448,013	$0	$0	$0	$0
Total Expenditures Phase 1 Crowd out	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Expenditures Phase 1 Medically Needy	$350,730,824	$50,103,688	$50,103,688	$50,103,688	$50,103,688	$50,103,688	$50,103,688	$33,404,129	$16,704,569	$0	$0	$0	$0
Total Expenditures Phase 1	**$1,780,769,069**	$169,251,803	$209,047,201	$248,842,599	$288,399,598	$288,399,598	$288,399,598	$192,276,090	$96,152,582	$0	$0	$0	$0
Phase 2 Expansion Enrollees[1]	**339,806**							113,257	226,514	339,806	339,806	339,806	339,806
Phase-in pattern								*33.3%*	*33.3%*	*33.3%*	*0%*	*0%*	*0%*
Phase 2 Crowd out Enrollees[2]	**20,031**							6,676	13,352	20,031	20,031	20,031	20,031
Phase-in pattern								*33.3%*	*33.3%*	*33.3%*	*0%*	*0%*	*0%*
Phase 2 Medically Needy Enrollees[3]	**25,964**							8,654	17,307	25,964	25,964	25,964	25,964
Phase-in pattern								*33.3%*	*33.3%*	*33.3%*	*0%*	*0%*	*0%*
Monthly per capita Expansion and Crowd out								$320.86	$320.86	$320.86	$320.86	$320.86	$320.86
Monthly per capita Medically Needy								$1,929.76	$1,929.76	$1,929.76	$1,929.76	$1,929.76	$1,929.76
Total Expenditures Phase 2 Expansion	$545,140,835	$0	$0	$0	$0	$0	$0	$36,339,728	$72,679,455	$109,030,413	$109,030,413	$109,030,413	$109,030,413
Total Expenditures Phase 2 Crowd out	$32,134,847	$0	$0	$0	$0	$0	$0	$2,142,066	$4,284,133	$6,427,162	$6,427,162	$6,427,162	$6,427,162
Total Expenditures Phase 2 Medically Needy	$250,513,428	$0	$0	$0	$0	$0	$0	$16,699,559	$33,399,118	$50,103,688	$50,103,688	$50,103,688	$50,103,688
Total Expenditures Phase 2	**$827,789,110**	$0	$0	$0	$0	$0	$0	$55,181,353	$110,362,706	$165,561,263	$165,561,263	$165,561,263	$165,561,263
Expansion Enrollee Premium Revenue	$28,422,827	$0	$0	$0	$0	$0	$0	$1,894,699	$3,789,398	$5,684,683	$5,684,683	$5,684,683	$5,684,683
Crowd out Enrollee Premium Revenue	$1,494,588	$0	$0	$0	$0	$0	$0	$99,627	$199,255	$298,927	$298,927	$298,927	$298,927
Medically Needy Enrollee Premium Revenue	$2,171,711	$0	$0	$0	$0	$0	$0	$144,769	$289,538	$434,351	$434,351	$434,351	$434,351
Total Enrollee Premium Revenue Phase 2	**$32,089,126**	$0	$0	$0	$0	$0	$0	$2,139,095	$4,278,191	$6,417,960	$6,417,960	$6,417,960	$6,417,960

[1]Half of the Expansion enrollees enroll July 1, 2015; one-sixth enroll on the 1st of each of the subsequent 3 months. One-third of Expansion enrollees disenroll from Phase 1 in each of the first three months: January 1, February 1, and March 1, 2016. Of each one-third group that disenrolls, those who meet the FHIX criteria (46%) enroll in Phase 2 at that time. Those who do not meet the criteria (54%) cannot enter Phase 2 and may no longer be able to obtain insurance coverage through the Exchange.

[2]None of the Crowd out enrollees enroll in Phase 1. One-third of Crowd out enrollees enroll in Phase 2 in each of the first three months: January 1, February 1, and March 1, 2016.

[3]All of the current Medicaid Medically Needy who meet the simple Medicaid Expansion criteria are assumed to move from traditional Medicaid to FHIX Phase 1 on July 1, 2016. One-third of Medically Needy enrollees disenroll from Phase 1 in each of the first three months: January 1, February 1, and March 1, 2016. Of each one-third group that disenrolls, those who meet the FHIX criteria (100%) enroll in Phase 2 at that time.

Expenditures have to be calculated month-by-month to reflect movements into and out of Phase 1 and into Phase 2.

Phase 1 & Phase 2 – Annual Expenditures…

Phase 1 and 2 - Annual Expenditures	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Expansion Enrollees					
Total	See FY 2015-16 Worksheet	344,733	349,639	354,520	359,364
Per capita expenditures		$3,969.71	$4,081.43	$4,196.29	$4,314.39
Expenditures	$1,975,179,080	$1,368,491,130	$1,427,027,454	$1,487,669,744	$1,550,435,449
Per capita weighted annual premium	$200.75	$200.75	$200.75	$200.75	$200.75
Premium Revenue	$28,422,827	$69,205,288	$70,190,169	$71,170,032	$72,142,467
Net Expenditures (Premium Revenue subtracted)	$1,946,756,252	$1,299,285,842	$1,356,837,285	$1,416,499,712	$1,478,292,982
Crowd out Enrollees					
Caseload	See FY 2015-16 Worksheet	20,031	20,031	20,031	20,031
Per capita expenditures		$3,969.71	$4,081.43	$4,196.29	$4,314.39
Expenditures	$32,134,847	$79,517,324	$81,755,144	$84,055,942	$86,421,490
Per capita weighted annual premium	$179.08	$179.08	$179.08	$179.08	$179.08
Premium Revenue	$1,494,588	$3,587,119	$3,587,119	$3,587,119	$3,587,119
Net Expenditures (Premium Revenue subtracted)	$30,640,259	$75,930,205	$78,168,025	$80,468,823	$82,834,371
Medically Needy Enrollees					
Total	See FY 2015-16 Worksheet	25,886	25,808	25,731	25,653
Per capita expenditures		$23,272.96	$23,389.32	$23,506.27	$23,623.80
Expenditures	$601,244,252	$602,437,722	$603,633,560	$604,831,773	$606,032,364
Per capita weighted annual premium	$200.75	$200.75	$200.75	$200.75	$200.75
Premium Revenue	$2,171,711	$5,196,573	$5,180,983	$5,165,440	$5,149,944
Net Expenditures (Premium Revenue subtracted)	$599,072,541	$597,241,149	$598,452,577	$599,666,333	$600,882,420
Total Enrollees	See FY 2015-16 Worksheet	390,650	395,478	400,282	405,048
Total Expenditures	$2,608,558,179	$2,050,446,176	$2,112,416,159	$2,176,557,459	$2,242,889,303
Total Enrollee Premium Revenue	$32,089,126	$77,988,980	$78,958,272	$79,922,591	$80,879,530
Total Net Expenditures (Premium Revenue subtracted)	$2,576,469,053	$1,972,457,196	$2,033,457,887	$2,096,634,868	$2,162,009,773
Expansion FMAP	100.00%	97.50%	94.50%	93.50%	91.50%
Federal Expenditures	**$2,576,469,053**	**$1,923,145,766**	**$1,921,617,703**	**$1,960,353,601**	**$1,978,238,943**
State Expenditures	**$0**	**$49,311,430**	**$111,840,184**	**$136,281,266**	**$183,770,831**

Medically Needy Savings from Shift…

Non Pregnant adults 19-64 Below 133%	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Caseload Growth Rate for MN from SSEC[1]		-0.67%	-0.30%	-0.30%	-0.30%	-0.30%
Non Pregnant adults 19-64 Caseload Below 133%	26,139	25,964	25,886	25,808	25,731	25,653
Expenditures Growth Rate[2]		0.5%	0.5%	0.5%	0.5%	0.5%
Non Pregnant adults 19-64 Per Capita Expenditures Below 133%	$23,042	$23,157	$23,273	$23,389	$23,506	$23,624
Non Pregnant adults 19-64 Below 133% Total Expenditures[3]		**$601,244,252**	**$602,437,722**	**$603,633,560**	**$604,831,773**	**$606,032,364**
Medically Needy FMAP		60.51%	61.17%	61.33%	61.50%	61.74%
Federal Expenditures w/o SB 2512		$363,812,897	$368,511,154	$370,208,463	$371,971,540	$374,164,382
State Expenditures w/o SB 2512[4]		$237,431,355	$233,926,568	$233,425,097	$232,860,233	$231,867,982
Expansion FMAP		100.00%	97.50%	94.50%	93.50%	91.50%
Medically Needy Enrollees FHIX Net Expenditures (lower due to FHIX premium revenue)		$599,072,541	$597,241,149	$598,452,577	$599,666,333	$600,882,420
Federal Expenditures under SB 2512		$599,072,541	$582,310,120	$565,537,686	$560,688,021	$549,807,415
State Expenditures under SB 2512[4]		$0	$14,931,029	$32,914,892	$38,978,312	$51,075,006
State Impact - Medically Needy Non Pregnant adults 19-64 Under 133%		**($237,431,355)**	**($218,995,539)**	**($200,510,206)**	**($193,881,921)**	**($180,792,976)**

Note: The 25,964 below 133% move to Phase 1 on July 1, 2015 (Phase 1 and 2 net expenditures computed on Annual Expenditures table).

Footnotes:

[1]Last two years Caseload Growth Rate held at FY 2017-18 rate

[2]SSEC growth rate of Hospital Inpatient Services unit cost, which is the largest expenditure category for Medically Needy, of 0.5% annually

[3]Total Expenditure lines computed as under current law

[4]State Expenditures include GR, GDTF, and PMATF

Positive Total = Additional Cost; Negative Total = Savings

Medically Needy Savings from Population Reduction…

Non Pregnant adults Above 133% and Seniors at all income levels

Non Pregnant adults 19-64 Above 133%	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Caseload Growth Rate for MN from SSEC[1]		-0.67%	-0.30%	-0.30%	-0.30%	-0.30%
Non Pregnant adults 19-64 Caseload						
133-400%	3,134	3,113	3,104	3,094	3,085	3,076
Over 400%	100	99	99	99	98	98
Expenditures Growth Rate[2]		0.5%	0.5%	0.5%	0.5%	0.5%
Non Pregnant adults 19-64 Per Capita Expenditures						
133-400%	$23,042	$23,158	$23,273	$23,390	$23,507	$23,624
Over 400%	$23,051	$23,166	$23,282	$23,398	$23,515	$23,633
Non Pregnant adults 19-64 Above 133%						
Total Expenditures[3]		**$74,390,916.13**	**$74,538,582.10**	**$74,686,541.19**	**$74,834,793.97**	**$74,983,341.04**
Medically Needy FMAP		60.51%	61.17%	61.33%	61.50%	61.74%
Federal Expenditures w/o SB 2512		$45,013,943	$45,595,251	$45,805,256	$46,023,398	$46,294,715
State Expenditures w/o SB 2512[4]		$29,376,973	$28,943,331	$28,881,285	$28,811,396	$28,688,626
Federal Expenditures under SB 2512		$11,253,486	$0	$0	$0	$0
State Expenditures under SB 2512[4]		$7,344,243	$0	$0	$0	$0
SB 2512 State Impact - Medically Needy						
Non Pregnant adults 19-64 Above 133%		**($22,032,730)**	**($28,943,331)**	**($28,881,285)**	**($28,811,396)**	**($28,688,626)**

Note: Under SB 2512, the 133-400% and Over 400% groups are in Medicaid until the Medically Needy program ends for all except children and pregnant women on October 1, 2015.

Adults 65+ - All Income Levels	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Caseload Growth Rate for MN from SSEC[1]		-0.67%	-0.30%	-0.30%	-0.30%	-0.30%
Adults 65+ Caseload						
Below 133%	1,576	1,565	1,561	1,556	1,551	1,547
133-400%	334	332	331	330	329	328
Over 400%	5	5	5	5	5	5
Expenditures Growth Rate[2]		0.5%	0.5%	0.5%	0.5%	0.5%
Adults 65+ Per Capita Expenditures						
Below 133%	$20,487	$20,589	$20,692	$20,796	$20,900	$21,004
133-400%	$20,504	$20,606	$20,709	$20,813	$20,917	$21,022
Over 400%	$20,818	$20,922	$21,026	$21,131	$21,237	$21,343
Adults 65+ Total Expenditures[3]		**$39,171,935**	**$39,249,691**	**$39,327,602**	**$39,405,667**	**$39,483,887**
Medically Needy FMAP		60.51%	61.17%	61.33%	61.50%	61.74%
Federal Expenditures w/o SB 2512		$23,702,938	$24,009,036	$24,119,618	$24,234,485	$24,377,352
State Expenditures w/o SB 2512[4]		$15,468,997	$15,240,655	$15,207,984	$15,171,182	$15,106,535
Federal Expenditures under SB 2512		$5,925,734	$0	$0	$0	$0
State Expenditures under SB 2512[4]		$3,867,249	$0	$0	$0	$0
SB 2512 State Impact - Medically Needy						
Adults 65+		**($11,601,748)**	**($15,240,655)**	**($15,207,984)**	**($15,171,182)**	**($15,106,535)**

Note: Under SB 2512, individuals 65+ are in Medicaid until the Medically Needy program ends for all except children and pregnant women on October 1, 2015.

Positive Total = Additional Cost; Negative Total = Savings

Medically Needy Savings from Final Program Sunset…

Children and Pregnant Women

Children and Pregnant Women	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Caseload Growth Rate for MN from SSEC[1]		-0.67%	-0.30%	-0.30%	-0.30%	-0.30%
Children Caseload						
Below 133%	0	0	0	0	0	0
133-400%	839	833	831	828	826	823
Over 400%	4	4	4	4	4	4
Pregnant Women Caseload						
Below 133%	0	0	0	0	0	0
133-400%	100	99	99	99	98	98
Over 400%	0	0	0	0	0	0
Expenditures Growth Rate[2]		0.5%	0.5%	0.5%	0.5%	0.5%
Children Per Capita Expenditures						
Below 133%	$11,514	$11,571	$11,629	$11,687	$11,746	$11,804
133-400%	$11,518	$11,575	$11,633	$11,691	$11,750	$11,809
Over 400%	$11,664	$11,723	$11,781	$11,840	$11,899	$11,959
Pregnant Women Per Capita Expenditures						
Below 133%	$15,668	$15,746	$15,825	$15,904	$15,983	$16,063
133-400%	$15,926	$16,006	$16,086	$16,166	$16,247	$16,328
Over 400%	$0	$0	$0	$0	$0	$0
Children and Pregnant Women Total Expenditures[3]		**$11,283,106**	**$11,305,503**	**$11,327,944**	**$11,350,430**	**$11,372,961**
Medically Needy FMAP		60.51%	61.17%	61.33%	61.50%	61.74%
Federal Expenditures w/o SB 2512		$6,827,407	$6,915,576	$6,947,428	$6,980,514	$7,021,666
State Expenditures w/o SB 2512[4]		$4,455,699	$4,389,927	$4,380,516	$4,369,916	$4,351,295
Federal Expenditures under SB 2512		$6,827,407	$6,915,576	$6,947,428	$6,980,514	$1,755,417
State Expenditures under SB 2512[4]		$4,455,699	$4,389,927	$4,380,516	$4,369,916	$1,087,824
SB 2512 State Impact - Medically Needy Children and Pregnant Women		**$0**	**$0**	**$0**	**$0**	**($3,263,471)**

Note: Under SB 2512, children and pregnant women remain covered by Medicaid until the Medically Needy program ends on October 1, 2019.

Positive Total = Additional Cost; Negative Total = Savings

Medically Needy Total Savings…

Total State Impact	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Medically Needy Total Expenditures[3]		**$651,699,292**	**$652,992,915**	**$654,289,106**	**$655,587,870**	**$656,889,212**
Medically Needy FMAP		60.51%	61.17%	61.33%	61.50%	61.74%
Federal Expenditures w/o SB 2512		$439,357,185	$445,031,017	$447,080,765	$449,209,937	$451,858,115
State Expenditures w/o SB 2512[4]		$286,733,023	$282,500,480	$281,894,882	$281,212,727	$280,014,438
Federal Expenditures under SB 2512		$623,079,168	$589,225,696	$572,485,114	$567,668,535	$551,562,831
State Expenditures under SB 2512[4]		$15,667,191	$19,320,955	$37,295,408	$43,348,228	$52,162,829
SB 2512 State Impact - Medically Needy		**($271,065,833)**	**($263,179,525)**	**($244,599,475)**	**($237,864,499)**	**($227,851,609)**

Positive Total = Additional Cost; Negative Total = Savings

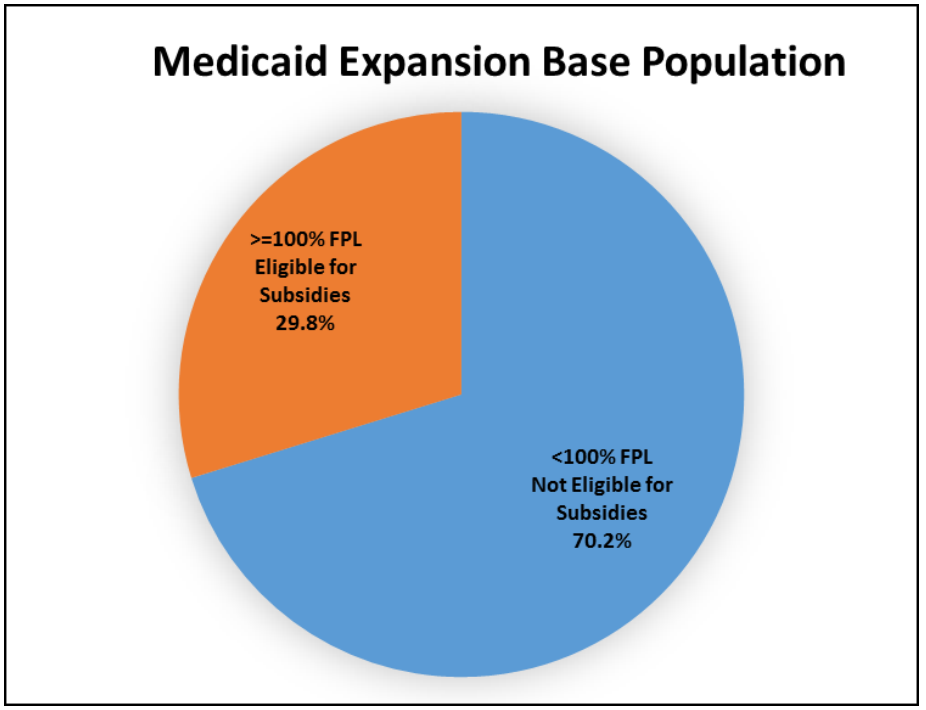
Phase 1 & Phase 2 – Medicaid Coverage…

Phase 1 and 2 Medicaid Coverage Summary	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Medicaid Expansion Population	742,677	753,446	764,167	774,835	785,423
FHIX Phase 1 Enrolled	742,677				
FHIX Phase 2 Enrolled	339,806	344,733	349,639	354,520	359,364
FHIX Phase 2 Disenrolled/Not Enrolled	402,871	408,713	414,528	420,315	426,059
Percent of Population Not Enrolled	***54.2%***	***54.2%***	***54.2%***	***54.2%***	***54.2%***
Crowd out Population	20,031	20,031	20,031	20,031	20,031
FHIX Phase 1 Enrolled	0				
FHIX Phase 2 Enrolled	20,031	20,031	20,031	20,031	20,031
FHIX Phase 2 Disenrolled/Not Enrolled	0	0	0	0	0
Percent of Population Not Enrolled	***0.0%***	***0.0%***	***0.0%***	***0.0%***	***0.0%***
Medically Needy Shift	25,964	25,886	25,808	25,731	25,653
FHIX Phase 1 Enrolled	25,964				
FHIX Phase 2 Enrolled	25,964	25,886	25,808	25,731	25,653
FHIX Phase 2 Disenrolled/Not Enrolled	0	0	0	0	0
Percent of Population Not Enrolled	***0.0%***	***0.0%***	***0.0%***	***0.0%***	***0.0%***
Medically Needy Children and Pregnant Women Population	937	934	931	928	925
Medically Needy Medicaid Enrolled	937	934	931	928	0
Medically Needy Medicaid Disenrolled/Not Enrolled[1]	0	0	0	0	925
Percent of Population Not Enrolled	***0.0%***	***0.0%***	***0.0%***	***0.0%***	***100.0%***
Medically Needy Non Pregnant Adults 19-64 above 133%	3,212	3,203	3,193	3,184	3,174
Medically Needy Medicaid Enrolled	0	0	0	0	0
Medically Needy Medicaid Disenrolled/Not Enrolled	3,212	3,203	3,193	3,184	3,174
Percent of Population Not Enrolled	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***
Medically Needy Adults 65+ All Income Levels	1,902	1,896	1,891	1,885	1,879
Medically Needy Medicaid Enrolled	0	0	0	0	0
Medically Needy Medicaid Disenrolled/Not Enrolled	1,902	1,896	1,891	1,885	1,879
Percent of Population Not Enrolled	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***
Total all groups	794,723	805,396	816,021	826,594	837,086
Total Enrolled	386,737	391,584	396,409	401,210	405,048
Total Disenrolled/Not Enrolled	407,986	413,812	419,612	425,384	432,038
Percent of Population Not Enrolled	***51.3%***	***51.4%***	***51.4%***	***51.5%***	***51.6%***

[1]Children and pregnant women are disenrolled from the Medically Needy program when it ends on October 1, 2019.

Disenrollees and the Exchange…

- Subsidies (health insurance premium tax credits) are only available to persons between 100% to 400% FPL selecting insurance coverage through the Exchange.
- Florida's Medicaid Expansion base population has 70.2% who are not eligible for subsidies today, and the remaining 29.8% are eligible for subsidies.
- EDR assumes that the disenrolled population would mirror Florida's Medicaid Expansion base population and therefore at least 70.2% would continue to be ineligible for subsidies on the Exchange.
- It is currently unknown whether the remaining 29.8% that are between 100% and 133% FPL would be allowed to receive subsidies for private insurance coverage purchased on the Exchange.



Insurance Premium Tax: Crowd Out Adjustment...

- 40,062 persons currently have private individual insurance and would qualify for FHIX.

- This analysis assumes that 20,031 would forgo private insurance for FHIX, removing them from the current pool of privately insured.

- In Phase 2, the premiums and tax collections from the underlying Insurance Premium Tax forecast associated with the 20,031 would be removed.

Insurance Premium Tax: ACA Induced...

- The current revenue forecast assumes 1.44 million individuals are induced by the Affordable Care Act to obtain private insurance that is subject to the Insurance Premium Tax in the 2015 calendar year.

- This analysis assumes that 234,284 of the 1.44 million individuals would qualify for and move to Medicaid under Phase 1 - Simple Expansion in lieu of seeking private insurance. This number grows and is included within the uninsured presenters.

- The premiums and tax collections from the underlying Insurance Premium Tax forecast associated with these individuals are removed during the entire forecast.

- Some of the Phase 1 participants would be disenrolled during the transition to Phase 2; however, their remaining insurance options are unclear and the disenrollee feedback to the Insurance Premium Tax forecast is indeterminate.

Insurance Premium Tax: FHIX Plan Selections...

- The ultimate mix of insurance offerings on FHIX are currently unknown.

- Among other options, FHIX can offer "...a managed care plan contracted with the Agency for Health Care Administration under the managed medical assistance program under part IV of Chapter 409." Today, these plans (Medicaid MMA) are not subject to the Insurance Premium Tax. The Insurance Premium Tax status of **Medicaid MMA *through FHIX*** is unclear.

- For these reasons, the impact of FHIX selections on Insurance Premium Tax collections is indeterminate.

Phase 1 & Phase 2 – Insurance Premium Tax...

Insurance Premium Tax

	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Phase 1 - Impact of Simple Expansion	($7,226,394)	($6,187,003)	($6,570,490)	($6,807,356)	($7,108,618)
Phase 2 - Impact of Crowd Out leaving private insurance	$0	($403,304)	($311,722)	($307,841)	($317,198)
Phase 2 - Impact of FHIX plan selection	$0	Indeterminate	Indeterminate	Indeterminate	Indeterminate
Impact of Disenrolled	$0	Indeterminate	Indeterminate	Indeterminate	Indeterminate
Total Cash Impact on Insurance Premium Tax	($7,226,394)	($6,590,307)	($6,882,212)	($7,115,197)	($7,425,816)

Overall Fiscal Impacts...

Expansion Program	FY 2015-16		FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20	
	Caseload	State $$$	Caseload	State $$$	Caseload	State $$$	Caseload	State $$$	Caseload	State $$$
*Uninsured Presenters (new)**	742,677	-	753,446	(75.1)	764,167	(172.3)	774,835	(212.3)	785,423	(289.3)
Crowd-Out (new)	122,704	-	122,704	(12.2)	122,704	(27.6)	122,704	(33.5)	122,704	(45.0)
*Medically Needy Shift (net)***	-	237.4	-	218.9	-	200.2	-	193.5	-	180.4
Medicaid Subtotal	865,381	237.4	876,150	131.6	886,871	0.3	897,539	-52.3	908,127	-153.9
Insurance Premium Revenue Adj.	-	(8.9)	-	(8.0)	-	(8.4)	-	(8.7)	-	(9.1)
Total	865,381	228.5	876,150	123.6	886,871	(8.1)	897,539	(61.0)	908,127	(163.0)

Note: Dollars in Millions; Positive Total = Surplus; Negative Total = Shortfall

*Includes qualifying persons on the waitlist for the APD Developmental Services Waiver and service recipients in the DCF Substance Abuse and Mental Health Program.

**Assumes approximately 26,000 non-pregnant adults aged 19-64 shift from the Medically Needy Program to the Expansion Program, with no other changes.

SB 2512 Phases 1 and 2	FY 2015-16		FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20	
	Caseload*	State $$$	Caseload	State $$$	Caseload	State $$$	Caseload	State $$$	Caseload	State $$$
*Uninsured Presenters (new)***	339,806	-	344,733	(32.5)	349,639	(75.0)	354,520	(92.1)	359,364	(125.7)
Crowd-Out (new)	20,301	-	20,031	(1.9)	20,031	(4.3)	20,031	(5.2)	20,031	(7.0)
*Medically Needy Shift (net)****	-	237.4	-	219.0	-	200.5	-	193.9	-	180.8
*Medically Needy Sunset*****	N/A	33.6	N/A	44.2	N/A	44.1	N/A	44.0	N/A	47.1
Phase 1 and 2 Subtotal	360,107	271.0	364,764	228.8	369,670	165.3	374,551	140.6	379,395	95.2
Insurance Premium Revenue Adj.	-	(7.2)	-	(6.6)	-	(6.9)	-	(7.1)	-	(7.4)
Total	360,107	263.8	364,764	222.2	369,670	158.4	374,551	133.5	379,395	87.8

Note: Dollars in Millions; Positive Total = Surplus; Negative Total = Shortfall

* The caseload figures for FY 2015-16 represent the number enrolled at the end of the fiscal year.

** Includes qualifying persons on the waitlist for the APD Developmental Services Waiver and service recipients in the DCF Substance Abuse and Mental Health Program.

*** Assumes approximately 26,000 non-pregnant adults aged 19-64 under 133% FPL shift from the Medically Needy Program to Phase 1 and 2. State savings result from the higher federal match rate for Phase 1 and 2 expenditures and from enrollee premium payments, which are exclusive to Phase 2.

**** Caseload in this row is not shown because individuals are included in current Medicaid program enrollment numbers. Non-pregnant adults ages 19-64 above 133% FPL and adults ages 65+ at all income levels (about 5,100 individuals in total) will be disenrolled from the program October 1, 2015. Children and pregnant women (about 930 individuals in total) will be disenrolled when the program is terminated on October 1, 2019. State savings in this row result from the disenrollment of these individuals at these points in time.

Expansion Program vs. SB 2512 Phases 1 and 2	FY 2015-16		FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20	
	Caseload	State $$$	Caseload	State $$$	Caseload	State $$$	Caseload	State $$$	Caseload	State $$$
	-505,274	+35.3	-511,386	+98.6	-517,201	+166.5	-522,988	+194.5	-528,732	+250.8

Impact of Medicaid Expansion 2015
Part 3: Phases 1, 2, and 3

(Impact: SB 2512 First Engrossed, All years)

Phase 1: Simple Expansion

Phase 2: FHIX

Phase 3: Healthy Kids Transition

April 9, 2015

Presented by:

The Florida Legislature
Office of Economic and
Demographic Research
850.487.1402
http://edr.state.fl.us

Phase 3 – Healthy Kids Assumptions…

- Phase 3 is interpreted to have two independent and simultaneously occurring components:
  - The continuation of Phase Two without further changes.
  - The transition of Florida Healthy Kids Title XXI to the FHIX marketplace.
- This analysis assumes that each of the three eligibility requirements for the FHIX Program [(1)(a); (1)(b); and (1)(c)] provided in s. 409.723, Florida Statutes, stands alone and should be evaluated in that manner. The following is from Section 5 of the bill:

  409.723 Participation.—

  (1) ELIGIBILITY.—In order to participate in FHIX, an individual must be a resident and must meet the following requirements, as applicable:

  (a) Qualify as a newly eligible enrollee, who must be an individual as described in s. 1902(a)(10)(A)(i)(VIII) of the Social Security Act or s. 2001 of the Affordable Care Act and as may be further defined by federal regulation.

  (b) Meet and maintain the responsibilities under subsection(4).

  (c) Qualify as a participant in the Florida Healthy Kids program under s. 624.91, subject to the implementation of Phase Three under s. 409.727.

Phase 3 – Healthy Kids Assumptions…

- For Phase 3, the bill language states:
  - (4)(b) Eligibility during this phase is based on meeting the requirements of Phase Two and s. 409.723(1)(c).
- This analysis assumes that Phase 3 eligibility for adults aged 19-64 is contingent upon meeting the requirements outlined in s. 409.723 (1)(a) and (1)(b), while eligibility for Florida Healthy Kids children aged 5-18 eligibility is contingent upon meeting the requirements of s. 409.723 (1)(c), Florida Statutes. As these are distinct qualifying populations, the analysis effectively treats the "and" used in the bill language as an "or".
- This assumption is further supported by the distinction between the terms enrollee and Healthy Kids enrollee.
  - Proposed sections 409.727(4)(c), (e), and (f) of the Florida Statutes concern all enrollees, while the language in sections 409.727(4)(a), (d), and (g) only addresses Florida Healthy Kids enrollees.

Phase 3 – Healthy Kids Assumptions…

- The eligibility requirements are assumed to correspond with the three phases of the program as follows:

Eligibility Requirements	Phase 1	Phase 2	Phase 3
Adults Aged 19-64	(a)	(a) & (b)	(a) & (b)
Florida Healthy Kids Children Aged 5-18			(c)

- This analysis further assumes that the Healthy Kids children (current and new) will be exempt from the "Participant Responsibilities" listed below:
  - Annually provide evidence of participation in one of the following activities:
    - Proof of employment.
    - On-the-job training or job placement activities.
    - Pursuit of educational opportunities.

Phase 3 – Healthy Kids Transition…

- Current Healthy Kids Title XXI (133% - 200% FPL):
  - Current enrollees will transition to FHIX on July 1, August 1, and September 1 2016 (one-third each month).
  - The monthly premium amount for these children will be the maximum $25 because all have family incomes above 100% FPL (the current average monthly premium is $12.48; the shift to FHIX will reduce costs to the state due to the increase in premiums).
- Current Healthy Kids Full Pay (above 200% FPL):
  - This analysis assumes Healthy Kids Full Pay enrollees will not be eligible for the FHIX marketplace (today, these families pay 100% of their insurance costs; if they transition to FHIX, they would receive heavily subsidized insurance).
  - Instead of moving to FHIX, Full Pay enrollees will shift to private insurance coverage on July 1, 2016.
  - The private insurance coverage that this population selects will be subject to the Insurance Premium Tax, thereby increasing state Insurance Premium Tax collections.

Phase 3 – Healthy Kids Assumptions…

- All Phase 3 participants will pay premiums in a timely manner.
- The relative shares of Federal and State expenditures for Healthy Kids in FHIX will be determined by the Enhanced FMAP, which was estimated by the February 2015 Social Services Estimating Conference (SSEC) and is currently used by the Healthy Kids program.
- Premiums will be deducted from total expenses before application of the Federal/State split, mirroring the current Healthy Kids program.

Phase 3 – Healthy Kids Title XXI Fiscal Impact...

Phase 3 - Healthy Kids Title XXI	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Average Monthly Enrollees		158,837	162,305	164,740	167,211
Total Expenditures		$249,670,639	$265,319,749	$280,071,684	$295,643,500
Average FMAP		95.79%	95.93%	96.04%	78.96%
Healthy Kids Title XXI w/o SB 2512					
Monthly Family Premium Contribution		$12.48	$12.48	$12.48	$12.48
Total Enrollee Premium Revenue		$23,787,379	$24,306,797	$24,671,412	$25,041,469
Total Net Expenditures					
(Premium Revenue subtracted)	Phase 3 Not	$225,883,260	$241,012,952	$255,400,272	$270,602,030
Federal Expenditures	in Effect	$216,372,540	$231,198,830	$245,283,139	$213,078,298
State Expenditures		$9,510,720	$9,814,122	$10,117,133	$57,523,732
Healthy Kids Title XXI w/ SB 2512					
Monthly Family Premium Contribution		$25.00	$25.00	$25.00	$25.00
Total Enrollee Premium Revenue		$45,686,508	$48,691,500	$49,421,900	$50,163,200
Total Net Expenditures					
(Premium Revenue subtracted)		$203,984,131	$216,628,249	$230,649,784	$245,480,300
Federal Expenditures		$195,389,990	$207,807,178	$221,513,348	$193,251,430
State Expenditures		$8,594,141	$8,821,071	$9,136,436	$52,228,870
State Impact: Phase 3 - Healthy Kids Title XXI		**($916,578)**	**($993,051)**	**($980,697)**	**($5,294,863)**

Notes:

- Positive Impact = Additional Cost; Negative Impact = Savings
- Figures for Healthy Kids without SB 2512 are from the February 2015 SSEC.
- It is assumed that the Healthy Kids FMAP would apply to Phase 3 Expenditures as it is currently applied to Healthy Kids Expenditures.
- Expenditures were computed monthly and summarized on the table above; see Supplemental Materials for underlying monthly analysis.

Phase 3 – Healthy Kids Full Pay Fiscal Impact…

Phase 3 - Healthy Kids Full Pay	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Healthy Kids Full Pay w/o SB 2512					
Average Monthly Enrollees		37,607	37,607	37,607	37,607
Total Expenditures		$59,563,224	$59,563,224	$59,563,224	$59,563,224
Total Enrollee Premium Revenue		$59,563,224	$59,563,224	$59,563,224	$59,563,224
Total Net Expenditures					
(Premium Revenue subtracted)		$0	$0	$0	$0
Federal Expenditures		$0	$0	$0	$0
State Expenditures	Phase 3 Not	$0	$0	$0	$0
Healthy Kids Full Pay w/ SB 2512	in Effect				
Average Monthly Enrollees		0	0	0	0
Monthly Family Premium Contribution		$0	$0	$0	$0
Total Enrollee Premium Revenue		$0	$0	$0	$0
Total Net Expenditures					
(Premium Revenue subtracted)		$0	$0	$0	$0
Federal Expenditures		$0	$0	$0	$0
State Expenditures		$0	$0	$0	$0
State Impact: Phase 3 - Healthy Kids Full Pay		**$0**	**$0**	**$0**	**$0**

Notes:

- Figures for Healthy Kids without SB 2512 are from the February 2015 SSEC.
- Expenditures were computed monthly and summarized on the table above; see Supplemental Materials for underlying monthly analysis.

Phases 1, 2, and 3 – Annual Expenditures…

Phases 1, 2, and 3 - Annual Expenditures	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Expansion, Crowd out, and Medically Needy					
Enrollees	Varies by Month	390,650	395,478	400,282	405,048
Expenditures	$2,608,558,179	$2,050,446,176	$2,112,416,159	$2,176,557,459	$2,242,889,303
Enrollee Premium Revenue	$32,089,126	$77,988,980	$78,958,272	$79,922,591	$80,879,530
Net Expenditures (Premium Revenue subtracted)	$2,576,469,053	$1,972,457,196	$2,033,457,887	$2,096,634,868	$2,162,009,773
Expansion FMAP	100.00%	97.50%	94.50%	93.50%	91.50%
Federal Expenditures w/o Phase 3 Healthy Kids	**$2,576,469,053**	**$1,923,145,766**	**$1,921,617,703**	**$1,960,353,601**	**$1,978,238,943**
State Expenditures w/o Phase 3 Healthy Kids	**$0**	**$49,311,430**	**$111,840,184**	**$136,281,266**	**$183,770,831**
Healthy Kids Title XXI					
Enrollees	Phase 3 Not in Effect	158,837	162,305	164,740	167,211
Expenditures		$249,670,639	$265,319,749	$280,071,684	$295,643,500
Enrollee Premium Revenue		$45,686,508	$48,691,500	$49,421,900	$50,163,200
Net Expenditures (Premium Revenue subtracted)		$203,984,131	$216,628,249	$230,649,784	$245,480,300
Expansion FMAP		95.79%	95.93%	96.04%	78.96%
Federal Expenditures Phase 3 Healthy Kids		**$195,389,990**	**$207,807,178**	**$221,513,348**	**$193,251,430**
State Expenditures Phase 3 Healthy Kids		**$8,594,141**	**$8,821,071**	**$9,136,436**	**$52,228,870**
Federal Expenditures Phases 1, 2, and 3	**$2,576,469,053**	**$2,118,535,756**	**$2,129,424,881**	**$2,181,866,949**	**$2,171,490,373**
State Expenditures Phases 1, 2, and 3	**$0**	**$57,905,571**	**$120,661,255**	**$145,417,703**	**$235,999,700**

Phases 1, 2, and 3 – Medicaid Coverage…

Phases 1, 2, and 3 Medicaid Coverage Summary	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Medicaid Expansion Population	742,677	753,446	764,167	774,835	785,423
FHIX Phase 1 Enrolled	742,677				
FHIX Phase 2 Enrolled	339,806	344,733	349,639	354,520	359,364
FHIX Phase 2 or 3 Disenrolled/Not Enrolled	402,871	408,713	414,528	420,315	426,059
Percent of Population Not Enrolled	***54.2%***	***54.2%***	***54.2%***	***54.2%***	***54.2%***
Crowd out Population	20,031	20,031	20,031	20,031	20,031
FHIX Phase 1 Enrolled	0				
FHIX Phase 2 Enrolled	20,031	20,031	20,031	20,031	20,031
FHIX Phase 2 or 3 Disenrolled/Not Enrolled	0	0	0	0	0
Percent of Population Not Enrolled	***0.0%***	***0.0%***	***0.0%***	***0.0%***	***0.0%***
Medically Needy Shift	25,964	25,886	25,808	25,731	25,653
FHIX Phase 1 Enrolled	25,964				
FHIX Phase 2 Enrolled	25,964	25,886	25,808	25,731	25,653
FHIX Phase 2 or 3 Disenrolled/Not Enrolled	0	0	0	0	0
Percent of Population Not Enrolled	***0.0%***	***0.0%***	***0.0%***	***0.0%***	***0.0%***
Medically Needy Children and Pregnant Women Population	937	934	931	928	925
Medically Needy Medicaid Enrolled	937	934	931	928	0
Medically Needy Medicaid Disenrolled/Not Enrolled[1]	0	0	0	0	925
Percent of Population Not Enrolled	***0.0%***	***0.0%***	***0.0%***	***0.0%***	***100.0%***
Medically Needy Non Pregnant Adults 19-64 above 133%	3,212	3,203	3,193	3,184	3,174
Medically Needy Medicaid Enrolled	0	0	0	0	0
Medically Needy Medicaid Disenrolled/Not Enrolled	3,212	3,203	3,193	3,184	3,174
Percent of Population Not Enrolled	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***
Medically Needy Adults 65+ All Income Levels	1,902	1,896	1,891	1,885	1,879
Medically Needy Medicaid Enrolled	0	0	0	0	0
Medically Needy Medicaid Disenrolled/Not Enrolled	1,902	1,896	1,891	1,885	1,879
Percent of Population Not Enrolled	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***
Healthy Kids Title XXI	Phase 3 not in effect	158,837	162,305	164,740	167,211
Healthy Kids or FHIX Enrolled		158,837	162,305	164,740	167,211
Healthy Kids or FHIX Disenrolled/Not Enrolled		0	0	0	0
Percent of Population Not Enrolled		***0.0%***	***0.0%***	***0.0%***	***0.0%***
Healthy Kids Full Pay		37,607	37,607	37,607	37,607
Healthy Kids or FHIX Enrolled		0	0	0	0
Healthy Kids or FHIX Disenrolled/Not Enrolled		37,607	37,607	37,607	37,607
Percent of Population Not Enrolled		***100.0%***	***100.0%***	***100.0%***	***100.0%***
Total all groups	794,723	1,001,839	1,015,933	1,028,940	1,041,904
Total Enrolled	386,737	550,420	558,714	565,950	572,259
Total Disenrolled/Not Enrolled	407,986	451,419	457,219	462,991	469,645
Percent of Population Not Enrolled	***51.3%***	***45.1%***	***45.0%***	***45.0%***	***45.1%***

Phase 3 Healthy Kids

[1]Children and pregnant women are disenrolled from the Medically Needy program when it ends on October 1, 2019.

Phases 1, 2, and 3 – Insurance Premium Tax...

	Insurance Premium Tax				
	FY 2015-16	FY 2016-17	FY2017-18	FY 2018-19	FY 2019-20
Phase 1 - Impact of Simple Expansion	($7,226,394)	($6,187,003)	($6,570,490)	($6,807,356)	($7,108,618)
Phase 2 - Impact of Crowd Out Leaving Private Insurance	$0	($403,304)	($311,722)	($307,841)	($317,198)
Phase 2 - Impact of FHIX Plan Selection	$0	Indeterminate	Indeterminate	Indeterminate	Indeterminate
Impact of Disenrolled	$0	Indeterminate	Indeterminate	Indeterminate	Indeterminate
Phase 3 - Impact of Healthy Kids Full Pay Purchasing Insurance	$0	$362,106	$629,801	$525,205	$548,440
Total Cash Impact of Insurance Premium Tax	($7,226,394)	($6,228,201)	($6,252,411)	($6,589,992)	($6,877,376)

Overall Fiscal Impacts...

Expansion Program	FY 2015-16		FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20	
	Caseload	State $$$	Caseload	State $$$	Caseload	State $$$	Caseload	State $$$	Caseload	State $$$
*Uninsured Presenters (new)**	742,677	-	753,446	(75.1)	764,167	(172.3)	774,835	(212.3)	785,423	(289.3)
Crowd-Out (new)	122,704	-	122,704	(12.2)	122,704	(27.6)	122,704	(33.5)	122,704	(45.0)
*Medically Needy Shift (net)***	-	237.4	-	218.9	-	200.2	-	193.5	-	180.4
Medicaid Subtotal	865,381	237.4	876,150	131.6	886,871	0.3	897,539	(52.3)	908,127	(153.9)
Insurance Premium Revenue Adj.	-	(8.9)	0	(8.0)	0	(8.4)	0	(8.7)	0	(9.1)
Total	865,381	228.5	876,150	123.6	886,871	(8.1)	897,539	(61.0)	908,127	(163.0)

SB 2512 Phases 1 and 2	FY 2015-16		FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20	
	Caseload***	State $$$	Caseload	State $$$	Caseload	State $$$	Caseload	State $$$	Caseload	State $$$
*Uninsured Presenters (new)**	339,806	-	344,733	(32.5)	349,639	(75.0)	354,520	(92.1)	359,364	(125.7)
Crowd-Out (new)	20,301	-	20,031	(1.9)	20,031	(4.3)	20,031	(5.2)	20,031	(7.0)
Medically Needy Shift (net) †	-	237.4	-	219.0	-	200.5	-	193.9	-	180.8
Medically Needy Sunset‡	N/A	33.6	N/A	44.2	N/A	44.1	N/A	44.0	N/A	47.1
Phase 1 and 2 Subtotal	360,107	271.0	364,764	228.8	369,670	165.3	374,551	140.6	379,395	95.2
Insurance Premium Revenue Adj.	-	(7.2)	-	(6.6)	-	(6.9)	-	(7.1)	-	(7.4)
Total	360,107	263.8	364,764	222.2	369,670	158.4	374,551	133.5	379,395	87.8
Compared to Expansion Program	**-505,274**	**+35.3**	**-511,386**	**+98.6**	**-517,201**	**+166.5**	**-522,988**	**+194.5**	**-528,732**	**+250.8**

SB 2512 Phases 1, 2, and 3	FY 2015-16		FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20	
	Caseload***	State $$$	Caseload	State $$$	Caseload	State $$$	Caseload	State $$$	Caseload	State $$$
*Uninsured Presenters (new)**	339,806	-	344,733	(32.5)	349,639	(75.0)	354,520	(92.1)	359,364	(125.7)
Crowd-Out (new)	20,301	-	20,031	(1.9)	20,031	(4.3)	20,031	(5.2)	20,031	(7.0)
Medically Needy Shift (net) †	-	237.4	-	219.0	-	200.5	-	193.9	-	180.8
Medically Needy Sunset ††	N/A	33.6	N/A	44.2	N/A	44.1	N/A	44.0	N/A	47.1
Healthy Kids Title XXI ‡	N/A	N/A	-	0.9	-	1.0	-	1.0	-	5.3
Phase 1, 2, and 3 Subtotal	360,107	271.0	364,764	229.7	369,670	166.3	374,551	141.6	379,395	100.5
Insurance Premium Revenue Adj.	-	(7.2)	-	(6.2)	-	(6.3)	-	(6.6)	-	(6.9)
Total	360,107	263.8	364,764	223.5	369,670	160.0	374,551	135.0	379,395	93.6
Compared to Expansion Program	**-505,274**	**+35.3**	**-511,386**	**+99.9**	**-517,201**	**+168.1**	**-522,988**	**+196.0**	**-528,732**	**+256.6**
Compared to SB 2512 Phases 1 and 2	**0**	**0.0**	**0**	**+1.3**	**0**	**+1.6**	**0**	**+1.5**	**0**	**+5.8**

Note: Dollars in Millions; Positive Total = Surplus; Negative Total = Shortfall

Overall Fiscal Impacts Table Notes...

*Includes qualifying persons on the waitlist for the APD Developmental Services Waiver and service recipients in the DCF Substance Abuse and Mental Health Program.
**Assumes approximately 26,000 non-pregnant adults aged 19-64 shift from the Medically Needy Program to the Expansion Program, with no other changes.
*** The caseload figures for FY 2015-16 represent the number enrolled at the end of the fiscal year.
† Assumes approximately 26,000 non-pregnant adults aged 19-64 under 133% FPL shift from the Medically Needy Program to Phase 1 and 2. State savings result from the higher federal match rate for Phase 1 and 2 expenditures and from enrollee premium payments, which are exclusive to Phase 2.
†† Caseload in this row is not shown because individuals are included in current Medicaid program enrollment numbers. Non-pregnant adults ages 19-64 above 133% FPL and adults ages 65+ at all income levels (about 5,100 individuals in total) will be disenrolled from the program October 1, 2015. Children and pregnant women (about 930 individuals in total) will be disenrolled when the program is terminated on October 1, 2019. State savings in this row result from the disenrollment of these individuals at these points in time.
‡ State savings result from the increase in enrollee premium payments for Healthy Kids Title XXI from $12.48 per month (February 2015 SSEC) to $25.00 per month (cost sharing rate for those above 100% FPL). Assumes approximately 38,000 Healthy Kids Full Pay enrollees will transition to private insurance coverage on July 1, 2016 because they will not have a path to insurance through the FHIX marketplace.

Overall Coverage Status after Full Implementation...

Current Coverage Status	Coverage Status under SB 2512 (after Phase 3 full implementation)	Description	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Uninsured	FHIX	This group is currently uninsured and would qualify for the FHIX marketplace (school/work requirements and premium payment requirements).	344,733	349,639	354,520	359,364
Private Insurance	FHIX	This group currently has private insurance and would transition to the FHIX marketplace; they will meet all FHIX requirements and will opt for a FHIX plan over their current private insurance plan.	20,031	20,031	20,031	20,031
Medicaid Medically Needy	FHIX	This group is currently in Medicaid Medically Needy and would be transitioned to FHIX because they would meet all the requirements. This group, which has not paid premiums in Medicaid, would be subject to premium payments starting in Phase 2.	25,886	25,808	25,731	25,653
Healthy Kids Title XXI	FHIX	This group comprises the current Healthy Kids Title XXI population. They would be transitioned to FHIX in Phase 3; premiums would increase from the current average of $12.48 per month to $25.00 per month (all are above 100% FPL).	158,837	162,305	164,740	167,211
		FHIX Enrollment Subtotal	549,486	557,783	565,021	572,259
Medicaid Medically Needy	Medicaid Medically Needy	This group is children or pregnant women currently in Medicaid Medically Needy. They would remain in Medicaid until the Medically Needy program is terminated on October 1, 2019.	934	931	928	- 925
Medicaid Medically Needy	No longer with a state-sponsored program	This group includes the elderly at all income levels and the individuals with incomes above 133% FPL who are currently in Medicaid Medically Needy. This group would not meet income and/or age requirements for FHIX. They would be disenrolled from Medicaid on October 1, 2015.	- 5,099	- 5,084	- 5,069	- 5,053
Healthy Kids Full Pay	No longer with a state-sponsored program	This group comprises the Healthy Kids Full Pay population (all have incomes above 200% FPL). It is assumed that they would not have a path to insurance through the FHIX marketplace.	- 37,607	- 37,607	- 37,607	- 37,607
Uninsured	Not with a state-sponsored program	This group is currently uninsured and would not qualify for the FHIX marketplace (school/work requirements and/or premium payment requirements).	~ 408,713	~ 414,528	~ 420,315	~ 426,059

A negative sign (-) indicates individuals who are currently enrolled in a state-sponsored program but would be disenrolled under SB 2512.
A tilde (~) indicates individuals who are currently uninsured and would not become eligible for a state-sponsored program through SB 2512.

Supplemental Materials:

Economic Analysis of PPACA and Medicaid Expansion

Select Committees on Patient Protection and Affordable Care Act

March 4, 2013

Presented by:

The Florida Legislature
Office of Economic and Demographic Research
850.487.1402
http://edr.state.fl.us

Affordable Care Act Analysis: Assumptions

Background:

Leadership in the Florida Senate and House of Representatives requested that the Legislative Office of Economic and Demographic Research (EDR) conduct an in-depth analysis of the Affordable Care Act (Act) and the potential effects it will have on the Florida Economy. The analysis covers the mandatory provisions of the Act, as well as the optional Medicaid Expansion decision. The mandatory provisions will be in effect regardless of future legislative actions. The optional decision regarding Medicaid Expansion is under the direct control of the Legislature and Governor.

The evaluation was performed by using static estimates developed by EDR as inputs for the recently-deployed Statewide Model. The Statewide Model was used to generate the direct, indirect and induced economic effects for Florida suggested by the static inputs. Since all 50 states will be simultaneously undergoing major transformations caused by the Act, some of the Florida-specific results will be further altered by the national nature of the legislation and the ultimate interplay among states, as well as by feedback results that are beyond the scope of this analysis.

The analysis has been further hampered by the incomplete nature of the federal rules and regulations that will implement the Act. While EDR has made decisions and assumptions based on the information now available, some of the underlying premises are still in flux and could change the outcomes generated by the Statewide Model. For example, it is still not clear whether individual subsidies will be available in exchanges set up and run by the federal government; however, this analysis assumes they will be.

For these reasons, the Statewide Model results should be viewed not as specifics, but as suggestive of likely outcomes. Even the adjusted baseline described below should be regarded as a simulation.

Premise:

The current National and Florida Economic Outlooks have not fully taken account of the economic changes that will result from the implementation of the Act. This means that the baseline for the Statewide Model had to be adjusted to address the provisions that will be in effect regardless of future legislative actions prior to looking at policy changes that are dependent on state legislative action. All discrete adjustments to the baseline are documented and discussed, with the results compared to the starting or prior baseline. [Note: EDR has reviewed the assumptions made by IHS Global Insight for the control national forecast; largely their adjustments were directed at the new federally required taxes and fees.]

Among the more significant adjustments to the baseline were:

(1) Increased state budgetary costs and federal dollars associated with the mandatory portions of the Affordable Care Act.

a. Primary Care Practitioners Fee Increase to Medicare Rate—an increase in the state budget by the amount of anticipated federal dollars; the increase in state budget is then directed to providers in the ambulatory area without a commensurate increase in services.
    i. Level pulled from the AHCA 12/12 Response (with state costs converted to federal: $349.4 million in FY 2012-13; $698.8 million in 2013-14; and $349.4 million in FY 2014-15.
b. Health Insurance Tax Impact on Medicaid Managed Care—as the new tax effectively increases managed care rates within the existing Medicaid Program, the cost will be split between increased federal reimbursements and realignment within the state budget to provide the required match. The increased federal reimbursements will effectively offset a portion of the dollars leaving the state to pay the initial tax.
    i. Level pulled from the AHCA 12/12 Response (state costs range from $13.1 million in FY 2013-14 to $192.5 million in FY 2022-23.
c. The cost of implementing the Exchange and its effect on eligibility determinations are indeterminate.

(2) Increased insurance coverage associated with the mandatory portions of the Act resulting in a greater number of traditional insurance policies, self-insured programs and richer benefits, as well as the knock-on effects from overall increased demand for healthcare from the entire population of uninsured.
a. Increased demand for healthcare services resulting from uninsured becoming insured: Increased Demand = # of Uninsured x Policy Cost
    i. In the PUMS data, 1,442,014 persons will receive policy coverage and 727,972 persons will fall under a self-insured program for a total of 2,169,986 uninsured persons becoming insured. These numbers are translated into percentages of the population and then allowed to grow over time as part the overall population growth within those shares.
        1. Applied four-year ramp-up period: 40%, 60%, 80% and 100%.
        2. Included aliens and the potential Medicaid Expansion population.
        3. Made a 10% adjustment for the non-compliant portion of the tax base (referred to generally as “non-filers”) in any given year.
        4. Made discrete assumptions based on age, employment status, size and type of employer, and income.
    ii. For policy coverage, assumed new premium of $6,157 in base year (preliminary data from OIR). This assumption was developed by taking into account the following: 70% actuarial value of the silver plan; trend growth; reinsurance subsidy; guaranteed issue feature of the contract; new fees related to the Act; area factor average reduction; and essential health benefits requirement. In essence, the policy premiums initially increase

by 25% to comply with the new law and then grow at one-half the rate they otherwise would have in the baseline. This result reflects the dual effects from the upward pressure on policy premiums associated with the "richer" benefit package and the downward effects from better health outcomes.

iii. Applied a scalar to the premium cost to reflect non-direct healthcare expenditures retained by insurance companies (based on EDR research: 18% non-health; 82% health). This non-health portion does not increase final demand for health services.

iv. Recognized the out-of-pocket healthcare spending today by the uninsured that will convert to spending on copayments, deductibles and incidentals: $583 per uninsured person that becomes covered (Health Affairs spending table).

v. Downwardly adjusted increased demand by the amount of today's uncompensated care that will shift to the newly insured (whether through self-insurance programs or private coverage). Assumed $536 per newly insured person = $1.16 billion (Health Affairs spending table).
    1. Assumed Disproportionate Share reductions will be largely offset by the shift from uncompensated care to newly insured care, resulting in no overall loss in spending.
    2. Used "Estimated Total Uncompensated Care" as reported in the 2011 Florida Hospital Uniform Reporting System (FHURS): $2.6 billion. Insured care will reduce this amount by $1.2 billion, leaving a remaining level of uncompensated care of $1.4 billion and freeing the resources previously directed to the $1.2 billion.
    3. Florida's federal Disproportionate Share allocation has ranged from $188.3 million to $206.6 million.

vi. Developed separate estimates related to the treatment of federal "subsidies" for individuals and tax credits for small businesses.
    1. Assumed individual subsidies will be limited to the non-working population with incomes greater than 100% and less than 400%.
    2. Assumed business tax credits will be limited to entities with less than 25 employees—and that they will be further constrained by the amount of liability present within any given year.

vii. In regard to incidence, assumed that:
    1. Premium policy costs for non-working individuals are entirely absorbed by households.

2. Premium policy costs for employees initially hit businesses, but households absorb 100% of the cost in the long-run.
3. Self-insurance programs are a complete cost-shift from today's spending by households to businesses due to the lower requirements for self-insurance programs.

viii. There is also an increased demand for health services associated with the richer benefit packages required for existing policy-holders. Based on OIR preliminary data, a 25% mark-up is expected on the average policy premium costs today (from $5,177 to $6,465).
1. Some existing policy-holders are non-employed and pay for insurance out-of-pocket. A portion of this group is eligible for individual subsidies.
2. Some of the small firms providing insurance today are eligible for the tax credits.

ix. Woodworking (the entry of individuals who are currently eligible for the Medicaid or CHIP programs but not enrolled) is indeterminate as adopted by Social Services Estimating Conference (SSEC).

b. Insurance Premium Tax value is added to state revenues, which increases the size of the overall budget expenditure on the generic market basket of goods.
c. The business value associated with increased utility / productivity from better healthcare (reduced sick days, average workweek hours increased, and improved health) is indeterminate.
d. Effects from employers altering their practices regarding the provision of insurance (moving to self-funded pools to a greater extent than the historic trend, eliminating coverage altogether or reducing the scope of health benefits) are indeterminate and excluded from the baseline analysis. Similarly, the extent to which businesses scale back or eliminate coverage but increase wages is deemed indeterminate.

(3) The loss of Florida discretionary income and/or increases to business costs to pay increased federal taxes and fees required by the Affordable Care Act, as well as the dead-weight loss of penalties and the excise taxes on "Cadillac" insurance plans:
a. Individual penalties assumptions:
i. Medicaid Expansion population is exempt from penalties due to the blanket "hardship" exemption provided by HHS. In addition, the general threshold for the requirement to pay federal income taxes is within the Medicaid Expansion population group.
ii. The permanent penalties will be incurred only by the following:
1. Non-working adults—all of those 25 and younger, and 10% of those 26 and older (essentially the non-filers).

2. 10% of the self-employed (essentially the non-filers).
3. The children associated with the above groups (10% of all children).

Moreover, only 50% of the non-filers will be identified within any given year and have to pay the penalty (including any back penalties).

iii. Temporary or time-limited penalties are assigned to certain individuals during the ramp-up period (1 minus the ramp-up period percentages). They will become compliant over time.

b. Business penalties assumption—Indeterminate
   i. Large firms will have total compliance due to competitive pressures related to their brand images and recruitment needs.
   ii. Small firms are not subject to business penalties.
c. Existing policy-holders are assumed to have 100% compliance, meaning no penalties will apply.
d. Increased federal taxes and fees were adequately treated in the underlying National and Florida Economic Outlooks.
e. Changes associated with some plans being deemed "Cadillac" are indeterminate.

(4) The model endogenously handles the shifting between industry sectors from "all else" into healthcare, including the knock-on effects, to meet the new demand.

Scenarios (compared to adjusted baseline described above):
The adjusted baseline can be considered the standard approach to modeling the Affordable Care Act "shock", assuming everything works as designed without introducing atypical labor shortages, wage constraints or capacity issues. The alternative scenarios (#1 through #7) are provided to assess areas of potential risk or change and the impact they would have on the results; however, no attempt is made to gauge the likelihood of the alternative outcomes. [Note: In the presentation PowerPoint, the various scenarios are referred to as "risk simulations".]

1. ADJUSTED BASELINE SCENARIO #1: Difference from the adjusted baseline after incorporating a barrier on additional healthcare workers moving into the state to fill jobs. [key features: potentially constrained infusion of federal dollars; no job-related migration]

2. ADJUSTED BASELINE SCENARIO #2: Difference from the adjusted baseline after assuming the uninsured today from the small business, self-employed, and non-working populations remain uninsured—meaning that those individuals originally buying policies instead pay penalties, as well as a complete erosion of existing insurance provision among small employers (1-50 employees, excluding self-employed)—meaning those employees move to individual coverage and the employers lose their tax credits. [key features: increased penalties; reduced Insurance Premium Tax collections; reduced federal tax credits]

3. ADJUSTED BASELINE SCENARIO #3: Difference from the adjusted baseline after assuming 25% entry rate for Woodworking. Woodworking values came from EDR. [key features: infusion of federal dollars; redirected state dollars]

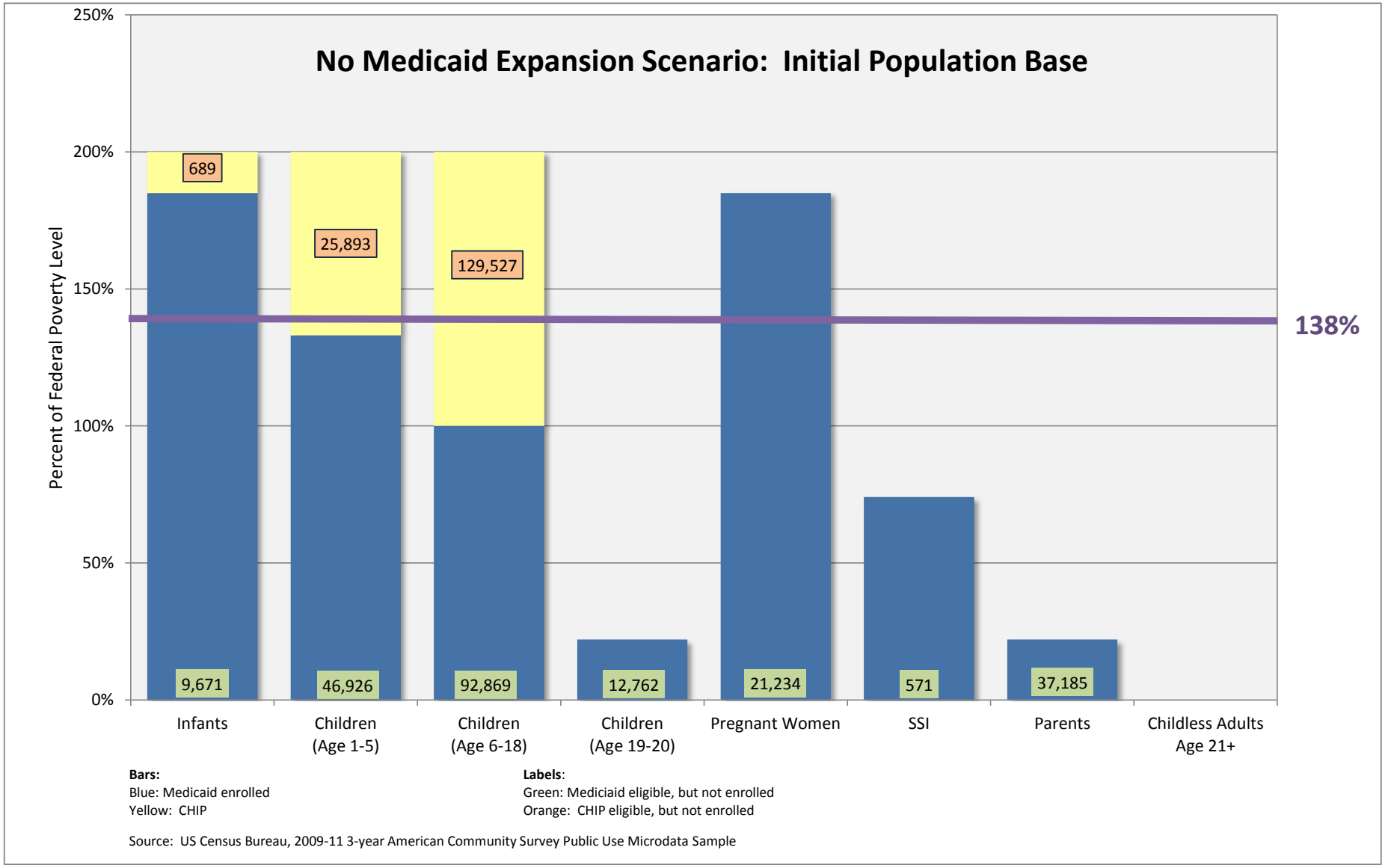
4. ADJUSTED BASELINE SCENARIO #4: Difference from the adjusted baseline after assuming that premium policy costs increase 50% from the existing blended level instead of the 25% assumed in the adjusted baseline, and that this higher level becomes the standard for all new policies. [key features: increased subsidies; increased Insurance Premium Tax]

5. ADJUSTED BASELINE SCENARIO #5 WITH MEDICAID EXPANSION: Difference from the adjusted baseline after incorporating the Medicaid Expansion coupled with an adjustment to assume 25% entry rate for Woodworking. Woodworking values came from EDR. The Medicaid Expansion values from the Social Services Estimating Conference have been updated to reflect new PUMS data and more recent "per member, per month" (PMPM) data. [key features: infusion of federal dollars; redirected state dollars; lower Insurance Premium Tax dollars due to the removal of the Medicaid Expansion and Crowd Out populations]

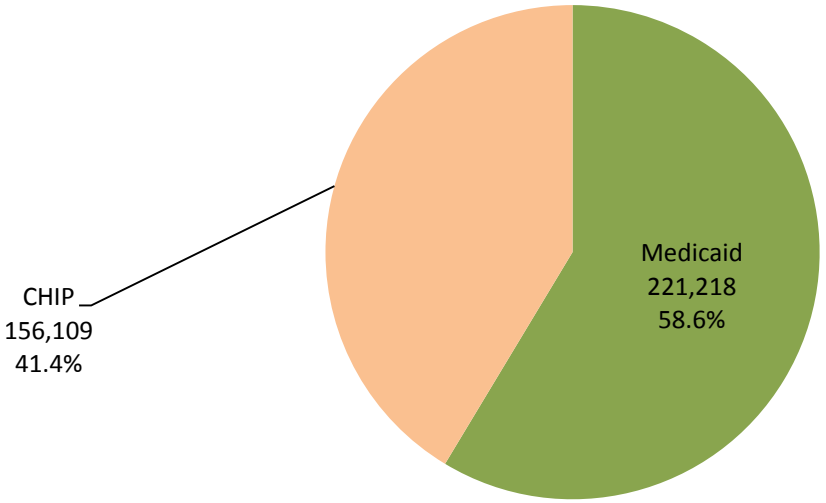
6. ADJUSTED BASELINE SCENARIO #6 WITH MEDICAID EXPANSION: Difference from the adjusted baseline after incorporating the Medicaid Expansion coupled with an adjustment to assume 25% entry rate for Woodworking and a barrier on additional healthcare workers moving into the state to fill jobs. Woodworking values came from EDR. The Medicaid Expansion values from the Social Services Estimating Conference have been updated to reflect new PUMS data and more recent PMPM data. [key features: infusion of federal dollars; redirected state dollars; lower Insurance Premium Tax dollars due to the removal of the Medicaid Expansion and Crowd Out populations; no job-related migration]

7. ADJUSTED BASELINE SCENARIO #7 WITH MEDICAID EXPANSION: Difference from the adjusted baseline after incorporating the Medicaid Expansion coupled with an adjustment to assume 25% entry rate for Woodworking and a 60% increase in the annual costs implied by the PMPM rates for the Medicaid Expansion and Woodworking entrants. Woodworking and increased Medicaid Expansion values came from EDR. [key features: infusion of federal dollars; redirected state dollars; lower Insurance Premium Tax dollars due to the removal of the Medicaid Expansion and Crowd Out populations]

8. BREAK-EVEN FUNDING ANALYSIS FOR MEDICAID EXPANSION: Incremental federal funding adjustments to the scenario which incorporates the Medicaid Expansion with no other alterations (Scenario #5) to determine at what point the additional economic benefits are driven to zero. Loss of federal funds are offset through an equal infusion of state funds with overall budget reductions elsewhere. The selected welfare variable to measure the economic benefits is Domestic Consumption by Households and Government.


No Medicaid Expansion Scenario: Initial Population Base
Percent of Federal Poverty Level
250%
200%
150%
100%
50%
0%
138%
689
25,893
129,527
9,671
46,926
92,869
12,762
21,234
571
37,185
Infants
Children (Age 1-5)
Children (Age 6-18)
Children (Age 19-20)
Pregnant Women
SSI
Parents
Childless Adults Age 21+
Bars:
Blue: Medicaid enrolled
Yellow: CHIP
Labels:
Green: Mediciaid eligible, but not enrolled
Orange: CHIP eligible, but not enrolled
Source: US Census Bureau, 2009-11 3-year American Community Survey Public Use Microdata Sample

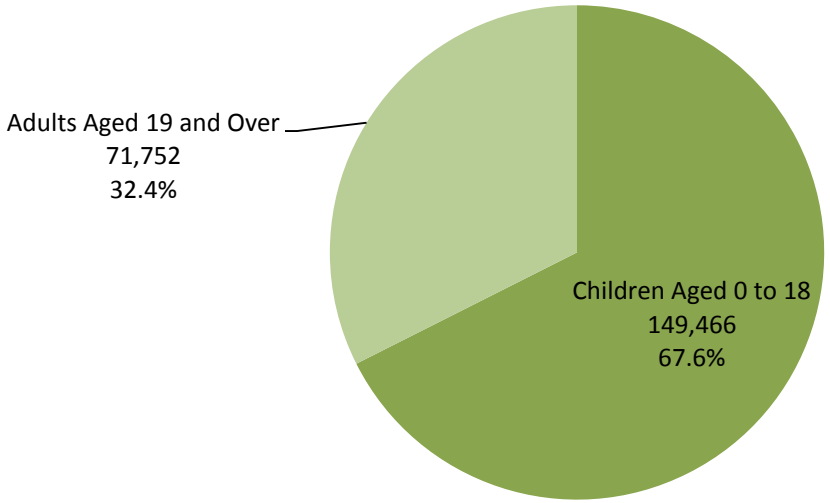
Eligible, but not Enrolled: No Expansion, Initial Population Base



Total: 377,327

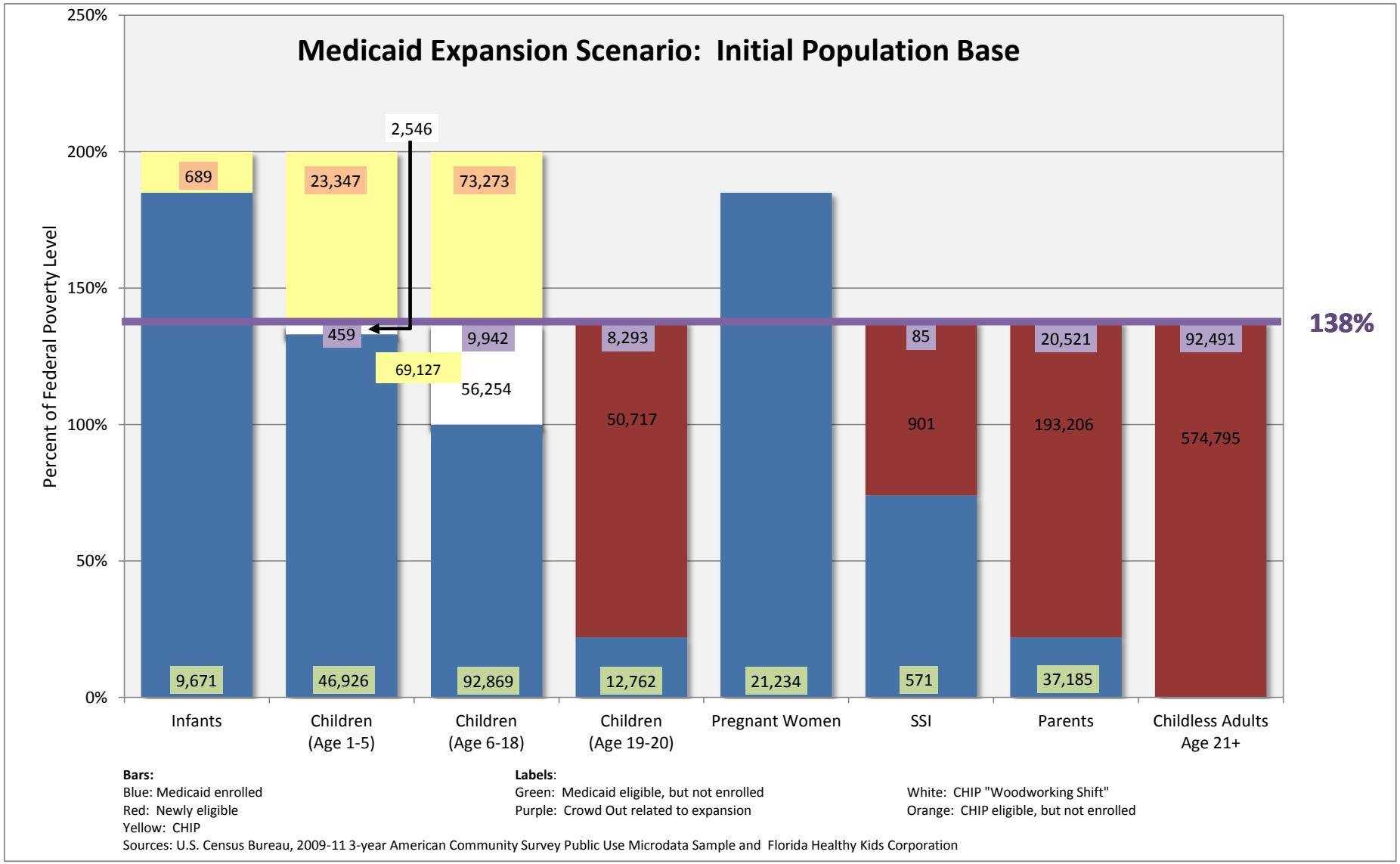
Source: U.S. Census Bureau, 2009-11 3-year American Community Survey Public Use Microdata Sample

Eligible for Medicaid, but not Enrolled: Initial Population Base

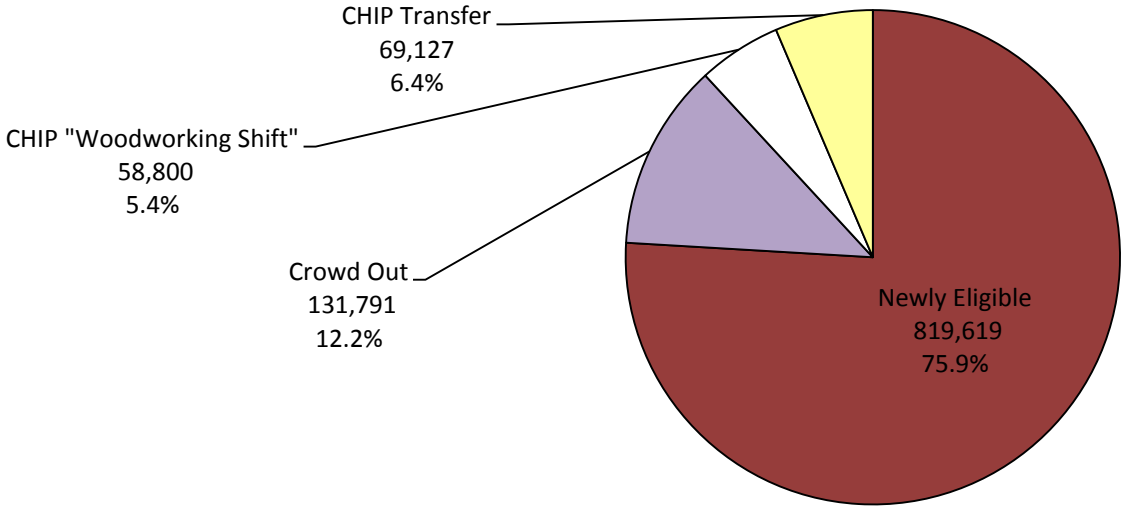


Total: 221,218

Source: U.S. Census Bureau, 2009-11 3-year American Community Survey Public Use Microdata Sample


Medicaid Expansion Scenario: Initial Population Base
Percent of Federal Poverty Level
250%
200%
150%
100%
50%
0%
138%
2,546
689
23,347
73,273
459
9,942
69,127
56,254
8,293
50,717
85
901
20,521
193,206
92,491
574,795
9,671
46,926
92,869
12,762
21,234
571
37,185
Infants
Children (Age 1-5)
Children (Age 6-18)
Children (Age 19-20)
Pregnant Women
SSI
Parents
Childless Adults Age 21+
Bars:
Blue: Medicaid enrolled
Red: Newly eligible
Yellow: CHIP
Labels:
Green: Medicaid eligible, but not enrolled
Purple: Crowd Out related to expansion
White: CHIP "Woodworking Shift"
Orange: CHIP eligible, but not enrolled
Sources: U.S. Census Bureau, 2009-11 3-year American Community Survey Public Use Microdata Sample and Florida Healthy Kids Corporation

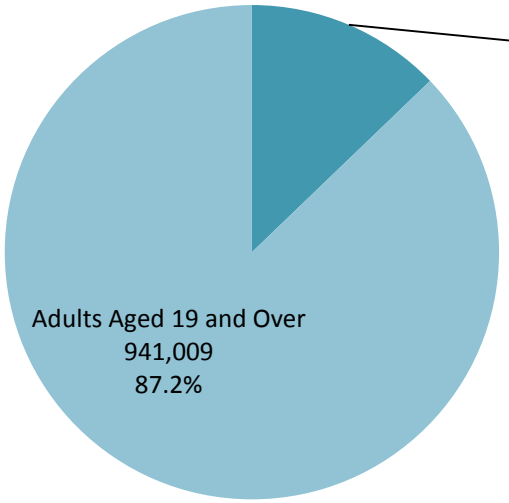
Medicaid Expansion Components: Initial Population Base



Total: 1,079,337

Sources: U.S. Census Bureau, 2009-11 3-year American Community Survey Public Use Microdata Sample and Florida Healthy Kids Corporation

Medicaid Expansion Impact: Initial Population Base



Total: 1,079,337

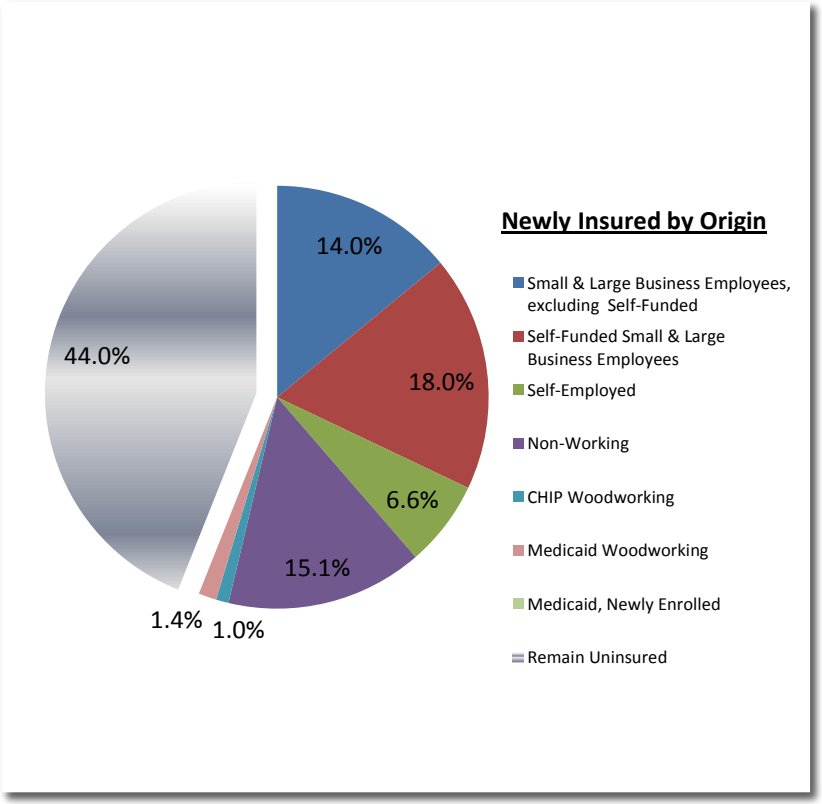
Note: 92.5% of Children Aged 0 to 18 are from CHIP (includes enrolled and those eligible, but not enrolled)

Sources: U.S. Census Bureau, 2009-11 3-year American Community Survey Public Use Microdata Sample and Florida Healthy Kids Corporation

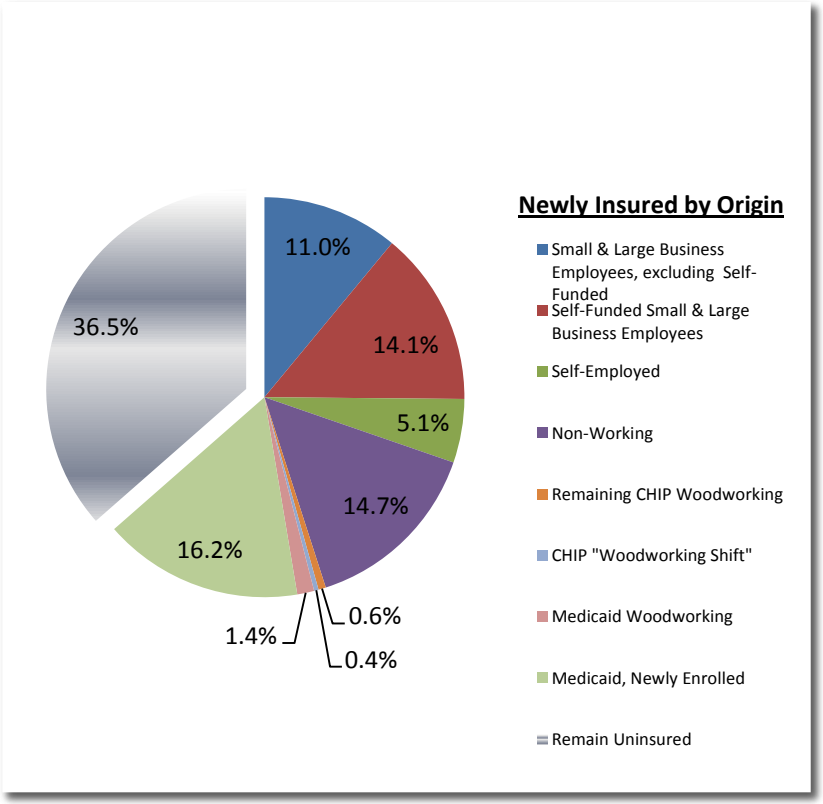
Newly Insured and Uninsured

Percent of Current Uninsured*

Adjusted Baseline with Woodworking**



Adjusted Baseline with Woodworking** and Medicaid Expansion



*4,040,731

** Woodworking are individuals that are currently eligible but not enrolled

Tab 4

Reports

Georgetown University
Health Policy Institute
CENTER FOR CHILDREN
AND FAMILIES

Medicaid Expansion Fills Gaps in Maternal Health Coverage Leading to Healthier Mothers and Babies

by Adam Searing and Donna Cohen Ross

Key Findings

- New research shows states that expand Medicaid improve the health of women of childbearing age: increasing access to preventive care, reducing adverse health outcomes before, during and after pregnancies, and reducing maternal mortality rates.
- While more must be done, Medicaid expansion is an important means of addressing persistent racial disparities in maternal health and maternal mortality.
- Better health for women of childbearing age also means better health for their infants. States that have expanded Medicaid under the Affordable Care Act saw a 50 percent greater reduction in infant mortality than non-expansion states.
- The uninsured rate for women of childbearing age is nearly twice as high in states that have not expanded Medicaid compared to those that have expanded Medicaid (16 percent v. 9 percent). States with the highest uninsured rates for women of childbearing age are: Alabama, Alaska, Florida, Georgia, Idaho, Mississippi, Nevada, North Carolina, Oklahoma, South Carolina, Texas and Wyoming. Ten of these twelve states have not expanded Medicaid.

The authors would like to thank the American College of Obstetricians and Gynecologists and the March of Dimes for their contributions to this report.

Introduction

Disruptions in health coverage are associated with adverse health consequences.[1] This is especially true for women in their childbearing years, when a pregnancy means having health coverage is even more important. The stakes are high as the care a woman receives during pregnancy is critical to her own health, as well as to the health of her newborn. In the United States, maternal and infant mortality is higher than most other industrialized nations,[2] lending urgency to strategies to address the overall health of women.[3]

In this paper we review the substantial new research showing the significant improvements in access to health coverage for women of childbearing age achieved through the adoption of the Affordable Care Act's (ACA) Medicaid expansion. Better health coverage is important not just for women who are pregnant but also for women well before they become pregnant and well after childbirth. The American College of Obstetricians and Gynecologists (ACOG) recommends women have access to continuous health coverage in order to increase preventive care, reduce avoidable adverse obstetric and gynecologic health outcomes, increase early diagnosis of disease and reduce maternal mortality rates.[4] Research also finds that Medicaid expansion has an important role in reducing the significant and persistent racial disparities in maternal and infant health. And finally, new studies show that healthier mothers mean healthier infants—another benefit for states that expand Medicaid.

Pre-ACA Medicaid Expansions Focused on Pregnancy Status

Over the past four decades, in response to concerns about high rates of infant mortality and poor birth outcomes, states have increased Medicaid eligibility for pregnant women, making health care during pregnancy significantly more accessible for lower-income women.

While this has been a positive change for both mothers and children, it is only one part of a comprehensive strategy to improve maternal and child health. It has been established that the strong connection between the health of a mother and her baby begins well before pregnancy and continues long past the 60 days of post-partum coverage Medicaid typically provides.[5] This elevates the need for overall good health throughout a woman's childbearing years. Innovative efforts such as the University of North Carolina's 4th Trimester Project, in collaboration with groups like the March of Dimes, are highlighting how increasing coverage is a key part of a comprehensive strategy to improve the health of new mothers.[6]

The Effect of State Medicaid Expansions

Reviews of state data estimate the majority of pregnancy-related deaths are preventable.[7] Expanding access to health coverage is a key strategy for addressing this problem. A growing body of research demonstrates the ACA and implementation of state Medicaid expansions have had positive effects on the health of mothers and their infants. Recent studies show that state Medicaid expansions have helped to reduce the rates of both maternal deaths and infant mortality. Women are getting better health coverage before pregnancy, leading to improved prenatal nutrition and prenatal care. And postpartum coverage has improved for women, helping them get the care they need following the birth of their child. States that have expanded Medicaid also have decreased the likelihood that eligibility for coverage will fluctuate, resulting in losing and regaining coverage over a relatively short span of time, a phenomenon known as "churning." Breaks in health coverage can disrupt care and cause existing health conditions to become more serious and more difficult and expensive to treat.[8]

Pre-ACA Medicaid Expansions for Pregnant Women and Coverage Churn for Women of Childbearing Age

In the late 1980s, prompted by high infant mortality rates, many states expanded Medicaid coverage for pregnant women. The state median income eligibility for pregnant women rose to 185 percent of the federal poverty level (FPL) by 2013 and is now 200 percent FPL.[9] Low-income parents could also obtain Medicaid coverage but at a much lower income level, typically well below 100 percent of FPL. The ACA's coverage changes, and particularly its expansion of Medicaid to both parents and adults without children in the home with incomes below 138 percent FPL, have the potential to change this situation dramatically. But the Supreme Court's decision to make Medicaid expansion optional for states, coupled with ideological objections to Medicaid expansion, led to some states rejecting the option. This has resulted in significant differences across the country in access to health coverage for women of childbearing age. (See Appendix A.)

In non-expansion states, the median Medicaid eligibility level for parents is 40 percent FPL or $8,532 per year for a family of three in 2019. This compares to a minimum parental eligibility level of 138 percent FPL ($29,435 for a family of three) in states that have expanded Medicaid.[10] And women of childbearing age who do not have children under age 19 or are currently not pregnant fare much worse in non-expansion states—they are simply not eligible for Medicaid at all unless they have a serious disability.

Such limited coverage for low-income women means coverage churn is more common in non-expansion states. Research consistently shows women of childbearing age experience high rates of transition between being covered

by different insurance providers or being covered and then becoming uninsured.[11] **While Medicaid's relatively high eligibility levels for pregnant women mean a woman's delivery is often covered, these same lower-income women are at significant risk of being uninsured in the critical months before pregnancy and after delivery.** A recent national study found that half of women who were insured by Medicaid for their delivery were uninsured prior to pregnancy.[12] And of these new mothers, 55 percent experienced another coverage gap in the six months after giving birth. The authors also note that "[t]he well-being of infants can also be negatively affected by their mothers' lack of insurance after delivery. Poor management of maternal mental health adversely affects a child's cognitive, behavioral, and socioemotional development."[13]

Table 1 shows that Medicaid expansion decisions have had a direct impact on the ability of women of childbearing age to obtain health coverage. While the ACA reduced the uninsured rate among women of childbearing age across all states, women living in states refusing the Medicaid expansion have generally experienced much smaller reductions and are more likely to remain uninsured. **States with above average declines in their uninsured rate for women of childbearing age are mainly states that have expanded Medicaid.**

States that have not expanded Medicaid generally do not cover women of childbearing age who do not have a disability if they are not pregnant or are not parents of dependent children. These states generally have extremely low eligibility levels for parents to qualify for Medicaid. For example, in Texas an income of more than $302 a month disqualifies the parents in a family of three from enrolling in Medicaid. See Table 2.

Medicaid Expansion Provides Benefits that Confer Two-Generation Advantages

ACA Medicaid expansions provide women of childbearing age their state's full benefit package for adults. These services can benefit their children, as well. For example:

- Maternal Depression Screening and Treatment. Research estimates that more than half (55 percent) of all infants in families with incomes below the poverty level are being raised by mothers with some form of depression.[a] In addition to the toll depression takes on the mother herself, it also can disrupt the formation of a strong parent-child relationship, which compromises a child's early brain development, with implications for cognitive, social and emotional health. State Medicaid programs must make depression screening without cost-sharing available to women enrolled under Medicaid expansions, and refer women at risk of perinatal depression to counseling. Many states have adopted the option to allow pediatric care providers to conduct maternal depression screenings as part of the well-child visit and also to deliver "dyadic treatment" to mother and child together.[b] In Medicaid expansion states, mothers have access to additional treatments they may need, such as more intensive therapy or medication.
- Tobacco Use Cessation. Medicaid enrollees are about twice as likely as the general U.S. population to smoke tobacco: 32 percent of beneficiaries identify themselves as smokers.[c] The ACA requires that all state Medicaid programs offer comprehensive tobacco cessation benefits without cost-sharing for pregnant women and for populations made newly eligible under Medicaid expansion. Smoking cessation can not only reduce a woman's risk of cardiovascular and respiratory disease, cancer and other chronic conditions, it also decreases the chances of pregnancy-related complications, including preterm birth, low birth weight, and sudden infant death syndrome. When adults quit smoking, they also reduce the likelihood that their children will suffer from exposure to second-hand smoke, which can trigger more frequent and severe asthma attacks and is associated with ear infections and even tooth decay.

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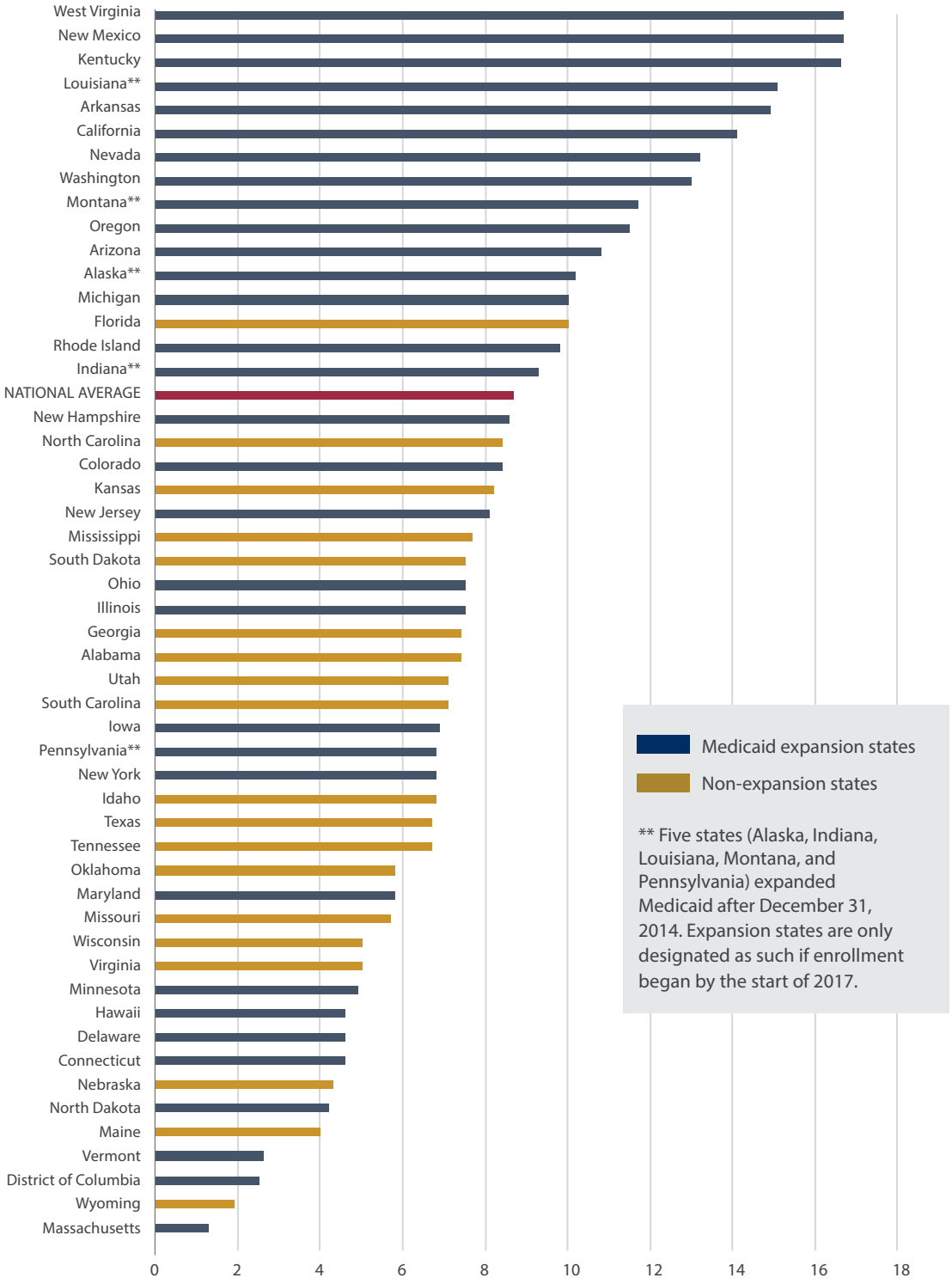
[a] Tracey Veriker, Jennifer Macomber, and Olivia Golden, "Infants of Depressed Mothers Living in Poverty: Opportunities to Identify and Serve," The Urban Institute. August 2010.

[b] "Maternal Depression Screening and Treatment: A Critical Role for Medicaid in the Care of Mothers and Children," CMS Informational Bulletin, May 16, 2016.

[c] L. Ku, B. Bruen, S.Steinmetz, and T. Bysshe, "Medicaid Tobacco Cessation: Big Gaps Remain In Efforts To Get Smokers To Quit," Health Affairs, Vol. 35, No. 1, January 2016.

Table 1. Percentage Point Decline in the Uninsured Rate for Women of Childbearing Age (18-44), 2013-2017



Source: Data is from a Georgetown University Center for Children and Families analysis of the U.S. Census Bureau American Community Survey (ACS) data, 2013 and 2017 single year estimates from the Integrated Public Use Microdata Series (IPUMS).

Table 2. Medicaid Income Eligibility Limit in Non-Expansion States for Adults as a Percentage of the Federal Poverty Level, January 2019

State	Parent upper eligibility limit (in a family of three) – percent of FPL	Parent upper eligibility limit (in a family of three) – monthly dollar amount	Childless adult eligibility limit (for an individual)
Alabama	18%	$320	0%
Florida	32%	$569	0%
Georgia	35%	$622	0%
Idaho*	25%	$444	0%
Kansas	38%	$675	0%
Mississippi	26%	$462	0%
Missouri	21%	$373	0%
Nebraska*	63%	$1,120	0%
North Carolina	42%	$747	0%
Oklahoma	42%	$747	0%
South Carolina	67%	$1,191	0%
South Dakota	49%	$871	0%
Tennessee	95%	$1,689	0%
Texas	17%	$302	0%
Utah*	60%	$1,067	0%
Wisconsin	100%	$1,778	100%
Wyoming	54%	$960	0%

Source: Based on a national survey conducted by Kaiser Family Foundation with the Georgetown University Center for Children on Families, 2019. See here for more information on the survey and this table.

*Idaho and Nebraska voters approved Medicaid expansion but the expansions are not in effect and may be limited. Utah voters also approved a Medicaid expansion but Utah's legislature passed a law limiting the expansion to only some of those originally eligible and capping enrollment at the discretion of the state.

Note: Among reproductive-age women who remained uninsured in 2016, about 20 percent were likely eligible for comprehensive Medicaid or Children's Health Insurance Program (CHIP) coverage based on their income, indicating that outreach and enrollment efforts could help boost participation.[14]

States Rejecting Medicaid Expansion are Missing an Opportunity to Address Stark Racial Disparities in Maternal Health

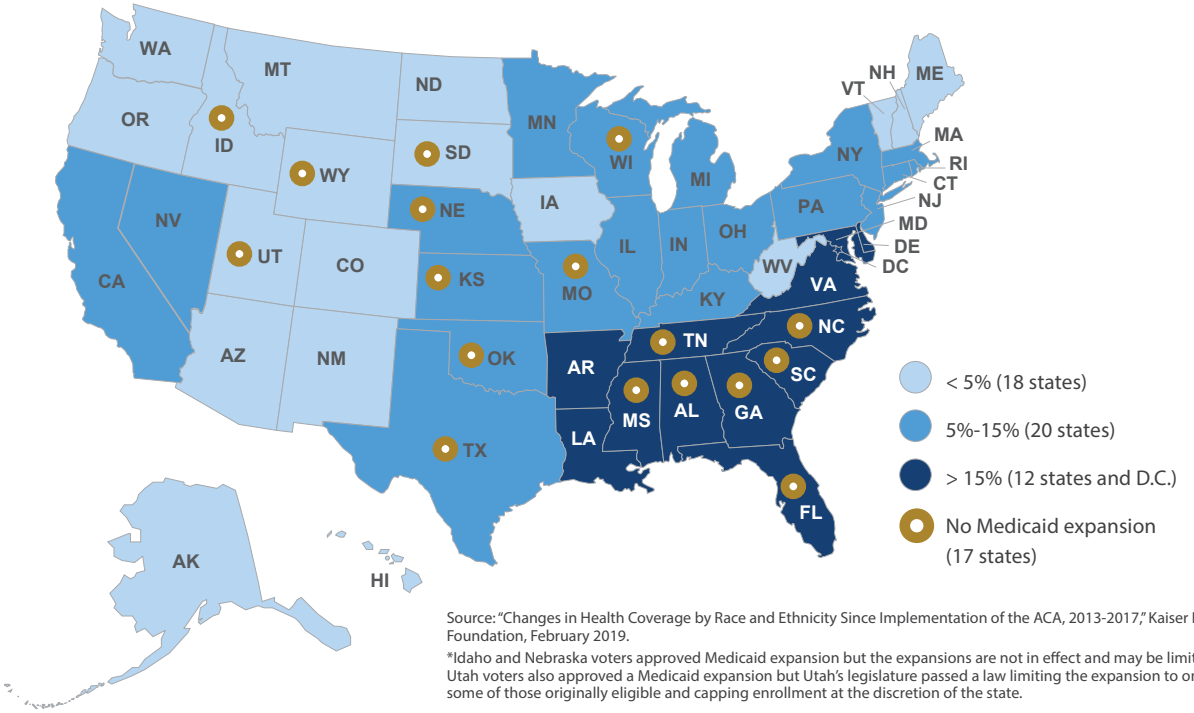
While strategies to increase women's health coverage have had positive effects, especially in states that have expanded Medicaid, stark racial disparities with respect to maternal mortality and maternal health persist. A recent commentary in the Journal of the American Medical Association noted that "African American women are nearly three times as likely to die of complications related to pregnancy and childbirth compared with white women . . . a gap that has not narrowed in decades."[15] The most recent comprehensive study on these disparities in the *American Journal of Obstetrics and Gynecology* found:

> "[B]lack women had a higher adjusted rate of severe maternal morbidity than white women. Our results confirm that the high risk of adverse outcomes faced by black women who give birth in comparison with white women in the United States and are similar to findings by others."[16]

Unsurprisingly, nonelderly adults are much more likely to be uninsured in states that have not expanded Medicaid.[17] Recent data specifically on women of childbearing age are not available, but overall this disparity in uninsured rates is magnified when race is taken into account. For example, the uninsured rate among nonelderly African Americans is 14 percent in states that haven't expanded Medicaid compared to 8 percent in expansion states. Nonelderly white children and adults (ages 0-64) experience lower overall rates of uninsurance: 10 percent in states that haven't expanded Medicaid compared to 6 percent in expansion states.[18] In Southern states, which make up the majority of those that have not expanded Medicaid, African Americans are disproportionately affected and experience higher uninsured rates. This is due in large part to the fact that the states that have not expanded Medicaid have larger shares of black residents.[19]

While multiple factors contribute to improving maternal health, new research is finding Medicaid coverage is a critical piece of the puzzle, especially for addressing racial inequities in access to affordable coverage and care.[20]

Share of Total Population that is Black by State and Current Medicaid Expansion Status



Source: "Changes in Health Coverage by Race and Ethnicity Since Implementation of the ACA, 2013-2017," Kaiser Family Foundation, February 2019.

*Idaho and Nebraska voters approved Medicaid expansion but the expansions are not in effect and may be limited. Utah voters also approved a Medicaid expansion but Utah's legislature passed a law limiting the expansion to only some of those originally eligible and capping enrollment at the discretion of the state.

Medicaid Expansion: Benefits for Women of Childbearing Age

When states decide to expand Medicaid, the resulting gains in coverage provide benefits that promote preventive health practices and can protect women and their children from serious health conditions and even death. Better coverage is the starting point for better care overall. In addition to the well-known advantages of being insured during pregnancy, coordination and quality of care during the pre-pregnancy period and during the postpartum period—sometimes called the "4th trimester"—are especially important.[21]

Several new studies provide insights into the impacts of Medicaid expansion for women of childbearing age including increased health coverage, earlier prenatal care, better overall care, lower rates of maternal mortality and a reduction in infant mortality.

1. Better health coverage for reproductive-age women

Overall, the ACA has had a major impact on increasing coverage for all women of reproductive age. This is due not only to Medicaid expansions but also other coverage changes like the expansion of dependent coverage to young adults up to age 26, the premium tax credit, elimination of pre-existing condition exclusions, and required coverage of maternity care. However, some low-income women are still at risk. Research published in the American Journal of Public Health reported "significant reductions in uninsurance and increases in nongroup private insurance and Medicaid among reproductive-aged women" in the first three years following the ACA's implementation. Across states, the authors identified the ACA as the cause of a 7.4 percentage-point decrease in the probability of uninsurance for reproductive age women. **Low-income women in non-expansion states were identified as a main group still at risk for lack of coverage.**[22]

2. Earlier initiation of prenatal care

The first long-term study examining the effect of pre-ACA Medicaid expansions on women of childbearing age found multiple positive effects. Medicaid expansions improved coverage prior to pregnancy and led to "earlier initiation and improved adequacy of prenatal care among pregnant mothers." Based on the findings, the author concluded that **"More recent state expansions in Medicaid under the ACA have the potential to impact even more women and children as they extend eligibility to all low-income women regardless of parental or pregnancy status."**[23]

3. Better care before women become pregnant

In Ohio, a 2018 study found that after the state's Medicaid expansion there was almost a 12 percentage-point increase in Medicaid enrollment for first-time mothers before they became pregnant. This improved access to proper prenatal care in the first 16 weeks after they became pregnant. **The researchers identified significant increases in the receipt of all recommended health screens and a nearly 14 percentage-point increase in receipt of prenatal vitamins for first-time mothers, compared with increases of 5 and 4 percentage points, respectively, for women with previous pregnancies.** Prenatal vitamins typically contain more iron and folic acid than standard adult multivitamins. They help prevent anemia during pregnancy and neural tube birth defects (such as spina bifida), which compromise a baby's brain and spinal cord development. While the authors caution the results also depend on other factors, including some unique to Ohio, the benefits for lower-income women in the state are clear after Medicaid expansion.[24]

4. Lower rates of maternal mortality

Findings from a study presented at the AcademyHealth National Health Policy Conference in February 2019 showed a link between implementation of Medicaid expansion under the ACA and lower rates of maternal mortality. An analysis of data from 1999 to 2016 from the National Center for Health Statistics compared maternal mortality rates in Medicaid expansion states with rates in states that did not expand. The study found that Medicaid expansion was associated with lower rates of maternal mortality, reflecting 1.6 fewer maternal deaths per 100,000 women. The researchers suggest that the reduction in maternal death rates is associated with women having increased access to Medicaid prior to pregnancy, which presented the opportunity to address pre-pregnancy risk factors such as obesity, diabetes and heart disease and also to begin prenatal care in a timely manner.[25]

5. Reductions in infant mortality

A study released in 2018 examined Medicaid expansions under the Affordable Care Act and their effect on the infant mortality rate in the United States. The researchers point out that since Medicaid covers a large proportion of maternal, infant, and child health care, as well as specific services related to pregnancy, maternity, pediatric care, chronic disease management, breastfeeding support, contraception, mental health and substance use disorder screening and treatment, and other behavioral health services; **"Medicaid expansion may be among the most important ways in which the ACA could improve maternal and child health indicators, such as the infant mortality rate."** Their analysis found that the infant mortality rate declined in both Medicaid expansion and non-expansion states between 2010 and 2016, however, **the decline in Medicaid expansion states was more than 50 percent greater than in non-expansion states.** The research also showed that the decline in infant mortality rates linked to Medicaid expansion were greatest among African American infants, which drove the overall decline and helped to substantially reduce the racial disparity in infant mortality rates.[26] And this improvement was not limited to overall infant mortality. Another recently released study examining the effect of state Medicaid expansions on overall birth outcomes found that while the rates of preterm birth and low birth weight did not show a change, there were significant improvements for African American infants relative to white infants. State Medicaid expansion was associated with "significant improvements in disparities for black infants relative to white infants for the four outcomes studied, including preterm birth, very preterm birth, low birth weight, and very low birth weight."[27]

Conclusion

Medicaid expansion under the Affordable Care Act offers affordable, comprehensive health coverage to women who would likely otherwise go without access to needed care. Most states have longstanding, generous Medicaid coverage for pregnant women, however, the pre-pregnancy coverage churn and post-partum (or "4th trimester") coverage gaps leave women without a full continuum of care. Prior to pregnancy, this can mean a significant missed opportunity to attend to health issues that pose high risks during pregnancy for mother and child. Similarly, a sudden plunge into uninsured status after the Medicaid post-partum period of 60 days can force women to abandon medication or other ongoing treatment they may need. And despite improved coverage during pregnancy, troubling racial maternal and infant health disparities persist, especially in Medicaid non-expansion states.

Recent studies show that Medicaid expansion has increased coverage rates for women during the childbearing years, has reduced the rate of women of childbearing age who are uninsured, and has improved health outcomes. Medicaid expansion has also played a role in reducing rates of maternal death, decreasing infant mortality rates, and improving the potential for optimal birth outcomes that can increase the prospects for a healthy childhood. Finally, it is clear if the remaining non-expansion states want to address significant racial disparities in maternal and infant health, expanding Medicaid is a critical first step.

Additional research could further illuminate the value of Medicaid expansion for women and their children. Many of the benefits Medicaid provides—smoking cessation treatment, treatment for substance use disorders, maternal depression screening and treatment, oral healthcare and other benefits—are likely to have positive two-generation impacts on women and their children.

Appendix A. Medicaid Income Eligibility Limit for Adults as a Percent of the FPL, January 2019

State	Parent upper eligibility limit (in a family of three) – percent of FPL	Parent upper eligibility limit (in a family of three) – monthly dollar amount	Childless adult eligibility limit (for an individual)
Alabama	18%	$320	0%
Alaska	138%	$3,066	138%
Arizona	138%	$2,453	138%
Arkansas	138%	$2,453	138%
California	138%	$2,453	138%
Colorado	138%	$2,453	138%
Connecticut	155%	$2,755	138%
Delaware	138%	$2,453	138%
District of Columbia	221%	$3,928	215%
Florida	32%	$569	0%
Georgia	35%	$622	0%
Hawaii	138%	$2,822	138%
Idaho*	25%	$444	0%
Illinois	138%	$2,453	138%
Indiana	139%	$2,471	139%
Iowa	138%	$2,453	138%
Kansas	38%	$675	0%
Kentucky	138%	$2,453	138%
Louisiana	138%	$2,453	138%
Maine**	138%	$2,453	138%
Maryland	138%	$2,453	138%
Massachusetts	138%	$2,453	138%
Michigan	138%	$2,453	138%
Minnesota	138%	$2,453	138%
Mississippi	26%	$462	0%
Missouri	21%	$373	0%
Montana	138%	$2,453	138%
Nebraska*	63%	$1,120	0%
Nevada	138%	$2,453	138%
New Hampshire	138%	$2,453	138%
New Jersey	138%	$2,453	138%
New Mexico	138%	$2,453	138%
New York	138%	$2,453	138%
North Carolina	42%	$747	0%
North Dakota	138%	$2,453	138%
Ohio	138%	$2,453	138%
Oklahoma	42%	$747	0%
Oregon	138%	$2,453	138%
Pennsylvania	138%	$2,453	138%
Rhode Island	138%	$2,453	138%
South Carolina	67%	$1,191	0%
South Dakota	49%	$871	0%
Tennessee	95%	$1,689	0%
Texas	17%	$302	0%
Utah*	60%	$1,067	0%
Vermont	138%	$2,453	138%
Virginia**	138%	$2,453	138%
Washington	138%	$2,453	138%
West Virginia	138%	$2,453	138%
Wisconsin	100%	$1,778	100%
Wyoming	54%	$960	0%

Non-expansion states

Source: Based on a national survey conducted by Kaiser Family Foundation with the Georgetown University Center for Children on Families, 2019. See here and here for more information on the survey and this table.

* Idaho and Nebraska voters approved Medicaid expansions but the expansions are not in effect and may be limited.

** Medicaid expansions in Maine and Virginia did not go into effect until 2019.

Appendix B. Uninsured Rates by State for Women of Child-Bearing Age (18-44), Comparing Rates for 2013 and 2017

Region	Uninsured Percent 2013 for Women Ages 18-44	Uninsured Percent 2017 for Women Ages 18-44	Percentage Point Change 2013-2017
US Total	21.0	12.3	-8.7
Alabama	23.0	15.6	-7.4
Alaska	25.5	15.3	-10.2
Arizona	24.2	13.4	-10.8
Arkansas	26.3	11.4	-14.9
California	23.4	9.3	-14.1
Colorado	18.6	10.2	-8.4
Connecticut	12.1	7.5	-4.6
Delaware	12.7	8.1	-4.6
District of Columbia	5.5	3.0	-2.5
Florida	29.0	19	-10.0
Georgia	27.5	20.1	-7.4
Hawaii	9.8	5.2	-4.6
Idaho	24.4	17.6	-6.8
Illinois	17.2	9.7	-7.5
Indiana	21.0	11.7	-9.3
Iowa	12.7	5.8	-6.9
Kansas	20.2	12.0	-8.2
Kentucky	24.0	7.4	-16.6
Louisiana	25.9	10.8	-15.1
Maine	15.8	11.8	-4.0
Maryland	13.9	8.1	-5.8
Massachusetts	4.6	3.3	-1.3
Michigan	16.4	6.4	-10.0
Minnesota	10.8	5.9	-4.9
Mississippi	26.2	18.5	-7.7
Missouri	19.6	13.9	-5.7
Montana	23.7	12.0	-11.7
Nebraska	16.8	12.5	-4.3
Nevada	29.0	15.8	-13.2
New Hampshire	16.5	7.9	-8.6
New Jersey	19.7	11.6	-8.1
New Mexico	29.8	13.1	-16.7
New York	14.2	7.4	-6.8
North Carolina	24.1	15.7	-8.4
North Dakota	14.4	10.2	-4.2
Ohio	15.1	7.6	-7.5
Oklahoma	27.2	21.4	-5.8
Oregon	20.8	9.3	-11.5
Pennsylvania	13.9	7.1	-6.8
Rhode Island	15.8	6.0	-9.8
South Carolina	23.9	16.8	-7.1
South Dakota	19.8	12.3	-7.5
Tennessee	18.9	12.2	-6.7
Texas	32.2	25.5	-6.7
Utah	18.3	11.2	-7.1
Vermont	8.0	5.4	-2.6
Virginia	17.4	12.4	-5.0
Washington	21.4	8.4	-13.0
West Virginia	24.6	7.9	-16.7
Wisconsin	11.8	6.8	-5.0
Wyoming	19.4	17.5	-1.9

Source: Data is from a Georgetown University Center for Children and Families analysis of the U.S. Census Bureau American Community Survey (ACS) data, 2013 and 2017 single year estimates from the Integrated Public Use Microdata Series (IPUMS).

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Georgetown University
Center for Children and Families
McCourt School of Public Policy
Box 571444
3300 Whitehaven Street, NW, Suite 5000
Washington, DC 20057-1485
Phone: (202) 687-0880
Email: childhealth@georgetown.edu

ccf.georgetown.edu/blog/

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Association of Medicaid Expansion With Cardiovascular Mortality

Sameed Ahmed M. Khatana, MD; Anjali Bhatla, BA; Ashwin S. Nathan, MD; Jay Giri, MD, MPH; Changyu Shen, PhD; Dhruv S. Kazi, MD, MS; Robert W. Yeh, MD, MSc; Peter W. Groeneveld, MD, MS

IMPORTANCE Medicaid expansion under the Patient Protection and Affordable Care Act led to one of the largest gains in health insurance coverage for nonelderly adults in the United States. However, its association with cardiovascular mortality is unclear.

OBJECTIVE To investigate the association of Medicaid expansion with cardiovascular mortality rates in middle-aged adults.

DESIGN, SETTING, AND PARTICIPANTS This study used a longitudinal, observational design, using a difference-in-differences approach with county-level data from counties in 48 states (excluding Massachusetts and Wisconsin) and Washington, DC, from 2010 to 2016. Adults aged 45 to 64 years were included. Data were analyzed from November 2018 to January 2019.

EXPOSURES Residence in a Medicaid expansion state.

MAIN OUTCOMES AND MEASURES Difference-in-differences of annual, age-adjusted cardiovascular mortality rates from before Medicaid expansion to after expansion.

RESULTS As of 2016, 29 states and Washington, DC, had expanded Medicaid eligibility, while 19 states had not. Compared with counties in Medicaid nonexpansion states, counties in expansion states had a greater decrease in the percentage of uninsured residents at all income levels (mean [SD], 7.3% [3.2%] vs 5.6% [2.7%]; $P < .001$) and in low-income strata (19.8% [5.5%] vs 13.5% [3.9%]; $P < .001$) between 2010 and 2016. Counties in expansion states had a smaller change in cardiovascular mortality rates after expansion (146.5 [95% CI, 132.4-160.7] to 146.4 [95% CI, 131.9-161.0] deaths per 100 000 residents per year) than counties in nonexpansion states did (176.3 [95% CI, 154.2-198.5] to 180.9 [95% CI, 158.0-203.8] deaths per 100 000 residents per year). After accounting for demographic, clinical, and economic differences, counties in expansion states had 4.3 (95% CI, 1.8-6.9) fewer deaths per 100 000 residents per year from cardiovascular causes after Medicaid expansion than if they had followed the same trends as counties in nonexpansion states.

CONCLUSIONS AND RELEVANCE Counties in states that expanded Medicaid had a significantly smaller increase in cardiovascular mortality rates among middle-aged adults after expansion compared with counties in states that did not expand Medicaid. These findings suggest that recent Medicaid expansion was associated with lower cardiovascular mortality in middle-aged adults and may be of consideration as further expansion of Medicaid is debated.

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Supplemental content

Author Affiliations: Author affiliations are listed at the end of this article.

Corresponding Author: Sameed Ahmed M. Khatana, MD, Cardiovascular Medicine, Perelman School of Medicine, University of Pennsylvania, 3400 Civic Center Blvd, Philadelphia, PA 19104-5162 (sameed.khatana@pennmedicine.upenn.edu).

The Patient Protection and Affordable Care Act (ACA) led to the largest expansion of Medicaid coverage since the inception of the program.[1] Under the ACA, beginning in 2014, all nonelderly US citizens and permanent residents (with more than 5 years of residency) with an income up to 138% of the federal poverty level (FPL) became eligible for Medicaid. However, a number of states have not expanded eligibility for Medicaid, and there is continued debate regarding further changes in eligibility criteria.[2,3]

Observational studies have demonstrated that prior efforts to expand health insurance coverage in individual states were associated with improved health outcomes, including lower mortality rates.[4,5] However, a single-state randomized clinical trial of Medicaid expansion did not show conclusive evidence of improvements in several intermediate health measures.[6] In a recent analysis of patients with end-stage renal disease, Medicaid expansion was associated with lower all-cause mortality.[7]

Cardiovascular disease and its risk factors disproportionately affect individuals of lower socioeconomic status and those who are uninsured.[8,9] Since Medicaid expansion has been associated with improvements in the management of diabetes,[10] increased use of cardioprotective medications,[11] and access to preventive care,[12] expansion in health insurance coverage may have a potential association with cardiovascular disease and mortality. Medicaid expansion has also been associated with fewer cardiovascular hospitalizations without insurance.[13] However, studies of in-hospital cardiovascular outcomes have not shown a significant association with Medicaid expansion.[14,15] It is unclear whether Medicaid expansion has had an association with overall cardiovascular mortality rates in the population. The aim of this analysis was therefore to assess whether there have been differential changes in cardiovascular mortality rates in nonelderly adults living in states that expanded Medicaid eligibility compared with those in states that did not expand Medicaid eligibility between 2010 and 2016.

Key Points

Question Has the expansion of Medicaid eligibility under the Affordable Care Act been associated with any differences in cardiovascular mortality rates?

Findings In this difference-in-differences analysis, states that expanded eligibility for Medicaid had a significantly smaller increase in rates of cardiovascular mortality for middle-aged adults after expansion than states that did not expand Medicaid.

Meaning Medicaid expansion was associated with lower cardiovascular mortality and may be an important consideration for states debating expansion of Medicaid eligibility.

Methods

Data Sources

Because Medicaid coverage expansion has a greater outcome on individuals younger than 65 years and cardiovascular diseases are more prevalent in older adults,[16] we focused this study on cardiovascular mortality rates among adults 45 to 64 years of age. We obtained annual, county-level cardiovascular mortality rates, age-adjusted to the 2000 US population, from the Centers for Disease Control and Prevention's Wide-ranging Online Data for Epidemiologic Research mortality database from 2010 to 2016 for all 50 states and Washington, DC.[17] Causes of deaths were limited to diseases of the circulatory system (*International Classification of Diseases, 10th Revision* codes I00 to I99). Counties with fewer than 10 deaths per year are censored from the publicly visible version of the Wide-ranging Online Data for Epidemiologic Research database and were not included in this analysis. Because all the data analyzed are publicly available and aggregated at the county or state level, the project is considered exempt from institutional review board review based on guidelines from the University of Pennsylvania institutional review board. Informed consent was not obtained because of the aggregate and deidentified nature of the data.

Data on county-level percentages of residents who were female, black (non-Hispanic black, either alone or in combination with other races), Hispanic, living in poverty, and unemployed were obtained from the US Census Bureau and the Bureau of Labor Statistics.[18-20] Additionally, the median inflation-adjusted household income (in 2016 dollars) was obtained. Percentage of residents with health insurance was also obtained from the US Census Bureau and was aggregated for residents aged 40 to 64 years.[21] The number of primary care clinicians and cardiologists per 100 000 residents was obtained from the Health Resources and Services Administration Area Health Resource File.[22] Because data for cardiologists were only available for the years 2010, 2015, and 2016, the population density of cardiologists in 2010 was assigned to all years from 2010 to 2014. Diabetes, obesity, and smoking prevalence at baseline were based on the Behavioral Risk Factor Surveillance System.[23]

Outcome Measure

The primary outcome measure was county-level, age-adjusted cardiovascular mortality rates per 100 000 adults aged 45 to 64 years. As sensitivity measures, we also examined cardiovascular mortality rates of residents aged 25 to 64 years and 65 to 74 years.

Study Design and Intervention

We used a quasiexperimental study design based on a difference-in-differences (DID) estimator. This approach aims to isolate the association of an intervention in observational data by comparing differences in an outcome over time between groups that received an intervention vs groups that did not.[24]

The main intervention of interest was the expansion of Medicaid eligibility under the ACA. The following states expanded Medicaid eligibility effective January 1, 2014: Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Hawaii, Illinois, Iowa, Kentucky, Maryland, Massachusetts, Minnesota, Nevada, New Jersey, New Mexico, New York, North Dakota, Ohio, Oregon, Rhode Island, Vermont, Washington, and West Virginia.[25] Another 6 states expanded eligibility at a later date: Michigan (April 1,

2014), New Hampshire (August 15, 2014), Pennsylvania (January 1, 2015), Indiana (February 1, 2015), Alaska (September 1, 2015), and Montana (January 1, 2016). The remainder of the states were designated as nonexpansion states. Owing to prior Medicaid eligibility expansion in Massachusetts and coverage of adults up to 100% of the FPL in Wisconsin, these 2 states were excluded from the main analysis. Another 6 states (California, Connecticut, District of Columbia, Minnesota, New Jersey, and Washington) had limited expansions of Medicaid eligibility after the passage of the ACA but prior to 2014. These states were included in the main analysis but were excluded in a sensitivity analysis along with the 6 late-adopter states.

The years 2010 through 2013 were designated as the preexpansion period and 2014 through 2016 were the postexpansion period for most of the states. For the states that expanded Medicaid eligibility later than 2014, the postexpansion period began in the year expansion was implemented (ie, 2015 for New Hampshire, Pennsylvania, and Indiana, and 2016 for Alaska and Montana). States that expanded Medicaid after the beginning of the calendar year had the entire year designated as a postexpansion year.

Analysis

We first compared county-level variables between counties in states that expanded Medicaid eligibility and those that did not, using the *t* test and Pearson χ^2 test. We then estimated cardiovascular mortality rates for each of the study years separately for expansion and nonexpansion counties using a multilevel linear regression model with county fixed effects and random intercepts for each state. Huber-White heteroskedasticity-robust standard errors were calculated, accounting for clustering at the state level and autocorrelation of repeated measures across years. We then estimated adjusted mortality rates by including the following covariates: the 2013 National Center for Health Statistics Urban-Rural Classification designation (metropolitan vs nonmetropolitan county), the percentages of residents aged 45 to 64 years who were female, black, and Hispanic; the percentages of residents living in poverty and unemployed; the percentages of adult residents with diabetes and obesity in 2010; the percentage of adult residents who smoke in 2010; the percentage of residents aged 40 to 64 years with income less than 138% of the FPL who had health insurance in 2010; the median household income; the number of primary care clinicians per 100 000 residents; and the number of cardiologists per 100 000 residents.

To test the association of Medicaid expansion on mortality, we constructed another linear regression model with the same structure and added an indicator for Medicaid expansion status, an indicator for the preexpansion or postexpansion period, and an interaction term between expansion status and period as the independent variables in the model (eMethods 1 in the Supplement). The interaction term is the DID estimator. An indicator variable for the year was also included to account for the variation in years in which different states entered the postexpansion period. We repeated this model with the addition of previously mentioned county-level covariates. We then analyzed some subgroups of interest: metropolitan and nonmetropolitan counties, counties in which more than 10% of residents aged 45 to 64 years were black in 2010, counties in the top 50th percentile for the percentage of residents living in poverty in 2010, counties in the top 50th percentile of cardiovascular mortality in 2010, and counties in the top and bottom 50th percentiles for percentage of residents with low income aged 40 to 64 years without health insurance in 2010. We also repeated the DID analysis separately for the top and bottom 50th percentiles of the absolute change in the number of low-income residents with health insurance between 2010 and 2016.

We also conducted some sensitivity analyses. These included using cardiovascular mortality of individuals aged 65 to 74 years as the outcome, because this age group was not primarily affected by Medicaid expansion. Other analyses included excluding all early-adopter and late-adopter states and using data aggregated at the state level (to include deaths that were censored from the county-level analysis). We also tested the assumption that time trends were similar between the 2 groups prior to Medicaid expansion. Details are presented in eMethods 3, eTable 4, and eTable 5 in the Supplement.

Because the primary unit of measurement was at the county level and the variance of each aggregate point estimate is a function of its underlying population size,[26] we weighted all of these analyses with the county population of residents aged 45 to 64 years. Data are presented as means with SDs or 95% CIs or medians and interquartile ranges (IQR), as indicated. All *P* values were 2-sided, and *P* values of .05 or less were considered statistically significant. Analyses were conducted using SAS version 9.4 (SAS Institute).

Results

Baseline County Characteristics

Counties in 29 expansion states plus Washington, DC, were included in the intervention (expansion) group, while counties in 19 nonexpansion states were in the control (nonexpansion) group. After excluding censored counties with fewer than 10 deaths per year, the number of counties included ranged between 902 to 931 in expansion states and 985 to 1029 for nonexpansion states over the study period (**Table 1**). Censored counties accounted for less than 5% of the total 79.7 million middle-aged adults living in the included states. Expansion counties were less likely to be in the Southern US Census region compared with nonexpansion counties (200 [21.9%] vs 836 [84.1%]; *P* < .001). In 2010, counties in expansion states had a higher median population (16 595 [IQR, 9030-42 640] vs 11 114.5 [IQR, 6514-25 225]; *P* < .001). The percentage of black residents was lower (mean [SD], 9.6% [11.1%] vs 16.5% [14.0%]; *P* < .001) in counties in expansion states, with no significant difference in the percentage of Hispanic residents. In 2010, expansion counties also had a lower prevalence of diabetes (mean [SD], 8.5 % [1.5%] vs 9.7% [1.6%]; *P* < .001), obesity (mean [SD], 26.2% [4.6%] vs 29.1% [4.2%]; *P* < .001), and smoking (mean [SD], 17.1% [4.7%] vs 18.9% [5.2%]; *P* < .001); a lower percentage of poor residents (mean [SD], 14.4% [5.0%] vs 16.6% [5.4%]; *P* < .001); and a higher median house-

Table 1. County-Level Characteristics

Characteristic	Mean (SD)		P Value
	Medicaid Expansion States	Medicaid Nonexpansion States	
States, No.	30[a]	19	NA
Counties included, No.			
2010	912	994	
2011	902	989	
2012	905	992	
2013	923	985	NA
2014	923	1013	
2015	918	1012	
2016	931	1029	
US census region, %			
South	21.9	84.1	<.001
Northeast	18.9	1.5	<.001
Midwest	39.3	11.5	<.001
West	20.0	2.9	<.001
Nonmetropolitan counties, %	48.0	50.9	.21
Residents aged 45-64 y per county in 2010, median (IQR)[b]	16 595 (9030-42 640)	11 114.5 (6514-25 225)	<.001
County residents aged 45-64 y without insurance, %			
In 2010	14.6 (5.1)	19.5 (6.0)	<.001
Change in percentage, 2010-2016	7.3 (3.2)	5.6 (2.7)	<.001
County residents aged 45-64 y without insurance with income <138% of the federal poverty line, %			
In 2010	35.6 (8.0)	44.9 (7.9)	<.001
Percentage change, 2010-2016	19.8 (5.5)	13.5 (3.9)	<.001
Demographic attributes in county residents aged 45-64 y in 2010, %			
Female	51.2 (1.2)	51.5 (1.4)	<.001
Black	9.6 (11.1)	16.5 (14.0)	<.001
Hispanic	11.4 (12.0)	11.0 (16.2)	.57
Attributes of county residents in 2010, %			
Unemployed adults	10.1 (2.5)	9.5 (2.3)	<.001
In poverty	14.4 (5.0)	16.6 (5.4)	<.001
With diabetes	8.5 (1.5)	9.7 (1.6)	<.001
With obesity	26.2 (4.6)	29.1 (4.2)	<.001
Smoking	17.1 (4.7)	18.9 (5.2)	<.001
County household income in 2010, median (IQR), $[c]	57 653.6 (49 490.3-69 431.4)	50 369.4 (44 279.8-57 251.0)	<.001
Clinicians per 100 000 residents in 2010			
Primary care clinicians	78.3 (27.7)	65.7 (25.3)	<.001
Cardiologists	7.7 (6.4)	6.6 (5.3)	<.001

Abbreviations: IQR, interquartile range; NA, not available.

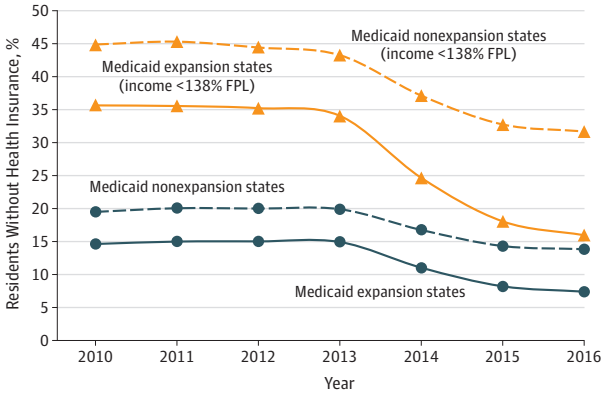
[a] Included 29 states and Washington, DC.

[b] Summary measure not weighted by county population.

[c] In 2016 dollars.

hold income (median [IQR], $57 653.60 [$49 490.30-$69 431.40] vs $50 369.40 [$44 279.80-$57 251.00]; $P < .001$) than nonexpansion counties.

Figure 1. Percentage of Residents Aged 40 to 64 Years Without Health Insurance Coverage



FPL indicates the federal poverty line.

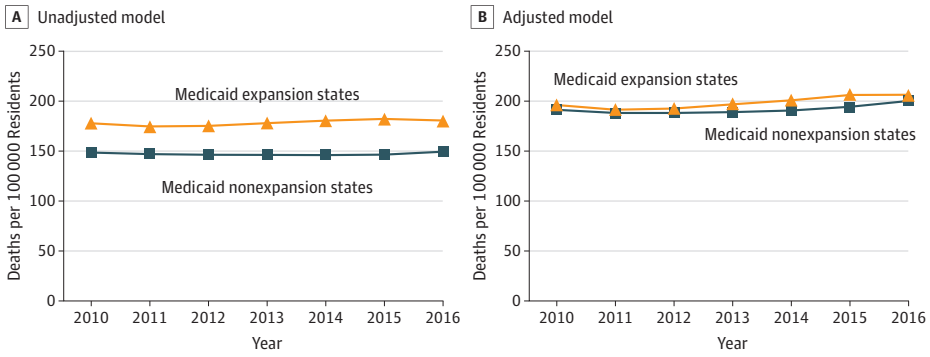
Health Insurance Coverage

In 2010, the proportions of residents aged 40 to 64 years without health insurance coverage were significantly lower in expansion counties than in nonexpansion counties for all income levels (mean [SD], 14.6% [5.1%] vs 19.5% [6.0%]; $P < .001$) and among those with income less than 138% of the FPL who were without insurance (mean [SD], 35.6% [8.0%] vs 44.9% [7.9%]; $P < .001$) (Table 1). Health insurance coverage for both groups of counties was relatively stable between 2010 and 2013 (**Figure 1** and eTable 1 in the Supplement). Between 2010 and 2016, there was a larger decrease in the percentages of residents aged 40 to 64 years without insurance in counties in expansion states compared with nonexpansion states at all income levels (mean [SD], 7.3% [3.2%] vs 5.6% [2.7%]; $P < .001$) and in residents with low income who were without insurance (mean [SD], 19.8% [5.5%] vs 13.5% [3.9%]; $P < .001$).

Cardiovascular Mortality Rates

Age-adjusted cardiovascular mortality rates for residents aged 45 to 64 years were significantly lower in counties in expansion states compared with counties in nonexpansion states between 2010 (147.9 [95% CI, 134.0-161.9] vs 177.6 [95% CI, 155.3-199.9] deaths per 100 000 residents per year) and 2013 (145.6 [95% CI, 131.4-159.8] vs 177.8 [95% CI, 154.7-200.8] deaths per 100 000 residents per year), but overall trends were similar between the 2 groups prior to expansion (**Figure 2**; eTable 2 and eTable 4 in the Supplement). Accounting for differences in the previously mentioned covariates significantly reduced the differences between the 2 groups (2010: expansion counties, 190.7 [95% CI, 181.5-200.0] deaths per 100 000 residents per year for vs nonexpansion counties; 195.3 [95% CI, 184.9-205.8] deaths per 100 000 residents per year for nonexpansion counties). The differences between the 2 groups increased in 2014 and 2015 and narrowed again in 2016 (adjusted cardiovascular mortality: expansion counties, 2014, 190.1 [95% CI, 180.4-199.8] vs nonexpansion counties, 199.8 [95% CI, 188.4-211.1] deaths per 100 000 residents per year; 2015: 193.6 [95% CI, 183.8-203.5] vs 204.9 [95% CI, 192.8-216.9] deaths per 100 000 residents per year; 2016: 199.2 [95% CI, 188.6-209.8] vs 205.1

Figure 2. Annual Cardiovascular Mortality Rates in Residents Aged 45 to 64 Years by State Medicaid Expansion Status



[95% CI, 193.5-216.7] deaths per 100 000 residents per year; eMethods 2 and eTable 3 in the Supplement).

Difference-in-Differences Estimates

In counties in expansion states, cardiovascular mortality was stable between the preexpansion and postexpansion periods (146.5 [95% CI, 132.4-160.7] to 146.4 [95% CI, 131.9-161.0] deaths per 100 000 residents per year) (**Table 2**). There was an increase in cardiovascular mortality rates in nonexpansion counties between the preexpansion and postexpansion periods (176.3 [95% CI, 154.2-198.5] to 180.9 [95% CI, 158.0-203.8] deaths per 100 000 residents per year). The unadjusted and adjusted DID estimates comparing expansion vs nonexpansion counties were −4.6 (95% CI, −7.5 to −1.8; $P = .001$) and −4.3 (95% CI, −6.9 to −1.8; $P = .001$), respectively. Therefore, after accounting for differences in demographic, clinical, economic, and health access variables, counties in expansion states had 4.3 (95% CI, 1.8-6.9) fewer deaths from cardiovascular causes per 100 000 residents per year after Medicaid expansion compared with the deaths that would have occurred if they had followed the same trajectory as seen in counties in nonexpansion states. Among the included counties in expansion states, which had a population of 47.4 million middle-aged adults in 2014; this translates to a total of 2039 (95% CI, 853-3271) fewer total deaths per year in residents aged 45 to 64 years from cardiovascular causes after Medicaid expansion.

Subgroup and Sensitivity Analyses

In the subgroup analyses, the adjusted DID estimate was attenuated but statistically significant in metropolitan counties (−3.7 [95% CI, −6.3 to −1.2]; $P = .005$; Table 2). The adjusted DID estimate was larger for nonmetropolitan counties but not significantly so (−6.2 [95% CI, −12.5 to 0.10]; $P = .05$). The DID estimate was also larger for counties in the top 50th percentile for residents living in poverty in 2010 (−5.3 [95% CI, −9.0 to −1.6]; $P = .01$). The adjusted DID estimate was more prominent for counties in the bottom 50th percentile for baseline percentage of uninsured residents (−7.5 [95% CI, −12.0 to −3.0]; $P = .001$) compared with counties in the top 50th percentile (−3.4 [95% CI, −6.6 to −0.2]; $P = .04$).

The adjusted DID estimate was significant when comparing the top 50th percentile of expansion counties for change in the number of residents with low income and health insurance with all nonexpansion counties (−4.8 [95% CI, −7.5 to −2.2]; $P < .001$) (**Table 3**). However, the DID estimate was not significant when comparing the bottom 50th percentile of expansion counties with all nonexpansion counties. The DID estimate was more prominent when comparing all expansion counties with the bottom 50th percentile of nonexpansion counties for change in the number of residents with low income and health insurance (−12.2 [95% CI, −16.0 to −8.4]; $P < .001$) compared with when the top 50th percentile of nonexpansion counties was used (−3.2 [95% CI, −5.7 to −0.8]; $P = .01$).

We also analyzed the cardiovascular mortality of residents aged 65 to 74 years over the same period. The adjusted DID estimate was −6.6 (95% CI, −16.2 to 3.1; $P = .18$; eTable 4 in the Supplement). Other sensitivity analyses had significant DID estimates, including ones that excluded all early-adopter and late-adopter states from the analysis (−3.6 [95% CI, −6.8 to −0.4]; $P = .03$) and ones using data aggregated at the state level, which included all deaths excluded from the county level analysis (−2.8 [95% CI, −5.1 to −0.5]; $P = .02$). The different sensitivity analyses are detailed in the online supplement (eMethods 3 in the Supplement).

Discussion

Counties in states that expanded Medicaid eligibility had a significantly smaller increase in age-adjusted cardiovascular mortality rates among residents aged 45 to 64 years after expansion compared with counties in nonexpansion states. Counties in expansion states had a mean of 4.3 fewer deaths per 100 000 residents per year than they would have had if they had followed the same trends as counties in nonexpansion states.

To our knowledge, this study is the first to show a population-level difference in rates of cardiovascular mortality among states that expanded Medicaid under the ACA. Such early changes in outcomes have also been also reported in other analyses of expansion in insurance coverage.[5,7] However, these prior analyses were either focused on a single state (Massachusetts) or a specific chronic disease population (end-stage renal disease). The only randomized clinical trial of Medicaid

Table 2. Difference-in-Differences Analysis[a]

Group	Cardiovascular Deaths per 100 000 Residents per Year, Unadjusted, Mean (SD)		Difference-in-Differences Estimate (95% CI)			
	Pre-Medicaid Expansion Period	Post-Medicaid Expansion Period	Unadjusted	*P* Value	Adjusted[a]	*P* Value
Overall						
Medicaid expansion states	146.5 (132.4-160.7)	146.4 (131.9-161.0)	−4.6 (−7.5 to −1.8)	.001	−4.3 (−6.9 to −1.8)	.001
Medicaid nonexpansion states	176.3 (154.2-198.5)	180.9 (158.0-203.8)				
Metropolitan counties						
Medicaid expansion states	139.4 (126.3-152.4)	139.6 (125.9-153.3)	−4.0 (−6.5 to −1.6)	.001	−3.7 (−6.3 to −1.2)	.005
Medicaid nonexpansion states	163.9 (144.1-183.7)	168.1 (147.8-188.4)				
Nonmetropolitan counties						
Medicaid expansion states	168.5 (1513-185.6)	168.9 (152.0-185.7)	−6.4 (−12.5 to −0.2)	.04	−6.2 (−12.5 to 0.1)	.05
Medicaid nonexpansion states	227.0 (200.9-253.0)	233.7 (206.4-261.0)				
Counties with >10% black residents in 2010						
Medicaid expansion states	176.9 (157.8-196.1)	175.2 (154.8-195.6)	−4.5 (−8.0 to −1.0)	.01	−4.3 (−7.7 to −0.9)	.01
Medicaid nonexpansion states	199.9 (178.2-221.5)	202.7 (179.6-225.7)				
Top 50th percentile for residents living in poverty in 2010[b]						
Medicaid expansion states	178.8 (160.9-196.4)	177.9 (159.1-196.6)	−6.6 (−10.7 to −2.5)	.002	−5.3 (−9.0 to −1.6)	.01
Medicaid nonexpansion states	205.4 (183.1-227.7)	211.1 (187.5-234.8)				
Top 50th percentile for cardiovascular mortality in 2010[c]						
Medicaid expansion states	185.7 (174.5-196.9)	187.0 (174.8-199.2)	−5.7 (−9.4 to −2.1)	.002	−5.2 (−9.1 to −1.4)	.01
Medicaid nonexpansion states	206.5 (191.1-221.8)	213.6 (197.2-229.9)				
Top 50th percentile for percentage of population uninsured in 2010[d]						
Medicaid expansion states	135.2 (117.5-152.8)	130.1 (112.5-147.8)	−4.4 (−8.2 to −0.5)	.03	−3.4 (−6.6 to −0.2)	.04
Medicaid nonexpansion states	174.1 (151.4-196.9)	173.5 (149.8-197.2)				
Bottom 50th percentile for percentage of population uninsured in 2010[e]						
Medicaid expansion states	155.0 (137.7-172.2)	155.3 (137.5-173.1)	−8.7 (−12.6 to −4.7)	<.001	−7.5 (−12.0 to −3.0)	.001
Medicaid nonexpansion states	205.9 (175.4-236.3)	214.9 (184.2-245.6)				

[a] Adjusted for 2013 National Center for Health Statistics Urban-Rural Classification designation (metropolitan vs nonmetropolitan county), percentage of residents living in poverty, percentage of adults unemployed, inflation-adjusted median household income, percentage of residents aged 40 to 64 years who were female, percentage of residents aged 40 to 64 years who were black, percentage of residents aged 40 to 64 years who were Hispanic, percentage of adult residents with diabetes in 2010, percentage of adult residents with obesity in 2010, percentage of adult residents who smoke in 2010, number of primary care clinicians per 100 000 residents, number of cardiologists per 100 000 residents, and percentage of residents aged 40 to 64 years with income less than 138% of the federal poverty limit with health insurance in 2010.

[b] Greater than or equal to 15.2% of residents.

[c] Greater than or equal to 145.1 deaths per 100 000 residents.

[d] Greater than or equal to 39% of residents aged 40 to 64 years with income less than 138% of the federal poverty limit.

[e] Less than 39% of residents aged 40 to 64 years with income less than 138% of the federal poverty limit.

expansion to date (the Oregon Health Study[6]) did not demonstrate significant improvements in cardiovascular risk factors, such as hypertension or hyperlipidemia.[6] However, in addition to including the substantially larger number of people affected by Medicaid expansion under the ACA, this study focused on middle-aged adults, an age group which represented around 28% of the Oregon Health study[6] population and one with a higher burden of cardiovascular disease than

Table 3. Difference-in-Differences Analysis by Change in Number of Residents in Low-Income Strata With Health Insurance

Increase in Number of Residents With Health Insurance[a]	Mean (95% CI) Cardiovascular Deaths per 100 000 Residents per y, Unadjusted		Difference-in-Differences Estimate			
	Period Before Medicaid Expansion	Period After Medicaid Expansion	Unadjusted	*P* Value	Adjusted[b]	*P* Value
Counties in Medicaid expansion states in top 50th percentile of increase[c]	142.3 (129.0-155.6)	142.2 (127.8-156.7)	−5.3 (−8.1 to −2.4)	.001	−4.8 (−7.5 to −2.2)	.001
All counties in Medicaid nonexpansion states	176.2 (154.1-198.4)	181.4 (158.4-204.4)				
Counties in Medicaid expansion states in bottom 50th percentile of increase[d]	162.8 (143.2-182.4)	165.8 (147.2-184.5)	0.3 (−2.3 to 2.9)	.81	−1.3 (−4.0 to 1.4)	.34
All counties in Medicaid nonexpansion states	176.7 (153.9-199.5)	179.5 (155.7-203.3)				
All counties in Medicaid expansion states[e]	146.4 (132.3-160.4)	146.2 (131.6-160.7)	−3.4 (−6.1 to −0.6)	.02	−3.2 (−5.7 to −0.8)	.01
Counties in Medicaid nonexpansion states in top 50th percentile of increase[e]	165.4 (144.1-186.6)	168.5 (146.6-190.4)				
All counties in Medicaid expansion states[f]	147.3 (133.1-161.6)	147.0 (132.4-161.7)	−13.8 (−17.4 to −10.2)	.001	−12.2 (−16.0 to −8.4)	.001
Counties in Medicaid nonexpansion states in bottom 50th percentile of increase[f]	223.0 (197.7-248.3)	236.4 (210.1-262.8)				

[a] Change in number of residents with health insurance refers to change in the number of residents aged 40 to 64 years with health insurance with an income less than 138% of the federal poverty limit between 2010 and 2016.

[b] Adjusted for 2013 National Center for Health Statistics Urban-Rural Classification designation (metropolitan vs nonmetropolitan county), percentage of residents living in poverty, percentage of adults unemployed, inflation-adjusted median household income, percentage of residents aged 40 to 64 years who were female, percentage of residents aged 40 to 64 years who were black, percentage of residents aged 40 to 64 years who were Hispanic, percentage of adult residents with diabetes in 2010, percentage of adult residents with obesity in 2010, percentage of adult residents who smoke in 2010, number of primary care professionals per 100 000 residents, number of cardiologists per 100 000 residents, and percentage of residents aged 40 to 64 years with income less than 138% of the federal poverty limit with health insurance in 2010.

[c] Expansion counties with a change in the number of residents with health insurance greater than 483 residents.

[d] Expansion counties with a change in the number of residents with health insurance fewer than 483 residents.

[e] Nonexpansion counties with a change in the number of residents with health insurance greater than 232 residents.

[f] Nonexpansion counties with a change in the number of residents with health insurance fewer than 232 residents.

younger adults. Given the small absolute differences in mortality between expansion and nonexpansion counties observed in this analysis, it is possible that such differences would not be observed in a study with a smaller sample size.

Studies of inpatient outcomes and quality of care of patients with heart failure and myocardial infarction did not show a significant association with Medicaid expansion.[14,15] This suggests that a possible influence of Medicaid expansion could be in the outpatient setting or access to care. One prior study[27] noted an association between lack of insurance coverage and delays in seeking emergency care by patients with myocardial infarction. Medicaid expansion has also been associated with higher rates of provision of cardiovascular medications, such as aspirin and better diabetes control.[28] There is also evidence of an increase in rates of coronary artery bypass graft surgery associated with Medicaid expansion.[29] Although we noted a stronger association between Medicaid expansion and cardiovascular mortality in the counties where there was a greater increase in the number of individuals gaining insurance coverage, there may be other indirect mechanisms by which expansion may be associated with the observations noted. The DID point estimate for individuals 65 to 74 years old suggests a possible beneficial association even for a population not directly affected by Medicaid expansion and the potential existence of a spillover phenomenon. This may be mediated by mechanisms such as strengthening of the financial health of institutions that provide care to individuals with lower incomes throughout the age spectrum (eg, community health centers, safety net hospitals).[30,31] Additionally, changes in insurance coverage in a population have been associated with access to health care and the quality of care received even by the insured population.[32]

Limitations

This study has certain limitations. Given the observational nature of the study, we are not able to make a causal association between expansion of Medicaid eligibility and differences in the cardiovascular mortality rates between the 2 groups of counties. It is possible that there were other unmeasured time-varying factors that can explain the observed association. Along with expanding eligibility for Medicaid, it is possible that other aspects of the ACA were implemented more in expansion states. Although the primary target of Medicaid expansion was adults with low income, the outcome measure is for residents of all income categories. However, we do observe a stronger association between Medicaid expansion and cardiovas-

cular mortality in counties with more residents in low income strata. The primary outcome is mortality from diseases of the circulatory system, which includes several different disorders. Although in a sensitivity analysis we did analyze a subset of these disorders, we did not analyze individual diseases to elucidate which ones are driving the overall mortality trend, owing to the small number of deaths from any individual cause. The primary analysis excluded counties with fewer than 10 deaths per year; however, a sensitivity analysis with outcome and covariates aggregated at the state level, which included all deaths in a state, had a significant association as well.

Conclusions

This study shows an association between Medicaid expansion and differences in cardiovascular mortality rates between expansion and nonexpansion states for middle-aged adults. Given the high burden of cardiovascular risk factors among individuals without insurance and those with lower socioeconomic status, these results may be a consideration as policymakers debate further changes to eligibility and expansion of Medicaid.

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Author Affiliations: Division of Cardiovascular Medicine, Perelman School of Medicine, University of Pennsylvania, Philadelphia (Khatana, Nathan, Giri); Penn Cardiovascular Outcomes, Quality, & Evaluative Research Center, Perelman School of Medicine, University of Pennsylvania, Philadelphia (Khatana, Nathan, Giri, Groeneveld); The Leonard Davis Institute of Health Economics, University of Pennsylvania, Philadelphia (Khatana, Nathan, Giri, Groeneveld); Perelman School of Medicine, University of Pennsylvania, Philadelphia (Bhatla); Richard A. and Susan F. Smith Center for Outcomes Research in Cardiology, Beth Israel Deaconess Medical Center, Boston, Massachusetts (Shen, Kazi, Yeh); Division of Cardiology, Beth Israel Deaconess Medical Center, Boston, Massachusetts (Shen, Kazi, Yeh); Harvard Medical School, Boston, Massachusetts (Shen, Kazi, Yeh); Division of General Internal Medicine, Perelman School of Medicine, University of Pennsylvania, Philadelphia (Groeneveld); Center for Health Equity Research and Promotion, Michael J. Crescenz Veterans Affairs Medical Center, Philadelphia, Pennsylvania (Groeneveld).

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Concept and design: Khatana, Nathan, Giri, Groeneveld.
Acquisition, analysis, or interpretation of data: Khatana, Bhatla, Shen, Kazi, Yeh.
Drafting of the manuscript: Khatana, Bhatla, Shen.
Critical revision of the manuscript for important intellectual content: Khatana, Nathan, Giri, Shen, Kazi, Yeh, Groeneveld.
Statistical analysis: Khatana, Shen, Groeneveld.
Administrative, technical, or material support: Bhatla, Giri.
Supervision: Giri, Groeneveld.

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Research Report

The Effect of the 2014 Medicaid Expansion on Insurance Coverage for Newly Eligible Childless Adults

Michael Dworsky, Christine Eibner

For more information on this publication, visit www.rand.org/t/RR1736

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Preface

Following full implementation of the Affordable Care Act's (ACA's) coverage provisions on January 1, 2014, the share of U.S. adults without insurance fell substantially more in Medicaid expansion states than in nonexpansion states. These figures suggest that Medicaid expansion is succeeding at reducing uninsurance. However, existing estimates of the Medicaid expansion's effects do not specifically examine take-up of Medicaid among adults who became newly eligible following the Medicaid expansion. This report used data from the 2009–2014 National Health Interview Survey with restricted-use state geocodes to measure the effect of state Medicaid expansion decisions on insurance coverage and the source of coverage among childless adults who became newly eligible for Medicaid in 2014. This report uses a differences-in-differences approach to compare newly eligible adults to similar adults in nonexpansion states who were not eligible for subsidized coverage through the Health Insurance Marketplace in 2014.

This study addressed the following research questions:

- How did Medicaid expansion affect insurance status for low-income childless adults who became newly eligible?
- Of the newly eligible adults gaining Medicaid coverage because of the expansion, how many would otherwise have been uninsured, and how many would otherwise have been covered by private insurance?
- Which subgroups of the newly eligible population were more or less likely to take up Medicaid coverage in 2014?

This report may be of interest to state and federal health policymakers, as well as other analysts evaluating the ACA and the effects of Medicaid eligibility on insurance coverage.

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Abstract

The authors used the National Health Interview Survey (NHIS) to estimate how the Affordable Care Act Medicaid expansion affected health insurance enrollment, by source of coverage, among childless adults who became newly eligible for Medicaid in 2014. The NHIS data allowed the authors to report changes in enrollment by source of coverage and to conduct subgroup analyses of Medicaid take-up by gender, age, and other characteristics. Newly eligible childless adults in expansion states were 8.9 percentage points more likely to be insured in 2014 relative to similar adults in nonexpansion states, reflecting gains in Medicaid with little to no offsetting decrease in private coverage. Subgroup patterns of take-up among the newly eligible differed from findings previously reported for the wider low-income population, many of whom were previously eligible. Because these estimates isolate the behavior of newly eligible adults, these findings may be useful for anticipating take-up if nonexpansion states with limited Medicaid eligibility under current law choose to expand in the future. Similarly, because the control group excludes adults who became eligible for subsidized insurance coverage through the Health Insurance Marketplace, these findings provide insight into the effects of Medicaid expansion relative to a counterfactual involving neither Medicaid expansion nor Marketplace subsidies.

Acknowledgments

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The analysis reported in this paper was conducted at the UCLA Census RDC using restricted-use data provided by NCHS. The findings and conclusions in this paper are those of the authors and do not necessarily represent the views of the RDC, NCHS, or the Centers for Disease Control and Prevention.

Contents

Abbreviations

ACA	Affordable Care Act
AFDC	Aid to Families with Dependent Children
CHIP	Children's Health Insurance Program
CMS	Centers for Medicare & Medicaid Services
CPS ASEC	Current Population Survey Annual Social and Economic Supplement
FPL	federal poverty level
GAMC	General Assistance Medical Care
IPUMS-CPS	Integrated Public Use Microdata Series, Current Population Survey
LPM	linear probability model
MAGI	modified adjusted gross income
NCHS	National Center for Health Statistics
NHIS	National Health Interview Survey
OLS	ordinary least squares
RDC	Research Data Center
RWJF	Robert Wood Johnson Foundation
SCHIP	State Children's Health Insurance Program
SHARE	State Health Access Reform Evaluation
SSDI	Social Security Disability Income
SSI	Supplemental Security Income
UCLA	University of California, Los Angeles

Introduction

Following full implementation of the Affordable Care Act's (ACA's) coverage provisions on January 1, 2014, the share of U.S. adults without insurance fell substantially more in Medicaid expansion states than in nonexpansion states (Cohen and Martinez, 2015b). Between 2013 and 2014, Medicaid enrollment increased by 10.75 million nationwide (Centers for Medicare & Medicaid Services [CMS], 2015). These figures suggest that Medicaid expansion is succeeding at reducing uninsurance, but more detailed analysis is needed to distinguish the impact of the Medicaid expansion from the impact of other policies, like the establishment of the Health Insurance Marketplace. Further, the extent to which Medicaid expansion reached the newly eligible population, versus increasing enrollment among people who would have been eligible under the old rules (the welcome-mat effect), remains unclear. Finally, there is limited evidence on the extent to which increases in Medicaid enrollment resulting from the ACA expansion may have been offset by reductions in private insurance coverage.

We used data from the 2009–2014 National Health Interview Survey (NHIS) with restricted-use state geocodes to measure the effect of state Medicaid expansion decisions on insurance coverage and the source of coverage among childless adults who became newly eligible for Medicaid in 2014. Because there are important pre-ACA differences in the demographic, health policy, and economic environments of these two groups of states, we used a differences-in-differences research design to distinguish changes in outcomes resulting from the Medicaid expansion from permanent differences between states and from nationwide changes associated with ACA implementation.

Our study addressed the following research questions:

- How did Medicaid expansion affect insurance status for low-income childless adults who became newly eligible?
- Of the newly eligible adults gaining Medicaid coverage because of the expansion, how many would otherwise have been uninsured, and how many would otherwise have been covered by private insurance?
- Which subgroups of the newly eligible population were more or less likely to take up Medicaid coverage in 2014?

While a growing number of studies have examined the Medicaid expansion, no currently published studies estimate the impact of Medicaid expansion on newly eligible adults or use a control group that was not directly targeted by other ACA coverage expansions. We limited our sample to nondisabled childless adults and excluded from our analysis 13 states in which these adults were categorically eligible (i.e., they had the opportunity to qualify for Medicaid if their incomes were sufficiently low) for Medicaid before 2014. We also focused on adults in poverty—those with family incomes below the federal poverty level (FPL)—because adults with income above the FPL became eligible for Marketplace subsidies in nonexpansion states in 2014. While nondisabled childless adults in poverty constitute only about 9 million of the estimated 196 million adults aged 18–64 in 2014, this population is of particular policy interest because it

is a group of newly eligible adults who can readily be identified from survey data on poverty status, family structure, and sources of income.

Our narrower sample definition allows us to examine the effect of new Medicaid eligibility on coverage relative to a counterfactual scenario without Medicaid expansion or Marketplace subsidies. Currently published research addresses the impact of Medicaid expansion on the entire population covered by the new eligibility group—most of whom were already eligible for Medicaid before 2014—relative to a counterfactual scenario that includes Marketplace subsidies for those with incomes above the FPL (Sommers, Gunja, et al., 2015b; Wherry and Miller, 2016). Our analysis complements these studies by providing new evidence on patterns of take-up behavior and the effectiveness of the Medicaid expansion in reaching populations previously excluded from public insurance coverage.

Among newly eligible childless adults, we found that the 2014 Medicaid expansion led to an 8.9-percentage-point increase in the rate of insurance coverage, which was driven by take-up of Medicaid with limited crowd-out of private insurance. Take-up among the newly eligible varied significantly across age groups and racial/ethnic groups in ways that differed from previously available estimates. In addition, adults in worse health experienced larger gains in coverage, suggesting that individuals with greater health care needs were the first to enroll after expansion.

Related Literature

Most of the literature on state-level Medicaid expansions prior to the ACA suggests that coverage expansions increase Medicaid enrollment even though take-up of Medicaid coverage among the newly eligible is often low (Long, Zuckerman, and Graves, 2006; Sommers, Baicker, and Epstein, 2012; Sommers, Kenney, and Epstein, 2014). The literature is more mixed regarding the degree to which expansions lead to offsetting decreases in private coverage, a phenomenon known as *crowd-out*. Several studies of pre-ACA coverage expansions for low-income adults found limited crowd-out for adults in poverty, with crowd-out rates increasing for higher-income families (Gruber and Simon, 2008; Hamersma and Kim, 2013; Long et al., 2006). More recent studies of pre-ACA expansions yield larger estimates of crowd-out for low-income adults, although researchers studying California's early implementation of the ACA expansion found no significant changes in private coverage (Garthwaite, Gross, and Notowidigdo, 2014; Golberstein, Gonzales, and Sommers, 2015).

Researchers have now begun to measure the effects of the 2014 Medicaid expansion. Several early studies that used tracking surveys to analyze the effect of the ACA found larger increases in coverage in Medicaid expansion states, including one study that found this to be the case specifically for low-income adults (Carman, Eibner, and Paddock, 2015; Karpman and Long, 2015; Sommers, Gunja, et al., 2015b). However, these surveys may not reliably identify the source of coverage, and they have substantially lower response rates than the NHIS.

More recently, several papers have used large federal surveys to compare changes in insurance coverage between expansion and nonexpansion states. Our work is most closely related to a recent study that used the 2010–2014 NHIS (Wherry and Miller, 2016). That study found that Medicaid expansion was associated with a 7.4-percentage-point increase in overall insurance coverage for adults with incomes below 138 percent of the FPL, reflecting a 10.5-

percentage-point increase in Medicaid coverage. The gap between the increase in Medicaid coverage and the increase in overall insurance coverage may reflect a reduction in private health insurance coverage, but this effect is imprecisely estimated and was not statistically distinguishable from zero at the 95-percent confidence level. Another study using the 2013–2014 American Community Survey found that coverage gains among adults in poverty were larger in expansion states than in nonexpansion states (Courtemanche, Marton, and Yelowitz, 2016).

Findings have also begun to emerge about which demographic groups benefited most from the 2014 coverage expansions. Across all states and income groups, young adults experienced larger reductions in uninsurance between 2013 and 2014 than did older adults, and larger gains in insurance coverage have also been documented for Black and Hispanic adults relative to white adults (Buchmueller et al., 2016; Courtemanche, Marton, and Yelowitz, 2016; McMorrow et al., 2015a; McMorrow et al., 2015b).

Our study adds to the existing literature by narrowly focusing on take-up behavior among the newly eligible, whereas the studies described above included parents and childless adults who were categorically eligible for Medicaid in 2013. To be clear, outcomes for the broader population studied elsewhere are of considerable policy interest. However, it is challenging to infer from currently published studies how the Medicaid expansion affected insurance coverage relative to a baseline without other coverage expansions; it is also not straightforward to distinguish take-up among the newly eligible from enrollment among previously eligible populations, such as low-income parents or participants in federal disability programs. Estimates that address these narrower questions may be of value to researchers wishing to assess whether the Medicaid expansion has succeeded in reaching newly eligible populations. Information about the take-up behavior of newly eligible childless adults, meanwhile, may be useful to policymakers in nonexpansion states: Most of these states have very limited Medicaid eligibility for childless adults in comparison with states that adopted the Medicaid expansion in 2014 or earlier, meaning that the overall impact of Medicaid expansion in these states would reflect the experiences of the newly eligible to a greater extent than in expansion states that have historically made Medicaid available to a larger population.

Similarly, we view our subgroup analyses—which are driven by take-up behavior among the newly eligible—as answering a different question from studies that measure the ACA's impact on health insurance disparities more broadly. Existing reports of demographic patterns in insurance coverage between 2013 and 2014 either do not distinguish between expansion and nonexpansion states (Courtemanche, Marton, and Yelowitz, 2016; Cohen and Martinez, 2014) or do not stratify on income and pre-ACA eligibility in a way that allows conclusions to be drawn about take-up among the newly eligible (Cohen and Martinez, 2015b; McMorrow et al., 2015a; McMorrow et al., 2015b). This is true even of the estimates reported by Buchmueller et al. (2016), which captured changes in the uninsurance rate by race and ethnicity specifically for adults with family income below 138 percent of the FPL. The estimates in that study pooled parents and childless adults together and included Medicaid expansion states that had already expanded Medicaid eligibility to this income range prior to the ACA. The analysis presented here complements existing estimates of the ACA's impact on health insurance disparities by

isolating one mechanism—differences in Medicaid take-up and crowd-out for the newly eligible—that contributes to the overall impact of the ACA.

Data and Methods

We used individual-level data from the NHIS, a household survey designed by the National Center for Health Statistics (NCHS) and collected by the Census Bureau. Our research design used repeated cross-sectional data from 2009 through 2014, encompassing years before and after the 2014 Medicaid expansion. Our analysis focused on the average effect of the 2014 Medicaid expansion in the 14 expansion states in which childless nondisabled adults were categorically ineligible for Medicaid in 2013.

In order to obtain a sample of adults who became newly eligible for Medicaid in 2014, we restricted our analysis to childless adults in poverty who were not beneficiaries of Supplemental Security Income (SSI) or Social Security Disability Income (SSDI). We focused on childless adults because low-income parents were categorically eligible for Medicaid in all states prior to the ACA. We excluded disabled individuals because SSI recipients are categorically eligible for Medicaid in most states, while SSDI recipients frequently qualify through other pathways.

In addition to limiting the sample to nondisabled childless adults in poverty, we excluded 13 states with categorical eligibility for nondisabled childless adults before 2014; our methodology for classifying states is presented in the appendix. The resulting sample consists of adults who were not eligible to enroll in comprehensive Medicaid coverage prior to 2014.

We classified insurance coverage into three categories: private, Medicaid, and non-Medicaid public insurance (such as Medicare and TRICARE). These categories provided an exhaustive classification of the types of insurance reported in the NHIS and allowed us to examine whether adults gaining Medicaid transitioned from other coverage.

We used a regression-adjusted differences-in-differences approach to model the effect of Medicaid eligibility on our sample, comparing changes in insurance over time between expansion and nonexpansion states. This approach controlled for permanent differences between states as well as nationwide changes over time that affect all states, including ACA reforms other than Medicaid expansion and the Marketplace subsidies. We also controlled for gender, age, marital status, race, educational attainment, and employment status. All estimates were weighted to represent the civilian noninstitutionalized population.

The basic differences-in-differences framework assumes that trends in outcomes would have been identical in expansion and nonexpansion states. We relaxed this assumption by controlling for a separate linear time trend in expansion states in addition to nationwide time effects that varied from quarter to quarter. Estimates without differential trends were qualitatively similar to our main specification, but, as we discuss in the next section, the magnitudes of the estimated effects were sensitive to assumptions about differential trends.

Limitations

Although we attempted to exclude adults who were categorically eligible for Medicaid prior to the ACA expansion, a small percentage of our sample (7 to 13 percent) reported having

Medicaid coverage prior to 2014. We cannot determine why these individuals reported having Medicaid coverage: Some might have been eligible through special pathways (e.g., pregnancy, breast or cervical cancer), some might have been enrolled in a limited benefits package, some might have been covered through programs that were closed to new enrollees, some might have enrolled in Medicaid as parents or caretakers prior to a change in family status, and some might have been misreporting their insurance type. Similarly, we did not observe immigration status, and so our sample may include some individuals who were ineligible for Medicaid because they were not lawful permanent residents. We wish to interpret our estimates as the effect on insurance coverage of becoming newly eligible for the comprehensive Medicaid benefits package available under the ACA expansion, and so nonzero rates of Medicaid coverage and unobserved immigration status may be problematic for this interpretation of our estimates.

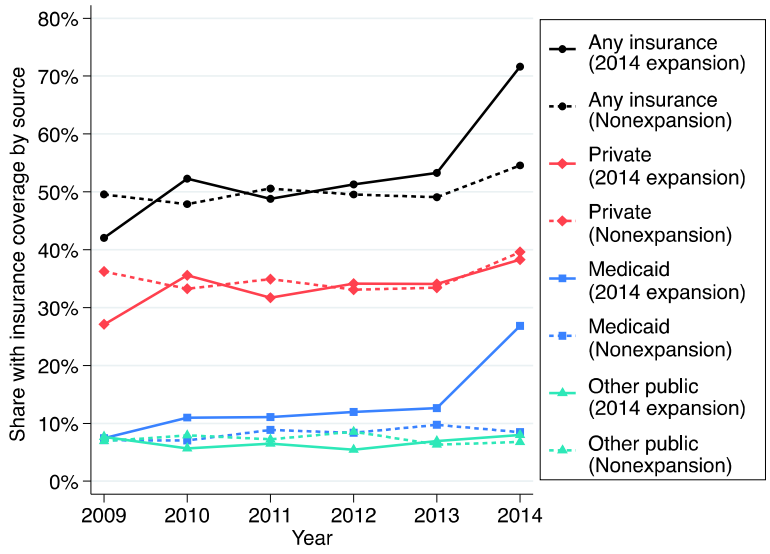
Despite the small percentage of seemingly ineligible childless adults reporting Medicaid coverage, the NHIS, like all other household surveys, undercounts participation in Medicaid relative to administrative data (Call, Davern, et al., 2013). The NHIS has several features—including a point-in-time coverage question and the use of state-specific plan names—that should mitigate limitations identified in other surveys (Cantor et al., 2007; Klerman et al., 2009). Previous audit studies suggested that survey reporting error may have a limited impact on estimates of the uninsurance rate in our setting (Call, Davidson, et al., 2008). However, we were also interested in the source of health insurance, and reporting error may have a larger impact on estimates of take-up and crowd-out. To the extent that the NHIS undercounts Medicaid coverage and overcounts private insurance, we may have tended to underestimate crowd-out. A more serious concern would be if Medicaid expansion leads to a reduction in Medicaid underreporting that is larger in expansion states than in nonexpansion states, which might bias our estimates of Medicaid take-up upward while biasing our estimates of crowd-out downward. We do not have any evidence that reporting styles have been affected by Medicaid expansion, but we cannot rule out this possibility, either.

A further limitation of our study is that our main model assumed that the Medicaid expansion occurred abruptly at the beginning of 2014 (or later in Michigan and New Hampshire). State and private outreach efforts, as well as public awareness of the ACA, could have changed insurance coverage or reporting behavior prior to the official implementation date. For example, expansion state Medicaid agencies may have reduced the frequency or stringency of recertification of eligibility immediately before expansion. Even though we defined our analysis sample to exclude states in which childless adults were eligible for Medicaid before 2014, we cannot rule out a priori the possibility that such preimplementation activities could affect our estimates. Any such effects may have caused us to underestimate the impact of the expansion, particularly in models with differential trends. To guard against bias caused by such preimplementation effects, we ran alternative models that excluded 2013 data, using 2012 and earlier years to define the pre-ACA baseline. We also estimated several models that used alternative assumptions about the presence and functional form of differential trends in coverage in expansion and nonexpansion states. These sensitivity analyses are discussed in the next section.

Results

Figure 1 shows unadjusted time trends in insurance coverage by state expansion status, along with trends in coverage for the three subtypes of insurance considered in this analysis. In 2014 expansion states, the fraction of nondisabled childless adults in poverty covered by health insurance increased by 18.3 percentage points between 2013 and 2014. There was a smaller increase in coverage of 5.5 percentage points in nonexpansion states. These changes in overall insurance coverage closely mirror the pattern observed for Medicaid coverage, which increased by 14.2 percentage points in expansion states with no meaningful change in nonexpansion states. Without adjusting for covariates or differential pre-ACA trends in coverage, these data imply that the Medicaid expansion increased the probability of any insurance coverage by 12.6 percentage points and increased the probability of Medicaid coverage by 14.9 percentage points. These unadjusted differences-in-differences are highly statistically significant ($p < 0.001$).

Figure 1. Insurance Coverage by Source for Nondisabled Childless Adults in Poverty, 2014 Expansion States Versus Nonexpansion States, 2009–2014



SOURCE: Authors' calculations, 2009–2014 NHIS Person File.
NOTES: This figure reports the probability of insurance coverage by source, year, and state Medicaid expansion status for nondisabled childless adults in families with income less than or equal to 100 percent of the FPL. Estimates use final annual person weights. 2014 expansion states are defined as states that began implementation of the ACA Medicaid expansion during 2014 and where childless adults were not categorically eligible for comprehensive Medicaid benefits in 2013 and earlier years. These 14 states are Arizona, Arkansas, Illinois, Kentucky, Maryland, Michigan, Nevada, New Hampshire, New Mexico, North Dakota, Ohio, Oregon, Rhode Island, and West Virginia.

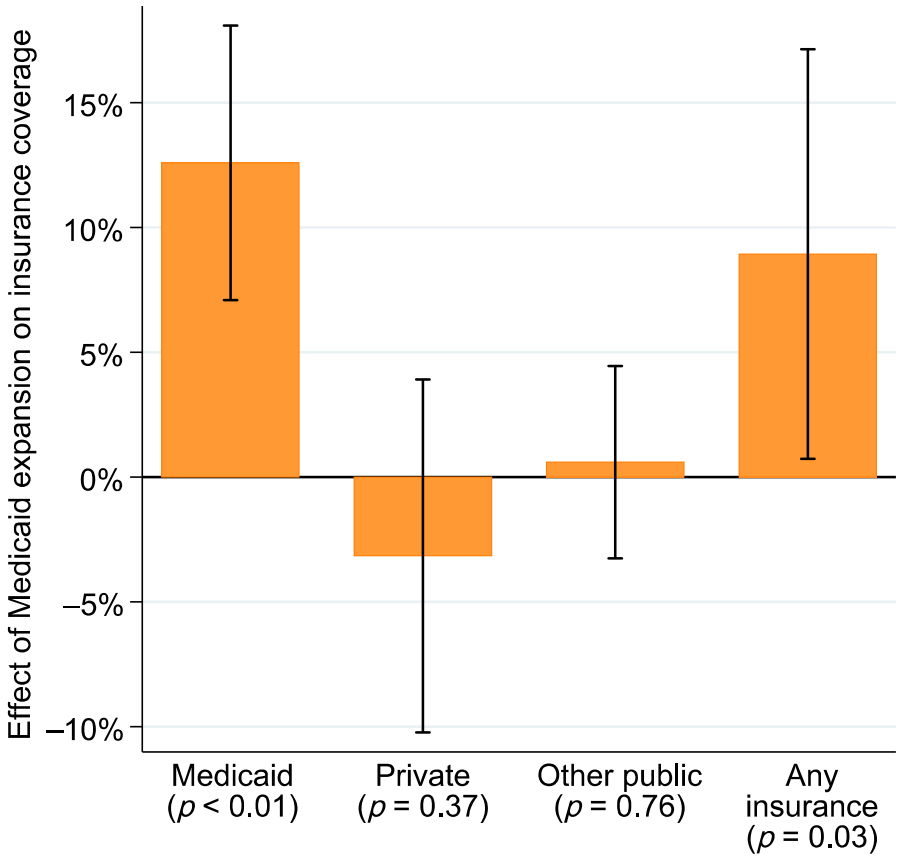
Nonexpansion states are defined as states that had not moved forward with the Medicaid expansion as of the fourth quarter of 2014. These 24 states are Alabama, Alaska, Florida, Georgia, Idaho, Indiana, Kansas, Louisiana, Maine, Mississippi, Missouri, Montana, Nebraska, North Carolina, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Wisconsin, and Wyoming.

Turning to the remaining forms of insurance, Figure 1 shows that rates of private and non-Medicaid public coverage were similar in expansion and nonexpansion states in all years, with the exception of a lower private coverage rate in 2009 for expansion states. Both expansion and nonexpansion states show an increase in private coverage between 2013 and 2014. The estimated increase is slightly larger in nonexpansion states, but unadjusted differences-in-differences estimates for an effect on private coverage were not significant ($p = 0.97$). Non-Medicaid public coverage did not change meaningfully in either group of states over the study period.

While Figure 1 clearly shows that differential increases in Medicaid coverage and overall insurance coverage were associated with Medicaid expansion, we also observed a slight increase in coverage between 2009 and 2013 in the expansion states and a slight decrease in nonexpansion states. Statistical tests reported in the appendix indicate that differential trends in insurance coverage and Medicaid were just barely insignificant at the 10-percent level. To ensure robustness to differential pre-ACA trends, we included a linear trend specific to the expansion states in our main regression model.

Figure 2 presents regression-adjusted estimates of the impact of Medicaid expansion on coverage for low-income childless adults. Overall, insurance coverage increased by 8.9 percentage points ($p = 0.03$), and Medicaid coverage increased by 12.6 percentage points ($p < 0.001$). Private coverage declined by a statistically insignificant 3.2 percentage points ($p = 0.37$). There was no effect on non-Medicaid public insurance ($p = 0.76$).

Figure 2. Effects of 2014 Medicaid Expansion on Insurance Coverage for Newly Eligible Childless Adults



SOURCE: Authors' calculations, 2009–2014 NHIS.
NOTES: This figure reports regression-adjusted differences-in-differences effects of ACA Medicaid expansion on insurance coverage by type. The effect is estimated as a coefficient on a dummy variable equal to 1 in expansion states after the implementation date and 0 otherwise. Effects are reported in percentage points.
Effects were estimated using linear regressions controlling for gender, age, marital status, race, educational attainment, employment status, time (year-quarter) fixed effects, state fixed effects, and a linear time trend specific to expansion states.
2014 expansion states are defined as states that began implementation of the ACA Medicaid expansion during 2014 and where childless adults were not categorically eligible for comprehensive Medicaid benefits in 2013 and earlier years. These 14 states are Arizona, Arkansas, Illinois, Kentucky, Maryland, Michigan, Nevada, New Hampshire, New Mexico, North Dakota, Ohio, Oregon, Rhode Island, and West Virginia. The treatment dummy for Michigan switches from 0 to 1 in the second quarter of 2014. The treatment dummy for New Hampshire switches from 0 to 1 in the fourth quarter of 2014. Data from New Hampshire in the third quarter of 2014 were dropped as a wash-out period for New Hampshire expansion implementation.
Nonexpansion states are defined as states that had not moved forward with the Medicaid expansion as of the fourth quarter of 2014. These 24 states are Alabama, Alaska, Florida, Georgia, Idaho, Indiana, Kansas, Louisiana, Maine,

Mississippi, Missouri, Montana, Nebraska, North Carolina, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Wisconsin, and Wyoming.
Error bars report 95-percent confidence intervals based on *t*-distribution with 37 degrees of freedom and standard errors clustered on state.

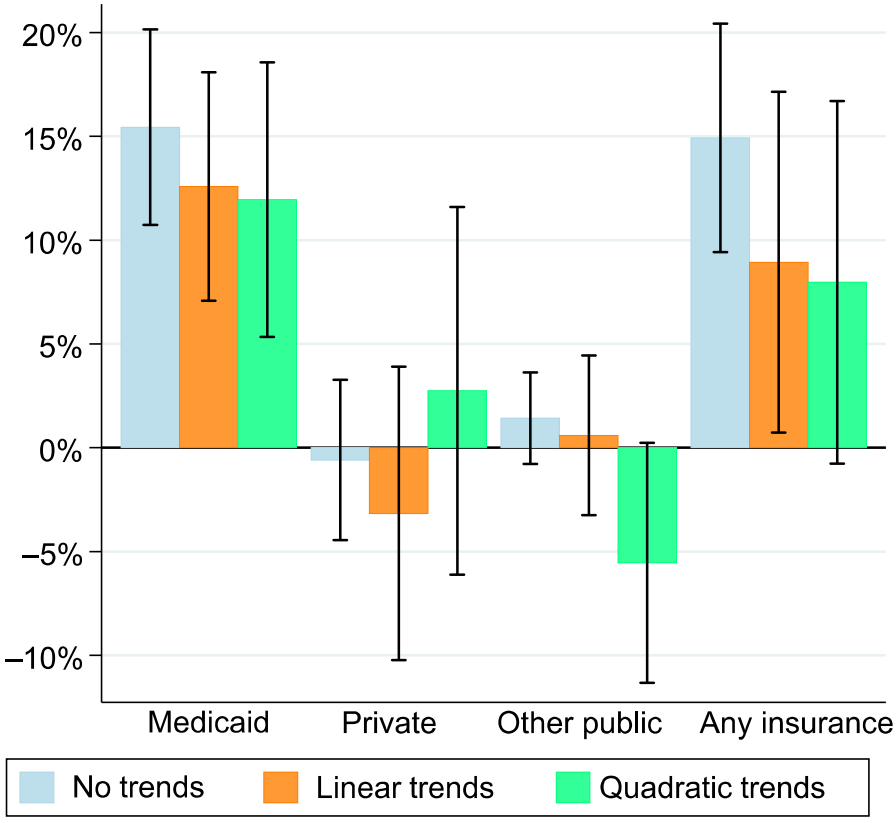
Although our estimate of the Medicaid expansion's impact on private insurance is statistically insignificant, it is negative. The point estimate is large enough to be substantively meaningful, suggesting that 25 percent of newly eligible childless adults gaining Medicaid coverage would have had private coverage in the absence of the Medicaid expansion. However, this estimate is imprecise: We cannot rule out decreases in private insurance coverage as large as 10.2 percentage points or increases as large as 3.9 percentage points at the 95-percent confidence level.

Sensitivity Analysis

To evaluate more fully whether newly eligible adults gaining Medicaid coverage in 2014 would have been privately insured in the absence of the Medicaid expansion, we estimated several additional models that rely on different assumptions about the presence and functional form of differential trends in coverage in expansion and nonexpansion states. Figure 3 presents estimates from these models side by side with our main specification. These alternative models did not provide any evidence that Medicaid expansion crowded out private coverage among newly eligible adults; the specification that includes linear differential trends yielded the most negative impacts on private coverage of any of the models we estimated.

Figure 3 indicates that the estimated change in private coverage is fairly sensitive to assumptions about differential trends in coverage between expansion and nonexpansion states. Evidence of decreases in private coverage for newly eligible adults appears to be limited to an imprecise point estimate in one specification. Estimated increases in Medicaid coverage were more robust to different assumptions about differential trends in expansion and nonexpansion states. While the impact of Medicaid expansion on overall coverage became slightly smaller and less significant when we controlled for quadratic trends, the point estimate was very close to the estimate in our main specification. These models and results are presented in greater detail in the appendix.

Figure 3. Estimates of Medicaid Expansion Impacts Under Alternative Modeling Assumptions



SOURCE: Authors' calculations, 2009–2014 NHIS.
NOTES: This figure reports regression-adjusted differences-in-differences effects of ACA Medicaid expansion on insurance coverage by type under alternative specifications for differential time trends in expansion and nonexpansion states. Effects were estimated as a coefficient on a dummy variable equal to 1 in expansion states after the implementation date and 0 otherwise. Effects are reported in percentage points.
Effects were estimated using linear regressions controlling for gender, age, marital status, race, educational attainment, employment status, time (year-quarter) fixed effects, state fixed effects, and a linear time trend specific to expansion states.
2014 expansion states are defined as states that began implementation of the ACA Medicaid expansion during 2014 and where childless adults were not categorically eligible for comprehensive Medicaid benefits in 2013 and earlier years. These 14 states are Arizona, Arkansas, Illinois, Kentucky, Maryland, Michigan, Nevada, New Hampshire, New Mexico, North Dakota, Ohio, Oregon, Rhode Island, and West Virginia. The treatment dummy for Michigan switches from 0 to 1 in the second quarter of 2014. The treatment dummy for New Hampshire switches from 0 to 1 in the fourth quarter of 2014. Data from New Hampshire in the third quarter of 2014 were dropped as a wash-out period for New Hampshire expansion implementation.
Nonexpansion states are defined as states that had not moved forward with the Medicaid expansion as of the fourth quarter of 2014. These 24 states are Alabama, Alaska, Florida, Georgia, Idaho, Indiana, Kansas, Louisiana, Maine, Mississippi, Missouri, Montana, Nebraska, North Carolina, Oklahoma, Pennsylvania, South Carolina, South Dakota,

Tennessee, Texas, Utah, Virginia, Wisconsin, and Wyoming.
Error bars report 95-percent confidence intervals based on *t*-distribution with 37 degrees of freedom and standard errors clustered on state.

Figure 3 also highlights a methodological point that is relevant to other studies that exploit the policy variation created by state Medicaid expansion decisions: The treatment of preexisting trends can have a substantial effect on the conclusions that analysts draw about the impact of Medicaid expansion. The assumption that outcomes in expansion and nonexpansion states would have moved in parallel in the absence of Medicaid expansion should be evaluated carefully.

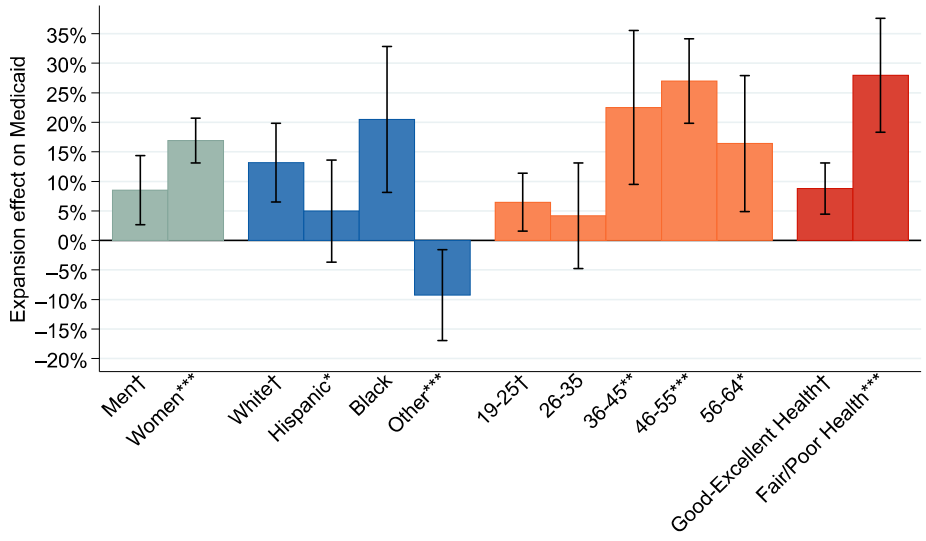
We estimated several further alternative specifications of our regression model to assess the robustness of our results to the preexpansion time period used as a baseline and our choice of estimation sample. Because of the concerns raised above about preimplementation activities, we ran several models that excluded 2013 data, using 2012 and earlier years as the pre-ACA baseline. These results, available in the appendix, show that our estimates are not sensitive to the inclusion or exclusion of data from the year preceding the expansion's implementation.

Readers may also be concerned that it is inappropriate to include employment status as a control variable because labor supply may respond to Medicaid eligibility (Garthwaite et al., 2014). In the appendix, we report estimates for models that did not control for employment status. These estimates are nearly identical to our main specification. We focused on a narrow group of expansion states to isolate the newly eligible. Estimates for a sample that includes four states with eligibility for some childless adults in poverty in 2014 are very similar to our main results (see the appendix).

Demographic Differences in Medicaid Take-Up

To better understand which individual characteristics were associated with take-up of Medicaid, we analyzed changes in Medicaid coverage by gender, race/ethnicity, age, and health status (Figure 4). Regression coefficients and estimates for other types of coverage can be found in the appendix.

Figure 4. Effects of 2014 Medicaid Expansion on Medicaid Coverage for Newly Eligible Childless Adults by Gender, Race, Age, and Health Status



SOURCE: Authors' calculations, 2009–2014 NHIS.
NOTES: This figure reports regression-adjusted differences-in-differences effects of ACA Medicaid expansion on Medicaid coverage for subgroups. Base effects are estimated as a coefficient on a dummy variable equal to 1 in expansion states after the implementation date and 0 otherwise. Interaction effects are estimated as a coefficient on interaction between an expansion dummy variable and a dummy variable for subgroup membership. Effects are reported in percentage points.
Effects are estimated using linear regressions controlling for gender, age, marital status, race, educational attainment, employment status, time (year-quarter) fixed effects, state fixed effects, and a linear time trend specific to expansion states.
† Indicates the base category in the regression model; other bars report the sum of base and interaction effects.
P-values for significance of pairwise difference from base category effect are indicated as follows: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.
Error bars report 95-percent confidence intervals based on *t*-distribution with 37 degrees of freedom and standard errors clustered on state. Confidence intervals for interaction effects treat base coefficients as known.

While Medicaid coverage increased for nearly all of the subpopulations examined, there were meaningful differences between demographic groups in the size of the increase. Men were 8 percentage points less likely than women to gain Medicaid coverage. The effect of the expansion did not differ significantly between Black and white non-Hispanic adults. Medicaid take-up among Hispanic adults was marginally significantly lower than among white non-Hispanic adults ($p = 0.06$), though these groups experienced identical gains in overall insurance coverage because Hispanic adults experienced larger increases in private coverage. Adults in the non-Hispanic "other" racial category (primarily Asian Americans) were significantly less likely to gain Medicaid coverage than other racial groups, and actually experienced reductions in Medicaid coverage relative to similar adults in nonexpansion states.

Our subgroup findings differ from corresponding nationwide changes in coverage between 2013 and 2014. For instance, the NHIS showed similar reductions in uninsurance for men (4.2 percentage points) and women (4 percentage points) (Cohen and Martinez, 2014, 2015a). Even though we were not able to condition on previous insurance status in the NHIS, the gender difference we observed in Medicaid take-up is similar to early estimates of insurance changes among previously uninsured adults (Vistnes and Cohen, 2015).

More striking differences were observed among subgroups defined by age and health status. Adults over age 35 were 10 to 21 percentage points more likely to gain Medicaid coverage than younger adults, and people in poor or fair health were 19 percentage points more likely to gain Medicaid coverage than those in good, very good, or excellent health.

Subgroup effects on any insurance coverage are similar to the results shown for Medicaid, except that the size of the Medicaid expansion effect on any insurance coverage for Hispanic adults is very close to the size of the effect for non-Hispanic white adults. We found no evidence of a statistically significant reduction in private insurance coverage for any of the groups considered. These estimates are reported in the appendix.

To provide additional insight into the demographic differences in take-up behavior implied by these estimates, Table 1 presents the subgroup effects underlying Figure 4 alongside the 2013 uninsurance rate for each subgroup in the expansion states included in our sample.

Table 1. Medicaid Coverage Gains, Preexpansion Uninsurance Rates, and Implied Medicaid Take-Up Rates by Demographic Group for Nondisabled Childless Adults in Poverty

Demographic Group	Expansion Effect on Medicaid Coverage	2013 Uninsurance Rate in Expansion States	Implied Medicaid Take-Up Rate
Total			
Nondisabled childless adults in poverty	13%	42%	30%
Gender			
Men (base)	8%	36%	23%
Women***	17%	33%	52%
Race/ethnicity			
White non-Hispanic (base)	13%	39%	34%
Hispanic*	5%	35%	14%
Black non-Hispanic	20%	33%	62%
Other non-Hispanic***	–9%	25%	–37%
Age			
19–25 (base)	6%	30%	22%
26–35	4%	47%	9%
36–45**	23%	48%	47%
46–55***	27%	36%	75%
55–64*	16%	25%	66%
Health status			
Good or better health (base)	9%	39%	23%
Fair or poor health***	28%	26%	108%

SOURCE: Authors' calculations, 2009–2014 NHIS.
The expansion effect on Medicaid coverage is the adjusted differences-in-differences point estimate presented in Figure 2 (for all nondisabled childless adults in poverty) or Figure 3 (for subgroups).
The 2013 uninsurance rate was calculated for the estimation sample of nondisabled childless adults in poverty for the expansion states included in our analysis.
The implied take-up rate is the increase in Medicaid coverage caused by Medicaid expansion divided by the 2013 uninsurance rate.
P-values for significance of pairwise difference from base category effect are indicated as follows: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.
See the appendix for details of estimation and standard errors on Medicaid coverage effects.

The NHIS does not capture information on the past insurance status of most currently insured respondents, making it infeasible to calculate a take-up rate among the population of previously

uninsured individuals. However, we can give readers a sense of how the change in Medicaid coverage compares to the size of the uninsured population by scaling our estimates by the 2013 uninsurance rate in expansion states for each subgroup we examine. We labeled this ratio the "implied take-up rate" in order to distinguish it from the take-up rate among the previously insured (which we cannot estimate). If only individuals who were uninsured in 2013 enrolled in Medicaid following the expansion and there was no churn in insurance status for reasons unrelated to the ACA, this ratio would yield the take-up rate among previously uninsured individuals. However, we caution that insurance transitions are widespread even in the absence of policy changes, and that some reductions in private coverage may have resulted from Medicaid expansion.

The implied take-up rate for the overall population of nondisabled childless adults in poverty suggests that the majority of uninsured individuals in this population who gained Medicaid eligibility in 2014 did not enroll; dividing the 12.9-percentage-point increase in Medicaid coverage by the 42-percent uninsurance rate for this group in 2013 yields an implied take-up rate of 30 percent.

As indicated by Figure 4, implied take-up varied widely across subgroups. While 2013 uninsurance rates were roughly similar across genders and racial/ethnic groups, older adults and those in fair or poor health had sharply higher implied take-up rates than younger and healthier adults because the former groups had both lower rates of uninsurance and larger Medicaid coverage gains. Thus, while the overall implied take-up rate was 30 percent, the implied take-up rates for adults 35 and older ranged from 47 percent to 75 percent. For adults in fair or poor health, meanwhile, the increase in Medicaid coverage was slightly larger than the 2013 uninsurance rate, leading to an implied take-up rate just above 100 percent.

Discussion

We estimate that Medicaid expansion made low-income childless adults in Medicaid expansion states 8.9 percentage points more likely to be insured than they would have been without the expansion. Virtually all of this increase came from enrollment in Medicaid, with no significant evidence of offsetting reductions in private coverage. Our estimates for overall take-up and crowd-out are qualitatively similar to the findings of other differences-in-differences studies of the 2014 Medicaid expansion (see the appendix for further discussion). Our findings confirm that Medicaid take-up by the newly eligible contributed meaningfully to the increases in coverage observed in expansion states.

Assuming that our sample excludes adults previously eligible for comprehensive Medicaid benefits, our results can be interpreted as the effect of becoming newly Medicaid eligible on the probability of coverage among nondisabled childless adults in poverty. Most uninsured adults in our sample did not gain coverage in the first year of the expansion, however: Our estimated 12.6-percentage-point increase in Medicaid coverage represents only 30 percent of the 2013 uninsurance rate in this population (see the appendix). While low, this estimate is consistent with prior estimates of take-up among newly eligible adults (Busch and Duchovny, 2005).

We note several possible explanations for low take-up in the first year of the expansion. This relatively low take-up rate may result, in part, from the fact that there is no open enrollment period for Medicaid, so eligible individuals can delay enrollment until they seek care. The individual mandate, which could incentivize take-up among higher-income Medicaid-eligible individuals, is not applicable to most adults in poverty: Individuals with income below the federal tax income filing threshold are exempt from the mandate, and very few adults in poverty are required to file tax returns. In addition, because we did not observe immigration status, it is possible that some people whom we classify as newly eligible are in fact ineligible because of Medicaid's residency and citizenship requirements. Administrative reports from CMS suggest that Medicaid take-up continued to increase in 2015 and 2016 (CMS, 2016).

Our finding that newly eligible whites and Blacks experienced the biggest increase in Medicaid coverage is also noteworthy. Between 2013 and 2014, the nationwide uninsurance rate decreased more for Hispanics (6.9 percentage points) and non-Hispanic Blacks (4.3 percentage points) than for non-Hispanic whites (2.9 percentage points) (Cohen and Martinez, 2014, 2015a). Our findings suggest that larger gains in insurance coverage for some minority groups observed among the overall adult population were not driven by differential take-up of Medicaid among newly eligible adults. Estimates from the American Community Survey reported in a recent study that simultaneously stratifies on race, income, and state expansion status also suggest that differences in Medicaid take-up across racial and ethnic groups did not closely resemble changes in the uninsurance rate for individuals of all income levels in all states (Buchmueller et al., 2016).

Similarly, the age gradient we observed in reductions in uninsurance differs from the nationwide pattern found in the early-release NHIS data, which showed that the uninsurance rate

fell most for adults aged 18–24 (6.1 percentage points), followed by adults aged 25–34 (4.4 percentage points) (Cohen and Martinez, 2014, 2015a). While the nationwide population of adults aged 45–64 had a small reduction in uninsurance between 2013 and 2014, we found that childless nondisabled adults in poverty in this age range experienced the *largest* coverage gains due to the Medicaid expansion. While we reiterate that the implied take-up rates reported above are a very rough calculation that should not be interpreted as the probability that an uninsured adult gained Medicaid coverage, Table 1 indicates that take-up in the first year of the Medicaid expansion was higher among some subgroups—older adults and those in fair or poor health—who were more likely to be insured prior to Medicaid expansion. We note that our subgroup estimates do not contradict previously reported subgroup findings for the nationwide population, as our population of interest is a small fraction of the nationwide adult population and our sample excludes California and several other large states with high pre-ACA Medicaid eligibility.

We also found that newly eligible adults in fair or poor health were more likely to gain Medicaid coverage than healthier adults. We caution that, because self-rated health is evaluated at the time of the survey, these results could potentially be biased due to reverse causation from Medicaid coverage to self-rated health status. In a study with a similar differences-in-differences research design to ours, Simon, Soni, and Cawley (2016) found that the 2014 Medicaid expansion led to a small but significant improvement in self-rated health for childless adults in poverty. If Medicaid coverage improves self-rated health status, our estimated interaction effect between *poor* health and Medicaid coverage will be biased downward (away from our finding that poor health predicted Medicaid take-up). We note that the short-term effect of coverage on self-rated health is theoretically ambiguous because increased access to care could make adults newly aware of health problems without yielding immediate improvements in health. The analysis of the 2014 NHIS by Wherry and Miller does not indicate that Medicaid expansion was associated with any changes in self-rated health status for the overall low-income adult population (Wherry and Miller, 2016). While we cannot rule out reverse causation, there is no evidence to date that the Medicaid expansion harmed self-rated health status among newly eligible adults, which is the relationship that would be needed to generate bias in the direction of our estimates.

When juxtaposed with our finding that older adults had higher take-up of Medicaid, our finding that worse self-rated health was associated with Medicaid take-up adds to the evidence that individuals with greater health care needs were the first to enroll in coverage under the 2014 expansion. This pattern is consistent with pre-ACA research on Medicaid take-up, and it mirrors a recent study showing that early enrollees in Marketplace policies were older and more likely to use medication than later enrollees (Donohue et al., 2015; Kenney et al., 2012).

An alternative explanation is that, unlike those with private insurance, Medicaid-eligible individuals can delay enrollment until they need to interact with the health care system. This phenomenon—which has been termed *conditional coverage*—is one mechanism that could lead to a mechanical association between health care utilization and Medicaid take-up among the newly eligible population. The importance of conditional coverage is likely to be most pronounced in the period immediately following Medicaid expansion, since a higher proportion of newly eligible individuals is likely to have encounters with health care providers as time

passes. While our analysis does not distinguish between conditional coverage and other mechanisms that might generate higher take-up among those in fair or poor health, the contribution of conditional coverage to observed patterns of Medicaid take-up under the ACA is a question that may warrant further attention from researchers and policymakers. For instance, the policy implications of early data on per-enrollee Medicaid spending may depend on assumptions about whether conditionally covered individuals who do not seek care in a given time frame should be included in or excluded from the risk pool. Analysis of data from 2015 and subsequent years will help determine the extent to which the association between poor health and Medicaid coverage documented here is a short-run or a long-run phenomenon.

Conclusion

Our results corroborate findings from other data sources that insurance coverage increases were larger in states that expanded Medicaid. Our estimates add to the existing literature because our treatment and control groups were more narrowly defined to exclude those previously eligible for Medicaid and those directly affected by other coverage expansions. By focusing on the group most likely to gain Medicaid eligibility (nondisabled low-income childless adults) and by focusing on states that implemented the Medicaid expansion in 2014, this study clarifies the important role played by increased Medicaid coverage in previously reported coverage gains. We found very little evidence of differential changes in private coverage between expansion and nonexpansion states. Although our best estimate of the increase in overall insurance coverage was somewhat smaller than the increase in Medicaid coverage, our estimates by insurance type yielded no significant evidence that the Medicaid expansion crowded out private coverage in the first year of the 2014 coverage expansion.

While we found substantial increases in Medicaid coverage, our estimates nevertheless suggest that take-up over the first year of the 2014 Medicaid expansion was limited relative to the size of the Medicaid-eligible uninsured population. Our subgroup analyses indicated that take-up was lower among men (compared with women), Hispanics and members of other racial/ethnic groups (compared with non-Hispanic whites and Blacks), and adults under age 36 (compared with older adults). Finally, we found that newly eligible adults in fair or poor health were more likely to gain Medicaid coverage than healthier adults.

Our subgroup analyses suggest that heterogeneity across demographic groups in coverage gains and Medicaid take-up among nondisabled childless adults in poverty were often quite different from the patterns observed among all adults, with women and older adults more likely to gain Medicaid coverage than men and younger adults. Differences in immigration status, which we did not include in our data, may account for some of these subgroup patterns. However, the differences are quite large in magnitude, and we suspect that they primarily reflect enrollment and take-up behavior.

Policymakers interested in increasing Medicaid take-up among the newly eligible may wish to consider these findings in targeting future outreach efforts. A clearer understanding of take-up and crowd-out among the newly eligible may be especially important for anticipating the likely outcome if nonexpansion states adopt the Medicaid expansion in the future, since many of these states have very limited Medicaid eligibility under current law.

Appendix: Methods and Sensitivity Analyses

Sample Construction and Descriptive Statistics

The population of interest in this study consisted of childless adults aged 19–64 living in families with income below 100 percent of the applicable U.S. Department of Health and Human Services Federal Poverty Guideline who were not receiving SSI or SSDI benefits. We used the edited family structure and relationship variables in the final-release NHIS to classify families by the number of children aged 18 or under. The NHIS family structure variables define 18-year-olds as adults even though 18-year-olds count as children for the purposes of determining categorical Medicaid eligibility for parents and caretakers. Using the family relationship codes, we defined *children* as persons aged 18 and under with a parent, caretaker, aunt/uncle, or grandparent aged 19 or over present in the household and then classified adults according to the presence of children in the family.

Income is measured in the NHIS over the calendar year preceding the survey. Our research design requires classification of households by poverty status but does not require a precise measure of the level of income. The final-release NHIS contains a categorical variable reporting previous-year poverty status as defined by the Census Bureau poverty threshold. We used this variable as a criterion for inclusion in our analysis sample. While the NHIS suffers high item nonresponse—typically 22 to 32 percent in recent years—for the exact income question, since 2007 the NHIS has used unfolding brackets to elicit a range for family income from respondents unable to report an exact amount. Unfolding brackets are a survey method that seeks to reduce nonresponse by asking respondents who do not report an exact amount to answer a series of yes-or-no questions about whether their income is above or below a certain threshold. Critically for our research design, the bracket boundaries have been based on Census poverty thresholds since 2011. Unfolding brackets have reduced nonresponse substantially even though many NHIS respondents remain unable or unwilling to report an exact income amount: Only 7.5 percent of persons in the 2014 NHIS (7 percent unweighted) failed to report any bracketed information on family income.[1] We observed whether family income was above or below 100 percent of the FPL for all other individuals in the NHIS. Although we did not use the NHIS imputed income files, the relatively low rate of missing data in our sample is likely to limit the scope for sample selection bias as a result of our choice to exclude individuals with no information on poverty status.

We also excluded all individuals who reported receiving SSI income or Social Security income for their own disability (which is a reasonable proxy for SSDI) at any time in the previous calendar year.

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[1] Authors' calculations, 2014 public-use NHIS. An additional 3 percent of families have a poverty ratio edited to "undefinable" because the number of persons under age 18 is equal to the family size. These families would be excluded from our sample based on age.

Panel A of Table A.1 reports the impact of each step in our sample definition on the number of observations available in the public-use NHIS. For all 50 states and the District of Columbia, the pooled public-use NHIS from 2009 through 2014 contains 16,907 childless adults living in families with income below 100 percent of the FPL and not receiving SSI or SSDI. Panel B of Table A.1 presents unweighted sample sizes by year.

Table A.1. Sample Construction Step-by-Step and Final Sample Sizes by Year and State Group

A. Number of observations in 2009–2014 public-use file

Sample criteria	N
Adults aged 19–64 at time of survey in person file	362,981
Restrict to families with income below 100 percent of the FPL	51,518
Restrict sample to childless adults	21,572
Restrict to those not receiving SSI or SSDI benefits	16,907

B. Number of observations by year in analysis sample

Year	Nonexpansion states	2014 expansion states	Estimation sample	Excluded expansion states	All states
2009	1,050	384	1,434	688	2,122
2010	1,134	447	1,581	776	2,357
2011	1,393	602	1,995	1,001	2,996
2012	1,589	688	2,277	948	3,225
2013	1,341	665	2,006	942	2,948
2014	1,470	821	2,291	968	3,259
All years	7,977	3,607	**11,584**	5,323	16,907

The sample sizes for the public-use NHIS in Panel A of Table A.1 include the entire country and therefore overstate the sample size available for our analysis. Panel B of Table A.1 shows the sample size available by year and group of states. The sample size increases substantially over the first three years of the sample in part because adult poverty rates climbed sharply following the 2008–2009 Great Recession (DeNavas-Walt and Proctor, 2014). The NHIS's increased sample size after 2011 is also apparent. Our final sample contained 11,584 individuals, of which just over two-thirds were in nonexpansion states. The sample of expansion state residents in 2014 who represent the treated group in our differences-in-differences models contains 821 individuals.

Sample Means

Table A.2 presents sample averages for our insurance coverage and demographic variables for all years (2009–2014) pooled together. This table reports summary statistics separately for the 2014 expansion states and the nonexpansion states. In this table, as in all other calculations reported in this appendix, final person sampling weights are used unless otherwise noted.

Table A.2. 2009–2014 Sample Means for Nondisabled Childless Adults in Poverty

Insurance Coverage		2014 Expansion States	Nonexpansion States
	Any insurance	54.1%	50.2%
	Private insurance	33.8%	35.1%
	Medicaid	14.1%	8.3%
	Any public insurance	20.8%	15.6%
	Non-Medicaid public	6.7%	7.3%
	SCHIP	0.2%	0.4%
	Other public insurance	1.4%	1.5%
	Other government insurance	1.2%	1.0%
	Military insurance	2.1%	2.8%
	Medicare	3.4%	3.2%
Demographics			
	Age	36.2	36.6
	Married	16.4%	18.9%
	Female	46.8%	47.4%
Education			
	Less than high school/GED	18.9%	20.5%
	High school diploma/GED	28.3%	29.7%
	Some college	31.6%	29.3%
	College or more	21.2%	20.5%
Employment			
	Employed	44.5%	47.4%
	Unemployment	20.6%	16.2%
	Not in labor force	34.9%	36.3%
Race/ethnicity			
	Non-Hispanic white	65.2%	56.0%
	Hispanic	10.5%	14.8%
	Non-Hispanic Black	18.7%	23.4%
	Other	5.6%	5.8%
Self-reported health status			
	Good, very good, or excellent	68.0%	68.4%
	Fair or poor	32.0%	31.6%
N (unweighted)		3,607	7,977

Final person sampling weights used

NOTE: SCHIP = State Children's Health Insurance Program.

Table A.2 indicates that nondisabled adults in poverty are roughly 4 percentage points more likely to have insurance coverage in 2014 expansion states, though these figures include the impact of the Medicaid expansion. As shown in Figure 1 in the main text, both groups of states have similar levels of private insurance coverage and overall coverage, but expansion states had higher levels of Medicaid coverage prior to the expansion. We classified the type of insurance coverage into three categories: private insurance, Medicaid, and non-Medicaid public insurance. The non-Medicaid public insurance category includes all forms of federal, state, and local government insurance coverage other than Medicaid. Respondents were assigned to this category only if they reported public insurance coverage but did not report Medicaid coverage. Inclusion of this category in the analysis gave us an exhaustive classification of the types of insurance reported in the NHIS and allowed us to examine whether adults gaining Medicaid coverage under the ACA might represent transfers of previously insured adults from other government programs. Table A.2 tabulates the specific insurance types that constitute the "Other public" category reported in the figures in the main text. Coverage from other sources of public insurance is similar between 2014 expansion and nonexpansion states, although military insurance is slightly more common in nonexpansion states.

The remainder of Table A.2 reports the average demographic characteristics of our sample. On some basic demographics, including age and gender, respondents from two groups of states are very close to being balanced. On other characteristics, however, including marital status, education, and employment, moderate differences on the order of 1 to 4 percentage points are apparent. The sharpest differences are apparent on race and ethnicity: 65 percent of our expansion state population are non-Hispanic whites versus 56 percent of nonexpansion state respondents. The proportions of respondents that are Black or Hispanic are correspondingly higher in nonexpansion states. We controlled for all demographic characteristics listed in Table A.2 in our regressions.

Protocol for Defining 2014 Expansion States

This section describes our procedure for identifying states with pre-ACA categorical eligibility for childless adults.

An incremental contribution of this study is our focus on a treatment group consisting only of adults who became newly Medicaid-eligible in 2014. At present, published differences-in-differences estimates of the Medicaid expansion's impact on insurance status use less narrowly drawn samples and report differences between all states moving forward with the Medicaid expansion and those not moving forward, or average take-up. While a binary classification of states into expansion and nonexpansion states is informative, generous pre-ACA Medicaid eligibility in many of the expansion states makes it challenging to assign a behavioral interpretation to a differences-in-differences coefficient estimated on the full group of expansion states. One issue is that parents were categorically eligible for Medicaid in all states, and many of the expansion states had relatively generous income limits for parents in 2013 and earlier years: Among families with income below 100 percent of the FPL in the 27 states that had adopted the ACA expansion by the end of 2014, we estimate that roughly 90 percent of parents were

Medicaid-eligible in 2013.[2] In order to isolate the newly eligible, we restricted attention to childless adults throughout this study.

Restricting attention to childless adults was not sufficient to isolate the newly eligible population, however, because childless adults were eligible for coverage in many of the states that adopted the Medicaid expansion by the end of 2014. We estimated that 55 percent of childless adults in these states were Medicaid-eligible in 2013.[3] In order to isolate the newly eligible population, we coded Medicaid income limits for parents and childless adults in all states and excluded states in which childless adults were categorically eligible for comprehensive Medicaid benefits. This led us to exclude the six "early-expansion" states that had implemented the ACA Medicaid expansion before 2014, but it also led us to exclude an additional seven states. We refer to the 14 remaining expansion states as "2014 expansion states" to distinguish them from the 13 "excluded expansion states" in which at least some childless nondisabled adults were eligible for some form of comprehensive Medicaid benefits in 2013. The 2014 expansion states served as the treatment group in our differences-in-differences analysis, while all 24 of the states that had not adopted the ACA Medicaid expansion by the end of 2014 served as the control group.

Table A.3 lists our classification of states as 2014 expansion states, excluded expansion states, and nonexpansion states, along with the highest income limit for each state in 2013. Income limits are reported in modified adjusted gross income (MAGI) as a percentage of the FPL.

The remainder of this subsection explains our procedure for collecting and coding state Medicaid eligibility rules.

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[2] Authors' calculations, 2013 Current Population Survey Annual Social and Economic Supplement (CPS ASEC). Eligibility was imputed by comparing 2012 MAGI approximated following Czajka (2013) to the relevant 2013 MAGI income limits coded as discussed below. We used the Integrated Public Use Microdata Series, Current Population Survey (IPUMS-CPS) for this analysis (Flood et al., 2015).

[3] Authors' calculations, 2013 CPS ASEC.

Table A.3. Classification of State Expansion Status

2014 Expansion States			Excluded Expansion States			Nonexpansion States		
	2013 Income Limits			2013 Income Limits			2013 Income Limits	
		Childless			Childless			Childless
State	Parents	Adults	State	Parents	Adults	State	Parents	Adults
AR	17	n.a.	CA†	211	210	AL	11	n.a.
AZ	106	n.a.	CO†	107	10	AK	106	n.a.
IL	195	n.a.	CT†	198	56	FL	30	n.a.
KY	20	n.a.	DC†	216	210	GA	34	n.a.
MD	123	n.a.	DE	107	108	ID	22	n.a.
MI*	54	n.a.	HI	208	208	IN	208	n.a.
ND	54	n.a.	IA	246	240	KS	30	n.a.
NH**	59	n.a.	MA	138	138	LA	18	n.a.
NM	47	n.a.	MN†	102	75	ME	208	n.a.
NV	30	n.a.	NJ†	61	25	MS	24	n.a.
OH	90	n.a.	NY	150	100	MO	18	n.a.
OR	50	n.a.	VT	195	157	MT	47	n.a.
RI	179	n.a.	WA†	133	133	NE	56	n.a.
WV	19	n.a.				NC	41	n.a.
						OK	41	n.a.
						PA	32	n.a.
						SC	62	n.a.
						SD	52	n.a.
						TN	99	n.a.
						TX	15	n.a.
						UT	42	n.a.
						VA	47	n.a.
						WI	201	n.a.
						WY	54	n.a.

Table reports highest income limit for 2013 reported in state MAGI conversion plans in terms of MAGI as a percentage of FPL.

Table reflects eligibility for comprehensive benefits (Medicaid state plan, Medicaid Managed Care, or waiver plans covering primary care, specialists, and hospital care). Plans with enrollment closed in 2011 or earlier are excluded.

* Michigan ACA expansion was implemented beginning in the second quarter of 2014.

** New Hampshire ACA expansion was implemented on August 15, 2014. We excluded data from the third quarter of 2014 for New Hampshire as a wash-out.

† indicates “early-expansion” states adopting the ACA expansion in part or in full prior to 2014.

MAGI Conversion Plans as Data Source on Medicaid Limits

In addition to the Medicaid coverage expansion, the ACA mandated major changes in how household income would be defined for the purposes of establishing Medicaid eligibility. Beginning in 2014, the ACA mandated that eligibility determinations for Medicaid, the Children's Health Insurance Program (CHIP), and exchange subsidies be made on the basis of MAGI.[4] Because pre-ACA net income concepts varied dramatically from state to state, the ACA required every state to calculate MAGI-based eligibility standards in 2013. MAGI conversion was required for groups involving parents/caretaker relatives, pregnant women, children under age 19, and childless adults. Even income standards that might seem irrelevant under the ACA Medicaid expansion (i.e., MAGI income limits for parents and children below 138 percent of the FPL in states moving forward with the expansion) were converted for several reasons, most notably that the health care costs of newly eligible and previously eligible beneficiaries are reimbursed at different Federal Medical Assistance Percentage rates.

Our primary sources for coding state Medicaid eligibility rules were the MAGI conversion plans submitted by the states to CMS. We collected MAGI conversion plans for 49 states and the District of Columbia from the CMS website (Medicaid.gov, undated[a]).[5] Two members of the research team reviewed the MAGI conversion plans available from the state web pages on the CMS website and independently entered the net income and MAGI income standards for every pathway covering families or childless adults. We did not enter pathways that applied to pregnant women or children. According to the Kaiser Family Foundation's survey of Medicaid program rules, the net income standard for pregnant women was above the poverty line in every state by 2013, meaning that the 2014 Medicaid expansion does not induce any variation in the eligibility of pregnant women (Heberlein, Brooks, Alker, et al., 2013).

The MAGI conversion plans often did not provide many details on the covered population or the type of benefits provided for each eligibility group. For the mandatory Section 1931 eligibility pathways (i.e., families meeting the former Aid to Families with Dependent Children [AFDC] income standards), it is clear that families with children are covered and traditional Medicaid benefits or Medicaid managed care is provided. However, there was significant ambiguity regarding the 1115 waiver pathways because the 1115 waivers encompass a very diverse group of programs and populations. We coded all 1115 waivers that were not clearly restricted to narrow benefits (e.g., family planning services) or targeted only to pregnant women or children.

Drawing guidance from the Kaiser Family Foundation's surveys of Medicaid eligibility (Heberlein, Brooks, Guyer, et al., 2011; Heberlein, Brooks, Guyer, et al., 2012; Heberlein, Brooks, Alker, et al., 2013), the first reviewer examined approved 1115 waivers obtained from the CMS website to identify the target population and scope of benefits for 1115 waivers

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[4] MAGI is a tax term that includes total gross income minus allowed deductions, plus certain tax-exempt income types, such as Social Security income, interest, and foreign income.

[5] All conversion plans were downloaded on March 13, 2015. All states except Massachusetts provided a conversion plan; we discuss our handling of Massachusetts below.

reported in the conversion plans that were ambiguous on these dimensions.[6] We determined that the MAGI conversion plans included a number of benefit plans that were significantly narrower than Medicaid in one of several ways, and we excluded from consideration 1115 pathways that met any of the following restrictions:

- **Limited-benefit plans that do not cover both primary care and inpatient hospital care.** Some 1115 plans cover only family planning services, or they cover only primary care in limited settings but do not cover hospital care. Our view is that these plans should be excluded from consideration because they are much less comprehensive than traditional Medicaid.
    - Maryland: The Primary Adult Care program provided "a limited primary care health benefit package to uninsured adults" (CMS, 2013a).
    - Michigan: The Adult Benefit Waiver program provided "a limited ambulatory care benefit package" (CMS, 2014).
    - Missouri: Gateway to Better Health is a program limited to St. Louis County providing "a limited primary care package" to beneficiaries who receive care at specified Federally Qualified Health Centers (CMS, 2013b).
    - Vermont: The Catamount health waiver program, available to those with incomes up to 300 percent of the FPL, is described as limited. (It also does not affect our analysis because another 1115 waiver goes up to 150 percent of the FPL.)
- **Plans that provide premium assistance for private employer-sponsored coverage or the individual market.** Some of these plans are limited to employees of participating employers. We also suspect that premium support for employer-sponsored insurance or individual market coverage is likely to be reported as private insurance in the NHIS rather than Medicaid.
    - Arkansas: The Safety Net Benefit Program provides premium assistance for employer-sponsored insurance (CMS, 2012b).
    - Oklahoma: Insure Oklahoma provides premium assistance for employer-sponsored insurance or individual market coverage (CMS, 2011).
- **Plans that were closed to new enrollment in 2011 or earlier.** While there may be a stock of enrollees in some closed plans prior to 2014, we assumed that closed plans were likely to have negligible enrollment.
    - Arizona: The 1115 program for childless adults with incomes up to 100 percent of the FPL was phased out in mid-2011 (CMS, 2012a).
    - Indiana: In the Healthy Indiana program, enrollment for childless adults was closed.
    - Maine: The 1115 program for childless adults up to 100 percent of the FPL was closed prior to 2014 (the timing is unclear from the waiver).
    - Wisconsin: BadgerCare Core covered childless adults up to 200 percent of the FPL with a limited benefits package. (The benefits package meets our criterion of covering both primary and inpatient care.) However, a binding enrollment cap was imposed shortly after coverage was expanded to childless adults, and the state

[6] All waiver applications cited were obtained from the Medicaid website on May 22–25, 2015 (Medicaid.gov, undated[b]).

reported in a waiver application that the childless adult waiting list was approximately seven times larger than the enrolled population in 2013.

Other plans that deviate in some way from traditional Medicaid but offer a comprehensive benefit were included in our database. In particular, we included

- Medicaid managed care
- state plans that charge premiums to some beneficiaries.

There are two states for which no family or childless adult income standards were reported in the MAGI conversion reports. A MAGI conversion plan for Massachusetts was not submitted to CMS. This may be due to the fact that Massachusetts had already implemented health care reform prior to the ACA. In any event, Massachusetts does not contribute any identifying variation to our research design because all low-income adults were eligible for Medicaid or subsidized coverage prior to 2014 (Heberlein et al., 2011). We assigned Massachusetts MAGI limits of 138 percent of the FPL for families and childless adults in all years so that all adults in our analysis sample were classified as Medicaid-eligible.

The other state missing MAGI conversion information was Texas. Texas submitted a conversion report, but the conversion report described the income limit for Section 1931 families as "AFDC" without further elaboration. We used the 2014 MAGI income standard of 15 percent for families reported for Texas by CMS as our proxy for the MAGI limit, and we used this standard to impute pre-ACA eligibility throughout the 2009–2013 period.[7]

The MAGI conversion plans are a valuable data source, but it was necessary to draw on additional references and data sources to verify the accuracy and completeness of the income standards reported in the conversion plans. For instance, one limitation of using the MAGI conversion plans is that states could choose not to provide conversion estimates for Medicaid pathways that would not be used in 2014 and later years.[8] The MAGI conversion plans also do not report pathways covering childless adults that were established in two states (Connecticut and Minnesota) following enactment of the ACA, nor do they report pathways in several other states (New York and Washington). We assigned MAGI limits to these states as follows:

- Connecticut: Childless adults, 56 percent of the FPL (early ACA expansion as reported in Sommers, Arntson, et al. [2013] and Herz [2012])
- Minnesota: Childless adults, 75 percent of the FPL (early ACA expansion as reported in Sommers, Arntson, et al. [2013] and Herz [2012])
- New York: Childless adults, 100 percent of the FPL; parents, 150 percent of the FPL (Family Plus taken from Kaiser Family Foundation)
- Washington: Childless adults and parents, 133 percent of the FPL (conversion of the state Basic Health plan to 1115 waiver, coded from Kaiser Family Foundation).

We compared the results of our coded income standards to the Kaiser Family Foundation's widely used survey of state Medicaid eligibility to identify any pathways that were omitted from

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[7] The only change in eligibility for Texas parents reported by the Kaiser Family Foundation is a 1-percentage-point decline in the standard for working parents between 2012 and 2013. Texas does not report offering any optional eligibility groups for families in the MAGI report or the other sources we consulted.

[8] In practice, very few of the discontinued pathways represented the highest income limit for families, so this limitation did not affect our ability to classify state Medicaid policies in earlier years.

the MAGI conversion reports and to assist in locating additional sources clarifying the status of pathways that were incompletely described in the conversion plans (Heberlein, Brooks, Guyer, et al., 2012; Heberlein, Brooks, Alker, et al., 2013) We also drew on a Congressional Research Service report to identify the statutory authority used by certain states to support early implementation of the ACA expansion (Herz, 2012). For 1115 eligibility pathways, we also attempted to compare our database to the 2012 program rules coded in the Urban Institute's TRIM3 microsimulation model (TRIM3, 2012, accessed May 18–27, 2015). The TRIM3 rules agreed with our coded limits except for the following cases, which we resolved in favor of the MAGI conversion reports:

- Hawaii: TRIM3 reported 100 percent for parents versus 208 percent in the MAGI conversion plan.
- Minnesota: TRIM3 reported 215 percent for parents versus 102 percent in the MAGI conversion plan. We follow Sommers, Kenney, and Epstein (2014) in coding Minnesota's income limit as 75 percent of the FPL.[9]
- New Jersey: TRIM3 reported 200 percent for parents versus 27 percent (61 percent MAGI) in the MAGI conversion reports. The 200-percent threshold corresponds to the NJ FamilyCare waiver program. However, NJ FamilyCare's 2013 annual report states that enrollment is closed for all pathways applicable to adults with income above 100 percent of the FPL. The same source reports that the number of beneficiaries in the state was essentially flat between December 2010 and December 2013, consistent with enrollment being closed to higher-income adults. We ignored the 200-percent eligibility pathway for New Jersey.
- Tennessee: TRIM3 reported 400 percent for parents, which we did not find documented elsewhere and therefore ignored.

Statistical Methods

We applied a regression-adjusted differences-in-differences approach to estimate the effect of expanded Medicaid eligibility. Because we used multiple years of pre-2014 data, our main specification relaxed the assumption that outcomes would have evolved identically in expansion and opt-out states if the expansion states had also opted out. We modeled outcome of interest y_{ist} for individual i in state s in quarter t as the sum of a state-specific intercept term (μ_s) for people in state s, a time effect (ν_t) that varied freely by year and quarter but was common to all states, the effect of i's demographic characteristics (X_{it}), the effect of a linear time trend (t, coded as the number of quarters elapsed since the end of 2008) that was present only for the expansion

[9] "Based on a comparison of MinnesotaCare and General Assistance Medical Care (GAMC) populations that were transitioned to Medicaid at the outset of the expansion, versus March 2013 expansion enrollment statistics provided by the Minnesota Department of Human Services. GAMC had an income cutoff of 75 percent of poverty but also used an asset test (which was eliminated under the 2010 expansion). MinnesotaCare offered coverage as high as 250 percent of poverty but had a state cap on total spending that often limited enrollment" (Sommers, Kenney, and Epstein, 2014, p. 79).

states, the effect of a binary variable (T_{st}) that equaled 1 if the Medicaid expansion was in effect in state s during quarter t and equaled 0 otherwise, and a mean-zero error term (ε_{ist}):

$$y_{ist} = \tau_T T_{st} + X_{it}\beta_X + \beta_T t\mathbf{1}\{s \text{ is expansion state}\} + \mu_s + \nu_t + \varepsilon_{ist},$$

where β_X is a vector of coefficients on individual characteristics X_{it} and β_T is the coefficient on the differential time trend. The parameter of interest is τ_T, which can be interpreted as the average effect of the Medicaid expansion on outcome y, holding an individual's demographic characteristics constant. The coefficient τ_T directly captures the predicted change in the probability of y_{ist} associated with the Medicaid expansion and is scaled as a fraction; for example, if τ_T in a model for any insurance coverage were 0.1, we would conclude that the Medicaid expansion had increased the probability that a nondisabled childless adult in poverty had insurance coverage by 10 percentage points.

The basic differences-in-differences approach effectively compares trends over time in expansion and nonexpansion states to assess whether trends diverged after the Medicaid expansion took effect on January 1, 2014. Because the approach focuses on changes within states rather than absolute differences, it enables us control for any fixed differences between expansion and nonexpansion states, including permanent unobserved differences. For example, the approach controls for underlying differences in the quality of hospitals and physicians across states, time-invariant differences in the stigma or hassle associated with Medicaid enrollment, fixed differences in individuals' awareness of the law, and any other time-invariant factors that may influence outcomes. The inclusion of individual characteristics X_{it} corrects the estimated differences-in-differences effect τ_T for differences in the composition of our population of interest across states and over time and improves the statistical power of the model by reducing the unexplained variation in the outcome y_{ist}.

The potential advantage of our model over differences-in-differences without trends is that the benchmark for changes in outcomes in expansion states takes into account trends observed in those states in 2009 through 2013, as well as any deviation from 2009 through 2013 trends observed in the opt-out states in 2014. While the differences-in-differences model with group-specific time trends can be unreliable when the number of time periods observed before policy implementation is small relative to the number of time periods observed in postimplementation data (Wolfers, 2006), we have enough preimplementation time periods (20 quarters) relative to postimplementation time periods (four quarters) that this is unlikely to be a major concern. Another risk of using trends is that unmodeled preimplementation activities (e.g., outreach starting in 2013) could affect our estimated trends, potentially biasing the estimated effects of Medicaid expansion on coverage downward. We address this possibility below by estimating alternative models that drop 2013 data as a preimplementation wash-out period.

For most of the 2014 expansion states, T_{st} is equal to 1 in 2014 and 0 in all other years. Two states in our sample—Michigan and New Hampshire—began the Medicaid expansion after January 1, 2014. Michigan's ACA expansion was implemented beginning in the second quarter of 2014. We coded the treatment indicator T_{st} for Michigan to 0 in the first quarter of 2014 and to 1 in subsequent quarters. New Hampshire's ACA expansion was implemented on August 15,

2014. We excluded data from the third quarter of 2014 for New Hampshire as a wash-out period and coded the treatment indicator T_{st} for New Hampshire to 1 only in the fourth quarter of 2014.

Alternative Specifications

In this appendix, we also report basic differences-in-differences estimates that do not control for a differential time trend in the expansion states:

$$y_{ist} = \tau_T T_{st} + X_{it}\beta_X + \mu_s + \nu_t + \varepsilon_{ist}.$$

This model makes stronger assumptions than the model in our main specification, and so it delivers more precise estimates, but it is not robust to violations of the assumption that expansion and nonexpansion states would have had parallel trends in coverage in the absence of the ACA.

To address the possibility that Medicaid expansion activities would affect coverage or reporting behavior prior to the 2014 implementation date, we estimated models both with and without differential trends that dropped 2013 data.

Estimation and Statistical Inference

Our regression specification is a linear probability model (LPM), and we estimated this model by ordinary least squares (OLS) regression. While the LPM does not explicitly account for the binary nature of the outcome variable, it can be justified as an approximation to the conditional expectation function of y_{ist} given the explanatory variables (Angrist and Pischke, 2008). Because all of our explanatory variables except the linear time trend are all binary or categorical, inconsistency arising from values of the regression function outside the unit interval may be limited in our specification. Our choice of the LPM over a fully parametric binary choice model, such as logistic regression, was motivated largely by our concerns about clustering—i.e., unmodeled correlation of the error term within states and over time. Standard maximum likelihood estimates of the logistic regression model are inconsistent in this setting, while OLS remains consistent as long as the error term is uncorrelated with the regressors.

Classical inference assuming independent and identically distributed error terms is inappropriate in our setting for several reasons. First, our outcomes are binary variables, leading to conditional heteroskedasticity. Second, the stratified sampling design of the NHIS requires estimation procedures that account for sampling design using the stratum and primary sampling unit variables on the NHIS files in addition to sampling weights. However, standard survey estimation procedures using the NHIS design variables are inappropriate for our application because these procedures assume statistical independence of error terms across survey strata, and many states contain multiple strata—the public-use NHIS identifies 300 unique strata.

We believe that error terms are most likely correlated across time periods within states. To the extent that state health policy, economic conditions, labor market regulation, and other factors that vary at the state level cause states to experience different dynamics of insurance coverage prior to ACA implementation, error terms will be correlated across states within time. This can be the case even if our regression model is correctly specified. Furthermore, our identifying variation exists at the state level. While our regression estimates would remain

consistent in such a scenario, inference that uses the NHIS survey design variables may lead to underestimates of standard errors and overrejection of null hypotheses.

We used standard errors clustered by state to account for arbitrary correlation of the error term within state as well as conditional heteroskedasticity. Survey strata are nested within states, so our inference approach should be viewed as more conservative than inference using the NHIS design variables. Our main estimation sample contains 38 clusters (states). We calculated *p*-values and confidence intervals using a *t*-distribution with 37 degrees of freedom, as suggested by Cameron and Miller (2015).

Results and Robustness Checks

Table A.4 presents our main regression estimates (Column 5) in addition to a range of other specifications used to assess the robustness of our results. Column 1, which includes no covariates except for state and time fixed effects, is used to assess the significance of the "unadjusted differences-in-differences" effects of Medicaid expansion referenced in the main text. Column 2 presents analogous estimates using all available pre-ACA years (2009–2013) as the baseline instead of only 2013 data.

Column 3 reports basic regression-adjusted differences-in-differences estimates that control for individual covariates but do not include differential trends in coverage in the expansion states. Omitting the differential trends yields estimated increases in Medicaid and private coverage that are each roughly 3 percentage points higher than in our main specification. However, the point estimates for our main model (Column 5) fall well within the 95-percent confidence intervals implied by Column 3, and vice versa, and we view these findings as being qualitatively similar. The model without differential time trends (Column 3) does yield a meaningfully larger increase in overall insurance coverage (14.9 percentage points versus 8.9 percentage points in our main model), though this point estimate also falls within the 95-percent confidence interval for our main model.

Table A.4. Differences-in-Differences and Regression-Adjusted Estimates of Medicaid Expansion Effect

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Years	2013–2014	2009–2014	2009–2014	2009–2012, 2014	2009–2014	2009–2012, 2014	2009–2014	2009–2014	2009–2014
Control for covariates?			Y	Y	Y	Y	Y	Y	Y
State group–specific time trends?					Linear	Linear	Quadratic		Linear
Model excludes employment?								Y	Y
Any insurance	0.126	0.173	0.149	0.160	0.089	0.100	0.080	0.161	0.106
	(0.030)	(0.028)	(0.027)	(0.028)	(0.041)	(0.043)	(0.043)	(0.028)	(0.042)
	0.000	0.000	0.000	0.000	0.034	0.025	0.072	0.000	0.016
Medicaid	0.149	0.158	0.154	0.155	0.126	0.108	0.120	0.163	0.135
	(0.033)	(0.023)	(0.023)	(0.024)	(0.027)	(0.028)	(0.033)	(0.023)	(0.026)
	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000
Private insurance	-0.001	0.016	-0.006	-0.002	-0.032	-0.027	0.027	-0.008	-0.029
	(0.033)	(0.023)	(0.019)	(0.018)	(0.035)	(0.045)	(0.044)	(0.020)	(0.034)
	0.967	0.501	0.758	0.926	0.371	0.559	0.534	0.700	0.386
Non-Medicaid public insurance	-0.010	0.013	0.014	0.021	0.006	0.029	-0.055	0.019	0.011
	(0.019)	(0.010)	(0.011)	(0.010)	(0.019)	(0.021)	(0.029)	(0.011)	(0.020)
	0.611	0.232	0.197	0.050	0.755	0.178	0.060	0.095	0.592
N	4,297	11,584	11,584	9,578	11,584	9,578	11,584	11,584	11,584

SOURCE: 2009–2014 National Health Interview Survey.
NOTES: Each cell reports the differences-in-differences regression coefficient for the effect of the 2014 Medicaid expansion from a separate OLS regression model.
Standard errors clustered on state (38 clusters) are in parentheses; two-sided *p*-values for equality to 0 are reported below standard errors. *P*-values were calculated based on a *t*-distribution with 37 degrees of freedom.
The sample consists of nondisabled childless adults aged 19–64 with annual family income below 100 percent of the FPL.
States with any categorical eligibility for nondisabled childless adults in 2013 are excluded from the sample. These 13 states are California, Colorado, Connecticut,

Delaware, the District of Columbia, Hawaii, Iowa, Massachusetts, Minnesota, New Jersey, New York, Vermont, and Washington.
All regressions include state and quarter fixed effects. Covariates include age categories (19–25, 26–35, 46–55, and 56–64), gender, binary marital status, four racial/ethnic groups (non-Hispanic white, Hispanic, non-Hispanic Black, and other), educational attainment (less than high school, high school diploma or GED, some college, college diploma, and more than college), and employment status (employed, unemployed, not in labor force, and unknown).

Columns 4 and 6 report regression specifications that are identical to those in Columns 3 and 5 but that are estimated on a sample that excludes data from 2013 as a wash-out period that could potentially be affected by state-specific activities related to the 2014 Medicaid expansion. These estimates do not differ meaningfully from the corresponding estimates that include 2013 data.

Column 7 adds a quadratic term to the specification of the differential time trend in the expansion states. The estimated impacts on overall insurance coverage and Medicaid are very close to those estimated in our main model, as reported in Column 5. The estimated effect of expansion on private coverage is insignificant and positive, while the effect on non-Medicaid public coverage becomes negative and statistically significant. This specification yields estimated impacts on private and other public coverage that do not resemble any of the other specifications we estimated. We view these results as a warning that the quadratic specification of the differential trends may be undesirably sensitive to the data from 2009, when the expansion states had lower rates of private coverage and higher rates of other public coverage relative to the nonexpansion states than in later years.

Finally, Columns 8 and 9 report regression specifications that are identical to those in Columns 3 and 5 but that omit the control variable for current employment status; some readers may be concerned that it is inappropriate to include employment status as a control variable because labor supply may respond to Medicaid eligibility (Garthwaite, Gross, and Notowidigdo, 2014). These estimates do not differ meaningfully from the corresponding estimates based on our main specification.

Comparison with Other Published Differences-in-Differences Estimates

We stated in the main text that our basic findings about take-up with limited crowd-out were qualitatively consistent with the other published differences-in-differences estimates using large federal surveys. Here we provide a more detailed comparison of our results and the two peer-reviewed studies to date that used large federal surveys to estimate differences-in-differences models for the coverage effects of Medicaid expansion. An earlier paper by Sommers et al. also used a differences-in-differences research design with tracking survey data from the Gallup-Healthways Well-Being Index (Sommers, Gunja, et al., 2015b). Sommers et al. were not able to reliably distinguish between different sources of coverage, and they did not distinguish between expansion states with different pre-ACA Medicaid policies, but they also found significant reductions in uninsurance (5.2 percentage points) among adults with family income of 138 percent of the FPL or below.

Compared with the 2016 paper by Wherry and Miller that also analyzed the 2014 NHIS, we found larger increases in Medicaid and overall coverage. Wherry and Miller estimated that Medicaid expansion increased overall insurance coverage by 7.4 percentage points and increased Medicaid coverage by 10.5 percentage points. We also found slightly weaker evidence of reductions in private insurance, which Wherry and Miller calculate decreased by a marginally significant 3.7 percentage points ($p = 0.07$) in their main estimates.

There are two major differences between our research design and Wherry and Miller's, which should have offsetting impacts on the magnitude of our estimated effects. On the one hand, because we focus on a population that experienced sharper increases in Medicaid

eligibility, our estimates may tend to be larger than those reported by Wherry and Miller. Specifically, we excluded adults with incomes between 100 percent and 138 percent of the FPL, we excluded parents, we used data collected in all quarters of 2014 while they dropped the first two quarters as a wash-out period, and we excluded eight expansion states included in their analysis (California, Colorado, Connecticut, Hawaii, Iowa, Minnesota, New Jersey, and Washington).

On the other hand, because, unlike Wherry and Miller, we control for differential linear trends in expansion and nonexpansion states, our estimates may tend to be smaller. The models reported in Column 3 of Table A.3, which omit pre-trends and thus correspond most closely to Wherry and Miller's specification, yield much larger estimated increases in overall coverage and Medicaid coverage with no evidence of reductions in private coverage.

Courtemanche, Marton, and Yelowitz (2016) analyzed data from the 2013–2014 American Community Survey to track changes in insurance by poverty ratio and state expansion status. They estimated that adults in poverty in expansion states became 8.8 percentage points more likely to be insured between 2013 and 2014, versus 4.7 percentage points in nonexpansion states, suggesting that Medicaid expansion was associated with a 4.1-percentage-point increase in insurance coverage for adults in poverty. They also reported rates of public and private coverage. Those estimates imply that Medicaid expansion was associated with a 6.1-percentage-point increase in public coverage and a 1.9-percentage-point decrease in private coverage. However, this study is not directly comparable to ours because it groups childless adults and parents together, and because the main models report results for all 50 states and the District of Columbia.

Take-Up and Crowd-Out Rates

Our regression coefficient for Medicaid coverage may be interpreted directly as a take-up rate because it captures the change in the probability of Medicaid coverage that resulted from gaining eligibility. To provide additional context for interpreting this estimate, we can scale this estimate by the 2013 uninsurance rate for nondisabled childless adults in poverty in our sample, which we estimated to be 42.0 percent. The increase in Medicaid coverage was equivalent to 30 percent of the pre-ACA uninsurance rate. Similarly, the reduction in uninsurance was equivalent to 21.3 percent of the pre-ACA uninsurance rate.

We can also scale our estimated change in private coverage by the change in Medicaid coverage to obtain a crowd-out rate in terms of the change in private coverage per new Medicaid enrollee. The point estimate from the model controlling for differential trends is 25 percent crowd-out, but we note that the change in private coverage is not significantly different from 0, and so the crowd-out ratio is too imprecisely estimated to be very informative: The 95-percent confidence interval based on delta-method standard errors covers crowd-out rates from –26 percent to 76 percent. The crowd-out estimate from the model without differential trends is close to 0 (4 percent), with a delta-method 95-percent confidence interval covering [–21 percent, 28.5 percent].

Because the ratio of two normal random variables can be highly non-normal if the denominator is close to 0, we also used the variance-covariance matrix of our regression

estimates for private coverage and Medicaid to examine the distribution of the crowd-out ratio by simulation. The resulting 95-percent confidence interval was [–38 percent, 71 percent], which is not meaningfully different from the delta-method estimate. This is not surprising; the estimated increase in Medicaid coverage is highly significant, so there were essentially no draws that were very close to 0. The estimated increase in Medicaid is even larger when pre-trends are omitted, so the delta-method confidence interval falls within 1 percentage point of the simulated confidence interval.

Assessing the Importance of Differential Time Trends

The only specification choice that had a substantial effect on our estimates was the inclusion of a differential time trend in the expansion states: The estimated effect of the expansion on Medicaid and private coverage was slightly less positive when differential trends were included, and the impact on overall coverage was lower. To assess the importance of differential trends, Table A.5 reports the coefficients β_T for the differential time trends, standard errors, and *p*-values for equality to 0. Coefficients and standard errors were multiplied by 4 so that they could be interpreted as the predicted annual increase in insurance coverage in expansion states relative to nonexpansion states after controlling for individual covariates and state and time fixed effects.

As suggested by Figure 1 in the main text, insurance coverage was trending upward in expansion states relative to nonexpansion states by 2 percentage points per year prior to 2014. Point estimates in Column 1 suggest that this increase was accounted for by both Medicaid coverage and private coverage, although the private coverage pre-trend was imprecisely estimated.

In our main model (Column 1 of Table A.5), the coefficients β_T on the linear pre-ACA time trends were not statistically significant when compared with the *t*-distribution that we considered appropriate for our clustering scheme. However, the pre-trends for any insurance ($p = 0.102$) and Medicaid coverage ($p = 0.105$) were extremely close to being significant at the 10-percent level. In fact, comparison to critical values from the normal distribution (1.64 for the 10-percent level) rather than the *t*-distribution with 37 degrees of freedom (1.69) would identify both of these coefficients as marginally significant. Thus, even though the differential trends were insignificant at conventional levels, they were close enough to significance that we did not feel comfortable relying on the parallel trends assumption for our main estimates.

A potential limitation of our main specification is that the pre-ACA time trend could be contaminated by postimplementation dynamics if 2014 Medicaid expansion led to a trend break in insurance coverage, with effects increasing over the course of 2014. We viewed this as a minor concern for our main specification because our dataset contained five years of preimplementation data but only one year of postimplementation data. To examine whether failure to allow for dynamics following implementation affected our estimates of differential time trends by expansion status, we estimated a model that allowed the differences-in-differences treatment effect to vary freely from quarter to quarter in 2014. In this specification, any postimplementation trend in outcomes was absorbed by the quarter-specific treatment effects and therefore could not affect our estimate of the differential trend in insurance for expansion states. The resulting estimates of the time trend are reported in Column 2 of Table A.5. The estimates

are very close to the time trends estimated in our main specification, suggesting that postimplementation dynamics do not account for the differential trends we estimate.

Finally, Column 3 of Table A.5 reports coefficients on trends that omitted 2013 data as a wash-out period, since it is reasonable to attribute differential trends to the early effects of activities associated with Medicaid expansion. The magnitudes of the preexisting trends were similar to the estimates including 2013 data, however, and the trend in Medicaid coverage was larger and clearly significant ($p = 0.034$) when 2013 data were excluded. We have included Table A.5 to allow interested readers to understand our motivations for favoring the model with differential pre-ACA trends as our main specification and to place the estimates with and without differential trends in context.

Table A.5. Coefficients on Preexpansion Linear Time Trends

	(1)	(2)	(3)
Years	2009–2014	2009–2014	2009–2012, 2014
Control for covariates?	Y	Y	Y
Quarter-specific effects of 2014 expansion?*		Y	
Preimplementation trend: Any insurance	0.021	0.022	0.018
	(0.013)	(0.012)	(0.013)
	0.102	0.067	0.185
Preimplementation trend: Medicaid	0.010	0.013	0.014
	(0.006)	(0.006)	(0.007)
	0.105	0.037	0.034
Preimplementation trend: Private insurance	0.009	0.007	0.008
	(0.009)	(0.009)	(0.012)
	0.312	0.467	0.536
Preimplementation trend: Non-Medicaid public insurance	0.003	0.004	-0.002
	(0.004)	(0.004)	(0.005)
	0.506	0.281	0.656
N	11,584	11,584	9,578

Table reports coefficients on linear time trends specific to expansion states included in models from columns 5–6 in Table A.4.

Time trend coefficients and standard errors scaled up by 4 to represent predicted increase in insurance coverage over 1 year for expansion states relative to nonexpansion states.

Regressions also control for sociodemographics, year-quarter time effects, state fixed effects, and dummy variable for expansion states in 2014.

* Model contains four dummies for the quarters of 2014 interacted with the indicator for expansion state status.

Standard errors clustered by state (38 clusters) are in parentheses.

P-values for equality of time trend to 0 are below standard errors.

P-values are based on *t*-distribution with 37 degrees of freedom and standard errors clustered on state.

Subgroup Analyses

We estimated that the majority of nondisabled childless adults in poverty who gained Medicaid eligibility in 2014 did not enroll in Medicaid. In order to learn more about the characteristics of those individuals who gained insurance because of the ACA Medicaid expansion, we conducted several subgroup analyses. We interacted the treatment variable in our main differences-in-differences regression models with indicators for group membership to yield the following model, which allows the effect of the 2014 Medicaid expansion to vary freely across groups indexed by G:

$$y_{ist} = \tau_T T_{st} + \sum_{G \in \mathcal{G}} \tau_G T_{st} \mathbf{1}\{i \text{ is in } G\} + X_{it}\beta_X + \mu_s + \nu_t + \varepsilon_{ist}$$

where $\mathcal{G}$ is a set of subgroups excluding a base category. We estimated this model for the following groups:

- race (base category: non-Hispanic white)
- gender (base category: male)
- age (base category: ages 19–25)
- self-reported health status (base category: good, very good, or excellent health).

Table A.6 reports coefficients from these four models for three sets of outcomes: any insurance coverage, Medicaid, and private coverage. The Medicaid estimates are reported in Figure 3 in the main text. Similar figures for the other insurance types are presented as Figures A.1 and A.2. As discussed in the main text, subgroup patterns for any insurance are very similar to the patterns observed for Medicaid, while none of the subgroups experienced a significant decrease in private coverage.

Table A.6. Subgroup Effects of Medicaid Expansion on Insurance Coverage

Years	2009–2014	2009–2014	2009–2014	2009–2014	2009–2014	2009–2014	2009–2014	2009–2014	2009–2014	2009–2014	2009–2014	2009–2014	2009–2014
Control for covariates?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
State group–specific time trends?	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Subgroup model	Gender	Gender	Race	Race	Race	Race	Age	Age	Age	Age	Age	Health	Health
Subgroup	Men	Women	Non-Hispanic white	Hispanic	Non-Hispanic Black	Other non-Hispanic	19–25	26–35	36–45	46–55	55–64	Good or better health	Fair or poor health
Effect type	Base	Interaction	Base	Interaction	Interaction	Interaction	Base	Interaction	Interaction	Interaction	Interaction	Base	Interaction
Any insurance	0.052	0.076	0.100	0.000	-0.013	-0.180	0.036	0.005	0.145	0.123	0.127	0.054	0.181
	(0.038)	(0.028)	(0.039)	(0.083)	(0.034)	(0.061)	(0.034)	(0.049)	(0.069)	(0.040)	(0.076)	(0.039)	(0.032)
	0.183	0.011	0.013	0.997	0.704	0.005	0.304	0.922	0.044	0.004	0.101	0.173	0.000
Medicaid	0.085	0.084	0.132	-0.082	0.073	-0.224	0.065	-0.023	0.160	0.205	0.099	0.088	0.192
	(0.029)	(0.019)	(0.033)	(0.043)	(0.061)	(0.038)	(0.024)	(0.044)	(0.064)	(0.035)	(0.057)	(0.021)	(0.048)
	0.006	0.000	0.000	0.062	0.238	0.000	0.011	0.605	0.017	0.000	0.089	0.000	0.000
Private insurance	-0.026	-0.011	-0.028	0.103	-0.071	-0.040	-0.029	0.032	-0.003	-0.075	0.039	-0.032	0.004
	(0.032)	(0.037)	(0.026)	(0.070)	(0.068)	(0.064)	(0.037)	(0.087)	(0.051)	(0.056)	(0.052)	(0.033)	(0.048)
	0.421	0.765	0.282	0.148	0.303	0.534	0.432	0.710	0.958	0.187	0.466	0.342	0.937
N	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584

SOURCE: 2009–2014 National Health Interview Survey.

NOTES: Subgroup analysis was conducted using regression specifications in which a differences-in-differences treatment variable was interacted with dummies for subgroup membership.

The base category coefficient is the effect of the expansion, but the interaction coefficient is the difference in the effect of the expansion between the subgroup at hand and the base category.

Standard errors clustered on state (38 clusters) are in parentheses; two-sided *p*-values for equality to 0 are reported below standard errors. *P*-values were calculated based on a *t*-distribution with 37 degrees of freedom.

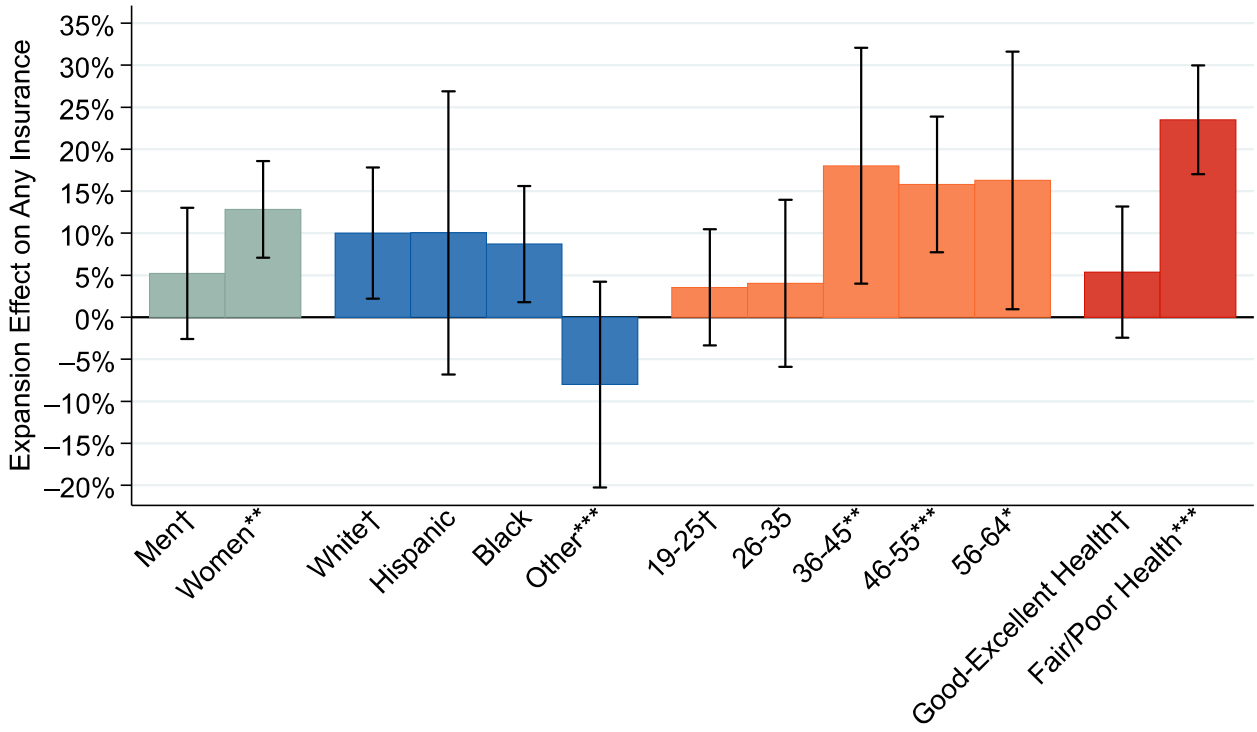
The sample consists of nondisabled childless adults aged 19–64 with annual family income below 100 percent of the FPL.

States with any categorical eligibility for nondisabled childless adults in 2013 are excluded from the sample. These 13 states are California, Colorado, Connecticut, Delaware, the District of Columbia, Hawaii, Iowa, Massachusetts, Minnesota, New Jersey, New York, Vermont, and Washington.

All regressions include state and quarter fixed effects. Covariates include age categories (19–25, 26–35, 36–45, 46–55, and 56–64), gender, binary marital status, four racial/ethnic groups (non-Hispanic white, Hispanic, non-Hispanic Black, and other), educational attainment (less than high school, high school diploma or

GED, some college, college diploma, and more than college), and employment status (employed, unemployed, not in labor force, and unknown).

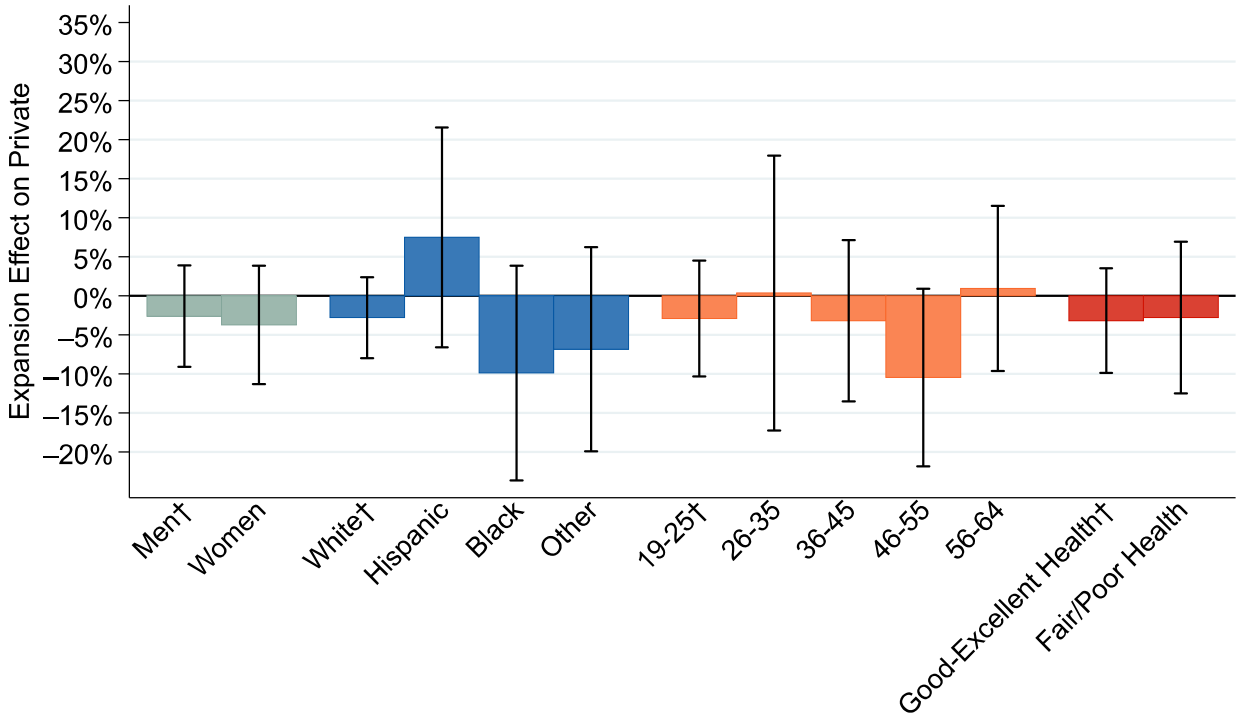
Figure A.1. Subgroup Effects on Probability of Any Insurance Coverage



NOTES: This figure shows the regression-adjusted differences-in-differences effects of ACA Medicaid expansion on any insurance coverage for subgroups. Base effects are estimated as a coefficient on a dummy variable equal to 1 in expansion states after the implementation date and equal to 0 otherwise. Interaction effects are estimated as a coefficient on interaction between the expansion dummy variable and a dummy variable for subgroup membership. Effects are reported in percentage points.

Effects are estimated using linear regressions controlling for gender, age, marital status, race, educational attainment, employment status, time (year-quarter) fixed effects, state fixed effects, and a linear time trend specific to expansion states.
† This indicates the base category in the regression model; other bars report the sum of base and interaction effects.
P-values for difference from base category effect are indicated as follows: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.
Error bars report 95-percent confidence intervals based on *t*-distribution with 37 degrees of freedom and standard errors clustered on state. Confidence intervals for interaction effects treat base coefficients as known.

Figure A.2. Subgroup Effects on Probability of Private Coverage



NOTES: This figure shows the regression-adjusted differences-in-differences effects of ACA Medicaid expansion on private insurance coverage for subgroups. Base effects are estimated as a coefficient on a dummy variable equal to 1 in expansion states after the implementation date and equal to 0 otherwise. Interaction effects are estimated as a coefficient on interaction between the expansion dummy variable and a dummy variable for subgroup membership. Effects are reported in percentage points.
Effects are estimated using linear regressions controlling for gender, age, marital status, race, educational attainment, employment status, time (year-quarter) fixed

effects, state fixed effects, and a linear time trend specific to expansion states.
† This indicates the base category in the regression model; other bars report the sum of base and interaction effects.
P-values for difference from base category effect are indicated as follows: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.
Error bars report 95-percent confidence intervals based on *t*-distribution with 37 degrees of freedom and standard errors clustered on state. Confidence intervals for interaction effects treat base coefficients as known.

Differences-in-Differences Effects of Medicaid Expansion for Wider Groups of States

In order to isolate a population of low-income childless adults with limited Medicaid eligibility prior to implementation of the 2014 Medicaid expansion, we excluded from our analysis 13 of the 27 states that had implemented the expansion by the end of 2014. To place our main coverage estimates and subgroup findings in context, Table A.7 reports estimates for several expanded samples that encompass these excluded expansion states.

Column 1 of Table A.7 reproduces our main estimates for reference, and Column 4 reproduces estimates for our main sample from a model that omits differential trends. Columns 2 and 5 of Table A.7 present estimates of our model with and without differential time trends for an expanded sample of 2014 expansion states that adds to the treatment group four expansion states that provided Medicaid eligibility to childless adults in 2013 but that imposed income limits below 100 percent of the FPL. We refer to these four states (Colorado, Connecticut, Minnesota, and New Jersey) as *partial expansion states*. We prefer to exclude them from our main specification because pre-2014 eligibility undermines the interpretation of our differences-in-differences model as capturing the effect of Medicaid expansion among the newly eligible. Adding these states to our main specification (Column 2) yields estimates that are close to the estimates for the 2014 expansion states. However, the effects of Medicaid expansion on Medicaid and private insurance are slightly lower, resulting in a lower estimate of the increase in overall insurance coverage that is no longer significant at the 5-percent level ($p = 0.073$).

However, because all four of these partial expansion states used early implementation of the ACA to expand Medicaid between 2010 and 2014, controlling for pre-2014 trends in a sample that includes these states seems inappropriate. Estimates that omit pre-2014 differential time trends were indistinguishable from estimates of the same specification for our sample of 2014 expansion states.

Columns 3 and 6 of Table A.7 expand the sample further to include all 50 states and the District of Columbia. The increase in Medicaid coverage is highly significant and is very close to the estimate for the 2014 expansion states in both the model with differential trends (13.1-percentage-point increase) and the model without differential trends (15.2-percentage-point increase). The change in private coverage becomes more negative (5.8-percentage-point decrease) and statistically significant ($p = 0.033$) when differential trends are included, but inclusion of differential trends is even less appropriate in this sample because this differential trend is likely to reflect coverage gains resulting from early implementation of the ACA, most notably in California (Sommers, Chua, et al., 2015a; Golberstein, Gonzales, and Sommers, 2015). Even if differential trends are omitted from the model, however, we find a marginally statistically significant ($p = 0.057$) reduction in private coverage (3.3-percentage-point reduction) associated with the 2014 Medicaid expansion when all expansion states are included in the sample.

Comparison of these results (Table A.7, Column 6) with the our main estimates for the 2014 expansion states (Table A.7, Column 4) and the sample including partial expansion states (Table A.7, Column 5) suggests strongly that this reduction in private coverage is driven by the nine expansion states where all adults with income below 100 percent of the FPL were Medicaid-

eligible in 2013. Because this population was fully eligible prior to 2014, estimates for this group of states reflect welcome-mat effects. These findings warrant further investigation, but we did not focus on them in this study because we suspect that insurance coverage changes in 2014 among the previously Medicaid-eligible are likely to reflect fundamentally different mechanisms than coverage changes among the newly eligible. That is, we think that welcome-mat effects and take-up among the newly eligible should be studied separately. We are exploring these differences further in work in progress using the NHIS, but larger surveys, such as the CPS ASEC or the American Community Survey, may be better suited to examining state-specific differences among the low-income adult population. (We are also limited by the terms of our access agreement with NCHS, which does not provide for disclosure of state-specific estimates.)

Table A.7. Coverage Effects for Broader Groups of States

	(1)	(2)	(3)	(4)	(5)	(6)
Years	2009–2014	2009–2014	2009–2014	2009–2014	2009–2014	2009–2014
Main sample included*	Y	Y	Y	Y	Y	Y
Sample includes partial 2014 expansion states**		Y	Y		Y	Y
Sample includes all expansion states***			Y			Y
Control for covariates?	Y	Y	Y	Y	Y	Y
State group–specific time trends?	Linear	Linear	Linear			
Any insurance	0.089	0.066	0.044	0.149	0.138	0.104
	(0.041)	(0.036)	(0.037)	(0.027)	(0.024)	(0.026)
	0.034	0.073	0.238	0.000	0.000	0.000
Medicaid	0.126	0.118	0.131	0.154	0.142	0.152
	(0.027)	(0.026)	(0.028)	(0.023)	(0.022)	(0.024)
	0.000	0.000	0.000	0.000	0.000	0.000
Private insurance	-0.032	-0.040	-0.058	-0.006	0.001	-0.033
	(0.035)	(0.032)	(0.026)	(0.019)	(0.019)	(0.017)
	0.371	0.220	0.033	0.758	0.968	0.057
Non-Medicaid public insurance	0.006	-0.007	-0.024	0.014	0.004	-0.008
	(0.019)	(0.020)	(0.015)	(0.011)	(0.012)	(0.011)
	0.755	0.716	0.132	0.197	0.766	0.469
Number of states in model	38	42	51	38	42	51
N	11,584	†	16,907	11,584	†	16,907

* This sample was restricted to nonexpansion states and expansion states with no categorical eligiblity for

nondisabled childless adults in 2013.
** Partial 2014 expansion states had categorical eligibility for childless adults with an income limit below 100 percent of the FPL in 2013. These states are Colorado, Connecticut, Minnesota, and New Jersey.
*** This sample includes all expansion states.
† Sample size including partial expansion states was not released from the NCHS RDC.
SOURCE: 2009–2014 National Health Interview Survey.
NOTES: Each cell reports the differences-in-differences regression coefficient for the effect of the 2014 Medicaid expansion from a separate OLS regression model.
Standard errors clustered on state are in parentheses; two-sided *p*-values for equality to 0 are reported below standard errors. *P*-values were calculated based on a *t*-distribution with *G* minus 1 degree of freedom, where *G* is the number of clusters.
All samples consist of nondisabled childless adults aged 19–64 with annual family income at or below 100 percent of the FPL.
All regressions include state and quarter fixed effects. Covariates include age categories (19–25, 26–35, 36–45, 46–55, and 56–64), gender, binary marital status, four racial/ethnic groups (non-Hispanic white, Hispanic, non-Hispanic Black, and other), educational attainment (less than high school, high school diploma or GED, some college, college diploma, and more than college), and employment status (employed, unemployed, not in labor force, and unknown).

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The Effects of Medicaid Expansion under the ACA: Updated Findings from a Literature Review

Larisa Antonisse (https://www.kff.org/person/larisa-antonisse/),

Rachel Garfield (https://www.kff.org/person/rachel-garfield/),

Robin Rudowitz (https://www.kff.org/person/robin-rudowitz/) (https://twitter.com/RRudowitz), **and**

Samantha Artiga (https://www.kff.org/person/samantha-artiga/)

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Issue Brief

A substantial body of research has investigated effects of the Medicaid expansion under the Affordable Care Act (ACA) on coverage; access to care, utilization, affordability, and health outcomes; and various economic measures. This issue brief summarizes findings from 202 studies of the impact of state Medicaid expansions under the ACA published beginning in January 2014 (when the coverage provisions of the ACA went into effect) and updates earlier versions of this brief with studies through February 2018.[1] More recent studies continue to support earlier findings but provide additional findings in key areas, including expansion's effects on health outcomes, access to services and medications for behavioral health and other needs, and providers' financial stability.

Key Findings

This body of research suggests that the expansion presents an opportunity for gains in coverage, improvements in access and financial security, and economic benefits for states and providers.

- **Coverage:** Studies show that Medicaid expansion states experienced significant coverage gains and reductions in uninsured rates, among the low-income population broadly and within specific vulnerable populations. States that implemented the expansion through a waiver have seen coverage gains, but some waiver provisions appear to compromise coverage. Data do not support a relationship between states' expansion status and community-based services waiver waiting lists.
- **Access to care, utilization, affordability, and health outcomes:** Most research demonstrates that Medicaid expansion has positively affected access to care, utilization of services, the affordability of care, and financial security among the low-income population. However, findings on provider capacity were mixed, with some studies suggesting that provider shortages are a challenge in certain contexts. Studies show improved self-reported health following expansion, and multiple new studies demonstrate a positive association between expansion and health outcomes. Further research is needed to more fully determine effects on outcomes given that it may take additional time for measureable changes in health outcomes to occur.
- **Economic measures:** Analyses find positive effects of expansion on numerous economic outcomes, despite Medicaid enrollment growth initially exceeding projections in many states. Total (federal and state) Medicaid spending increased following expansion implementation, but research suggests that there were no significant increases in state spending from state funds as a result of the expansion through 2015 (although an uptick in state Medicaid spending growth was projected for 2017 and later years as the federal share for the expansion population phases down from 100% to 90%). Studies also show that Medicaid expansions result in reductions in uncompensated care costs for hospitals and clinics as well as positive or neutral effects on employment and the labor market.

This literature review includes studies, analyses, and reports published by government, research, and policy organizations using data from 2014 or later. This brief only includes studies that examine impacts of the Medicaid expansion in expansion states. It excludes studies on impacts of ACA coverage expansions generally (not specific to Medicaid expansion alone), studies investigating potential effects of expansion in states that have not (or had not, at the time of the study) expanded Medicaid, and reports from advocacy organizations and media sources. Findings are separated into three broad categories: Medicaid expansion's impact on coverage; access to care, utilization, affordability, and health outcomes; and economic outcomes for the expansion states. The Appendix at the end of the brief provides a list of citations for each of the included studies, grouped by the three categories of findings.

Recently published studies from late 2017 and early 2018 have continued to support earlier findings while using the additional years of experience with expansion to deepen findings in many areas, including expansion's effects on health outcomes, access to services and medications for behavioral health and other needs, and providers' financial stability. Among other findings, new studies in these areas show that expansion is associated with infant mortality rate reductions, increases in cancer diagnosis rates (especially early-stage diagnosis rates), increases in prescriptions for and Medicaid coverage of medications to treat opioid use disorder and opioid overdose, and reduced probability of hospital closure (particularly in rural areas).

We will continue to monitor and update these findings as additional studies and state experiences provide insight into how various factors shape coverage, access to care, and costs in Medicaid expansion states and as states continue to consider expansion and reshape Medicaid coverage. While future research will be necessary to study the effects of new waiver provisions recently approved by or pending approval (https://www.kff.org/medicaid/issue-brief/which-states-have-approved-and-pending-section-1115-medicaid-waivers/) from the Trump administration, findings from this literature review on states with existing expansion waivers (such as Indiana) suggest that adding new restrictions or program complexities to Medicaid through Section 1115 waivers could compromise coverage and access gains achieved under expansion or slow future progress.

Impacts on Coverage

UNINSURED RATE AND MEDICAID COVERAGE CHANGES

Studies show that Medicaid expansion results in significant coverage gains and reductions in uninsured rates.

- States expanding their Medicaid programs under the ACA have seen large increases in Medicaid enrollment, driven by enrollment of adults made newly eligible for Medicaid as well as enrollment growth among individuals who were previously eligible for but not enrolled in Medicaid (known as the "woodwork" or "welcome mat" effect that occurred largely due to incentives to increase enrollment in coverage provided under the broader ACA). In comparison, non-expansion states have experienced slower enrollment growth.[2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24]
- Numerous analyses demonstrate that Medicaid expansion states experienced large reductions in uninsured rates and that these reductions significantly exceed those in non-expansion states.[25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56]
    - Recent studies have shown that expansion-related enrollment growth in Medicaid and declines in uninsured rates in expansion states continued in 2015 and 2016, and that the gap between coverage rates in expansion and non-expansion states continued to widen after 2014. One study found that the greater uninsured rate decline in expansion compared to non-expansion states was isolated among the population that is ineligible for ACA coverage in non-expansion states (those below 100% FPL).[57,58,59,60,61,62]

- The sharp declines in uninsured rates among the low-income population in expansion states are widely attributed to gains in Medicaid coverage.[63,64,65,66,67,68]
- Research does not support a relationship between states' Medicaid expansion status and home and community-based services (HCBS) waiver waiting lists. One study found that most expansion states either had no HCBS waiver waiting list or had a decrease in their waiting list from 2014 to 2015, and more non-expansion states than expansion states experienced an HCBS waiver waiting list increase between 2014 and 2015.[69]
- Studies exploring the potential for Medicaid expansion to "crowd-out" private insurance have found mixed results, with most showing no evidence of "crowd-out" and some showing slight declines in private coverage in expansion states following expansion.[70,71,72,73,74,75,76,77,78]

Similar coverage gain patterns have occurred within specific vulnerable populations.

- While many studies focused on the low-income population broadly, several studies identified larger coverage gains in expansion versus non-expansion states for specific vulnerable populations, including young adults, prescription drug users, people with HIV, veterans, parents, mothers, women of reproductive age (with and without children), children, lesbian, gay, and bisexual adults, newly diagnosed cancer patients, women diagnosed with a gynecologic malignancy, low-income workers, low-educated adults, early retirees, and childless adults with incomes under 100% FPL.[79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100,101,102]
- Multiple recent analyses demonstrate that Medicaid expansion is having a disproportionately positive impact in rural areas in expansion states, where growth in Medicaid coverage and declines in uninsured rates have exceeded those in metropolitan areas in expansion states and both rural and metropolitan areas in non-expansion states. One study found higher Medicaid growth rates in metropolitan counties compared to rural counties in both expansion and non-expansion states, but the geographic differential in growth rates was much less dramatic in expansion states and analysis at the state level showed much variability across the states.[103,104,105,106]
- Multiple studies showed that this trend of larger uninsured rate reductions and Medicaid coverage gains in expansion states compared to non-expansion states occurred across the major racial/ethnic categories. Additional research also suggests that Medicaid expansion has helped to reduce disparities in coverage by income and age, and research shows improvements in disparities by race/ethnicity, with mixed outcomes for some specific racial and ethnic groups.[107,108,109,110,111,112,113,114,115,116]
- One 2017 study demonstrated a clear "welcome-mat" effect of Medicaid expansion on enrollment in public coverage among children who were already eligible for Medicaid. Enrollment increases in 2014 and 2015 among children whose parents became newly eligible for Medicaid under the expansion outpaced coverage increases among children in families without newly eligible parents by more than double.[117]

COVERAGE EFFECTS UNDER SECTION 1115 MEDICAID EXPANSION WAIVERS

States implementing the expansion through a waiver have seen similar gains in coverage, but some provisions in these waivers may present barriers to coverage.

- Studies show that states expanding Medicaid through Section 1115 waivers have experienced coverage gains that are similar to gains in states implementing traditional Medicaid expansions. Research comparing Arkansas (which expanded through a premium assistance model) and Kentucky (which expanded through a traditional, non-waiver model) showed no significant differences in uninsured rate declines between 2013 and 2015 in the two states. An analysis of expansion waiver programs in Michigan and Indiana showed that both states experienced uninsured rate reductions between 2013 and 2015 that were higher than the average decrease among expansion states as well as large gains in Medicaid enrollment.[118,119,120,121]
- Data from Indiana, which implemented the expansion through a Section 1115 waiver, show that its required monthly contributions may have created an enrollment barrier for some adults. In the Healthy Indiana Plan (HIP) 2.0 Medicaid expansion program, individuals above 100% FPL are either not enrolled or disenrolled from HIP 2.0 coverage for unpaid monthly contributions. A report assessing the program showed that between February 1, 2015 and November 30, 2016, 57,189 members were disenrolled or not enrolled due do non-payment (representing 29% of those that could be affected by the policy).[122,123]
- Evidence also suggests that beneficiaries and other stakeholders often do not fully understand complex enrollment policies such as the HIP 2.0 monthly contribution policy, and these policies can deter eligible people from enrolling in coverage. The March 2017 HIP 2.0 evaluation found that 14% of all HIP enrollees above 100% FPL, 33% of individuals who were disenrolled for not making a monthly contribution, and 40% of individuals who were not enrolled because they did not make a first monthly contribution reported being unaware that they could be disenrolled for non-payment.[124,125,126]

Impacts on Access to Care, Utilization, Affordability, and Health Outcomes

ACCESS TO CARE AND UTILIZATION

Most research demonstrates that Medicaid expansion positively impacts access to care and utilization of health care services among the low-income population, but some studies have not identified significant effects in these areas.

- Many expansion studies point to improvements across a wide range of measures of access to care as well as utilization of some medications and services. Some of this research also shows that improved access to care and utilization is leading to increases in diagnoses of a range of diseases and conditions and in the number of adults receiving consistent care for a chronic condition.[127,128,129,130,131,132,133,134,135,136,137,138,139,140,141,142,143,144,145,146,147,148,149,150,151,152,153,154,155,156,157,158,159,160,161,162,163,164,165,166,167,168,169,170,171,172,173,174,175,176,177] For example:
  - Two studies found that expansion was associated with significantly greater increases in cancer diagnosis rates (especially early-stage diagnosis rates), and another study showed an association of expansion with an increase in the probability of early uncomplicated presentation for patients admitted to hospitals for one of five common surgical conditions. A fourth study found that Medicaid expansion was correlated with increased heart transplant listing rates for African

American patients (both overall and among Medicaid enrollees, specifically).[178,179,180,181]

- Recent evidence demonstrates that compared to non-expansion states, Medicaid expansion states have seen greater improvements in access to medications and services for the treatment of behavioral and mental health conditions. This evidence includes studies that have shown that Medicaid expansion is associated with increases in overall prescriptions for, Medicaid-covered prescriptions for, and Medicaid spending on medications to treat opioid use disorder and opioid overdose. Additional research found increased utilization and Medicaid coverage of evidence-based smoking cessation medications post-expansion in expansion states relative to non-expansion states.[182,183,184,185,186,187,188,189,190,191,192,193]
- Multiple recent studies have also found expansion to be associated with improvements in disparities by race and income, education level, and employment status in measures of access to and affordability of care.[194,195,196,197]
- Studies conducted in 2017 and 2018 began to explore the effect of the Medicaid expansion on quality of care. A January 2018 study found that for patients with one of five common surgical conditions admitted to an academic medical center or affiliated hospital, expansion was associated with a significantly greater probability of receiving optimal care. Another study found that at federally funded community health centers, expansion was associated with improved quality on four of eight measures examined: asthma treatment, Pap testing, body mass index assessment, and hypertension control. A third study found some improvement in perceived quality of care associated with expansion in 2015, but this result did not persist in 2016.[198,199,200]
- Some studies point to changes in patterns of use of emergency departments (EDs). Two recent single-state studies in Maryland and Illinois found declines in uninsured ED visits and increases in Medicaid-covered ED visits following expansion implementation. Some studies have explored expansion's impact on total emergency department (ED) volume and utilization patterns. A single-state study in Maryland found no significant relationship between Medicaid expansion and changes in total ED volume by hospital. An Illinois study found an increase in total ED visits after ACA implementation, but this included an increase in visits by individuals with private coverage. One study in a single hospital in Maryland found that, in the year after expansion, there was a small but statistically significant reduction in the proportion of ED patients that were high utilizers and a reduction in visits to the ED for ambulatory care sensitive conditions. However, high utilizers remained more likely than low utilizers to have ED visits for ambulatory care sensitive conditions before and after Medicaid expansion.[201,202,203]
- Two studies found that Medicaid expansion was associated with declines in hospital length-of-stay for Medicaid patients. Another analysis found that, contrary to past studies associating Medicaid insurance with longer hospitalizations and higher in-hospital mortality, the shift in payer mix in expansion states (increase in Medicaid discharges and decrease in uninsured discharges) did not influence length of stay or in-hospital mortality for general medicine patients at academic medical centers.[204,205,206]

- Evidence suggests that beneficiaries and other stakeholders lack understanding of some waiver provisions designed to change utilization or improve health outcomes.

Multiple studies have demonstrated confusion among beneficiaries, providers, and advocates in expansion waiver states around the basic elements of the programs or requirements for participation, as well as beneficiary reports of barriers to completion of program activities (including internet access and transportation barriers). These challenges have resulted in increased costs to beneficiaries, beneficiaries being transitioned to more limited benefit packages, low program participation, or programs not operating as intended in other ways.[207,208,209,210,211]

- A few studies did not find significant positive effects of expansion on certain measures of access or utilization. For several of the earlier studies in this group, these results may reflect the additional time needed for persons to enroll in Medicaid and establish care following initial expansion implementation. Authors of early studies using 2014 data note that changes in utilization may take more than one year to materialize. Consistent with this premise, a longer-term study found improvements in measures of access to care and financial strain in year two of the expansion that were not observed in the first year.[212,213,214,215,216,217]
- While some research indicates that provider shortages are a challenge in certain contexts, many studies show that providers have expanded capacity and are meeting increased demands for care.[218,219,220,221,222,223,224,225,226,227,228,229,230,231,232,233,234,235,236,237] For example:
  - One study found that Medicaid expansion was associated with longer wait times for appointments, suggesting remaining access challenges despite improvements in coverage and access measures.[238]
  - In contrast, another study found that Medicaid primary care appointment availability increased significantly in the five expansion states included in the analysis, whereas there were no significant changes in appointment availability in the non-expansion states studied.[239]
  - An additional study found improvements in receipt of checkups, care for chronic conditions, and quality of care even in areas with primary care shortages, suggesting that insurance expansions can have a positive impact even in areas with relative shortages.[240]

AFFORDABILITY AND FINANCIAL SECURITY

Research suggests that Medicaid expansion improves the affordability of care and financial security among the low-income population.

- Several studies show that expansion states have experienced greater reductions in unmet medical need because of cost than non-expansion states. Although a few studies did not identify statistically significant differences in changes in unmet medical need due to cost between expansion and non-expansion states,some of these findings may have been affected by study design or data limitations.[241,242,243,244,245,246,247,248,249,250,251,252,253,254,255,256,257,258]
- Research suggests that Medicaid expansion results in significant reductions in out-of-pocket medical spending. One study found that previously uninsured prescription drug users who gained Medicaid coverage in 2014 saw, on average, a $205 reduction in annual out-of-pocket spending in 2014. The January 2018 study noted above that focused on the 100-138% FPL population in expansion and non-expansion states also found that Medicaid expansion coverage produced far greater reductions than

subsidized Marketplace coverage in average total out-of-pocket spending, average out-of-pocket premium spending, and average cost-sharing spending.[259,260,261,262,263]

- Multiple studies found larger declines in trouble paying as well as worry about paying future medical bills in expansion states relative to non-expansion states.[264,265,266,267,268,269,270,271,272,273,274,275] For example:
  - One study found that, among those residing in areas with high shares of low-income, uninsured individuals, Medicaid expansion significantly reduced the number of unpaid bills and the amount of debt sent to third-party collection agencies. Similarly, other studies have found that Medicaid expansion has significantly reduced the percentage of people with medical debt, reduced the average size of medical debt, reduced the average number of collections, improved credit scores, reduced the probability of having one or more medical bills go to collections in the past 6 months, and reduced the probability of a new bankruptcy filing, among other improvements in measures of financial security.[276,277,278,279]
  - A study of Ohio's Medicaid expansion found that the percentage of expansion enrollees with medical debt fell by nearly half since enrolling in Medicaid (55.8% had debt prior to enrollment, 30.8% had debt at the time of the study).[280]

SELF-REPORTED HEALTH AND HEALTH OUTCOMES

Continually emerging research has documented improvements in self-reported health and certain health outcomes measures following Medicaid expansion.

- Multiple studies have found improvements in measures of self-reported health following Medicaid expansions, and additional research has documented provider reports of newly eligible adults receiving life-saving or life-changing treatments that they could not obtain prior to expansion.[281,282,283,284,285,286]
- One 2017 study found that Medicaid expansion was associated with improved health outcomes for cardiac surgery patients, including a significant decrease in predicted preoperative risk of morbidity or mortality and a decreased risk-adjusted rate of postoperative major morbidity.[287]
- A January 2018 study suggests that expansion may contribute to infant mortality rate reductions. While the mean infant mortality rate rose slightly in non-expansion states between 2014 and 2016, it declined in expansion states over that period. This effect was particularly pronounced among the African-American population.[288]
- A 2018 study found no evidence of expansion affecting drug-related overdoses or fatal alcohol poisonings.[289]
- Four analyses did not find significant changes in self-reported health status. Given that it may take additional time for measureable changes in health to occur, researchers suggest that further work is needed to provide longer-term insight into expansion's effects on self-reported health and health outcomes.[290,291,292,293]

Economic Effects

STATE BUDGETS AND ECONOMIES

Analyses find positive effects of expansion on multiple economic outcomes, despite Medicaid enrollment growth initially exceeding projections in many states and increases in total Medicaid spending, largely driven by increases in federal spending given the enhanced federal match rate for expansion population costs provided under the ACA (the federal share was 100% for 2014-2016 and phases down to 90% for 2020 and subsequent years).

- National, multi-state, and single state studies show that states expanding Medicaid under the ACA have realized budget savings, revenue gains, and overall economic growth. A 2016 study found that growth in state Medicaid spending in expansion states has been lower relative to non-expansion states, but an uptick was predicted for state fiscal year (SFY) 2017, primarily due to the phase-down in the federal share for the expansion population from 100% to 95% in 2017. As of the end of Summer 2016, several expansion states planned to use provider taxes or fees to fund all or part of the state share of expansion costs beginning in 2017. While studies showed higher growth rates in total Medicaid spending (federal, state, and local) following initial expansion implementation in 2014 and 2015, this growth rate slowed significantly in 2016.[294,295,296,297,298,299,300,301,302,303,304,305,306]
    - National research found that there were no significant increases in spending from state funds as a result of Medicaid expansion and no significant reductions in state spending on education, transportation, or other state programs as a result of expansion during FYs 2010-2015.[307]
    - A Louisiana annual report on Medicaid expansion reported that expansion saved the state $199 million in FY 2017 due to multiple factors, including the higher federal match rate for Medicaid populations that were previously funded at the regular state match rate, additional revenue from a premium tax on managed care organizations, and a decrease in state disproportionate share payments to hospitals as the uninsured population decreased.[308]
- Multiple studies suggest that Medicaid expansion can result in state savings by offsetting state costs in other areas, including state costs related to behavioral health services, crime and the criminal justice system, and Supplemental Security Income program costs. For example, a study on Montana revealed that as Medicaid's role in financing substance use disorder (SUD) services has grown under the state's decision to expand Medicaid, federal Medicaid dollars have replaced federal block grant and state dollars previously used to fund services for uninsured Montanans with SUD.[309,310,311,312,313,314,315,316]

MEDICAID SPENDING PER ENROLLEE

- National studies have found lower Medicaid spending per enrollee for the new ACA adult eligibility group compared to traditional Medicaid enrollees and that per enrollee costs for newly eligible adults have declined over time since initial implementation of the expansion.[317,318,319]
    - One analysis found that in 2014, among those states reporting both spending and enrollment data, spending per enrollee for the new adult group was much lower than spending per enrollee for traditional Medicaid enrollees.[320]

- A June 2017 study showed that per enrollee Medicaid spending declined in expansion states (-5.1%) but increased in non-expansion states (5.1%) between 2013 and 2014. Researchers attributed these trends to the ACA Medicaid expansion, which increased the share of relatively less expensive enrollees in the Medicaid beneficiary population mix in expansion states.[321]
- The 2016 Actuarial Report on the Financial Outlook for Medicaid shows that while the average per enrollee costs for newly eligible adults in initial years following expansion were higher than for previously eligible adults, these per enrollee costs have declined over time as states have adjusted capitation rates to better reflect actual use. By 2018, the cost for newly eligible adults is projected to be less than that of previously eligible adults.[322]

MARKETPLACE EFFECTS

- Research suggests that Medicaid expansion may contribute to lower Marketplace premiums—one study found that Marketplace premiums are about 7% lower in expansion compared to non-expansion states. The study authors suggested that the difference in premiums reflects a difference in risk pool between expansion and non-expansion states, where individuals between 100 and 138% FPL make up a greater share of Marketplace enrollment in non-expansion compared to expansion states. Another study found that the state average plan liability risk score was higher in non-expansion than expansion states in 2015 (higher risk scores are associated with sicker state risk pools and likely translate to higher premiums).[323,324,325]
  - A study in Arkansas showed that the "private option" expansion has helped to boost the number of carriers offering Marketplace plans statewide, generated a younger and relatively healthy risk pool in the Marketplace, and contributed to a 2% drop in the average rate of Marketplace premiums between 2014 and 2015. A study of New Hampshire's Premium Assistance Program (PAP) population (Medicaid expansion population enrolled in the Marketplace), however, showed higher medical costs for the PAP population compared to other Marketplace enrollees.[326,327]

IMPACTS ON HOSPITALS AND OTHER PROVIDERS

Medicaid expansion results in reductions in uncompensated care costs for hospitals, clinics, and other providers.

- Research shows that Medicaid expansions result in reductions in uninsured hospital or other provider visits and uncompensated care costs, whereas providers in non-expansion states have experienced little or no decline in uninsured visits and uncompensated care. One study suggested that Medicaid expansion cut every dollar that a hospital in an expansion state spent on uncompensated care by 41 cents between 2013 and 2015, corresponding to a reduction in uncompensated care costs across all expansion states of $6.2 billion over that period.[328,329,330,331,332,333,334,335,336,337,338,339,340,341,342,343,344,345,346,347,348,349,350,351,352,353,354,355,356,357,358,359,360,361,362,363,364]
  - Some studies point to improvements in patterns of use of emergency departments (EDs), specifically. Two recent single-state studies in Maryland and Illinois, a study comparing California to Florida (a non-expansion state), and a study across 25 expansion and non-expansion states, found significant declines

in uninsured ED visits and increases in Medicaid-covered ED visits following expansion implementation (the studies that included non-expansion states found much smaller changes on these measures in the non-expansion states).[365,366,367,368]

- One study found that expansion significantly increased Medicaid coverage of treatment at specialty substance use disorder (SUD) treatment facilities and decreased the probability that patients at these facilities were uninsured. A second study found large shifts in sources of payment for SUD treatment among justice-involved individuals following Medicaid expansion in 2014, with significant increases in those reporting Medicaid as the source of payment.[369,370]
- Evidence suggests that Medicaid expansion significantly reduced variation in provision of uncompensated care between hospitals that treat a disproportionate share of low-income patients (DSH hospitals) and those that do not, with DSH hospitals experiencing significantly larger reductions in uncompensated care days per bed.[371]

- A new study published in January 2018 found that Medicaid expansion was associated with improved hospital financial performance and significant reductions in the probability of hospital closure, especially in rural areas and areas with higher pre-ACA uninsured rates.[372]
- Additional studies demonstrate that Medicaid expansion has significantly improved hospital operating margins. One analysis found that while all types of hospitals in expansion states experienced reductions in uncompensated care costs and increases in Medicaid revenue compared with their counterparts in non-expansion states, expansion's effects on margins were strongest for small hospitals, for-profit and non-federal-government-operated hospitals, and hospitals located in non-metropolitan areas.[373,374,375,376]

EMPLOYMENT AND LABOR MARKET EFFECTS

Studies find that Medicaid expansion has had positive or neutral effects on employment and the labor market.

- State-specific studies have documented or predicted significant job growth resulting from expansion. A study in Colorado found that the state supports 31,074 additional jobs due to Medicaid expansion as of FY 2015-2016, and a study in Kentucky estimated that expansion would create over 40,000 jobs in the state through SFY 2021 with an average salary of $41,000.[377,378,379]
- No studies have found negative effects of expansion on employment or employee behavior. Studies examining employment rates and other measures such as transitions from employment to non-employment, the rate of job switches, transitions from full- to part-time employment, labor force participation, and usual hours worked per week have not found significant effects of Medicaid expansion. One study showed that adults with disabilities living in expansion states are significantly more likely to be employed and less likely to be unemployed due to disability compared to adults with disabilities in non-expansion states.[380,381,382,383,384]
- In an analysis of Medicaid expansion in Ohio, most expansion enrollees who were unemployed but looking for work reported that Medicaid enrollment made it easier to

seek employment. Over half of expansion enrollees who were employed reported that Medicaid enrollment made it easier to continue working.[385]

- One study found an association between Medicaid expansion and volunteer work (both formal volunteering for organizations and informally helping a neighbor), with significant increases in volunteer work occurring among low-income individuals in expansion states in the post-expansion period (through 2015) but no corresponding increase in non-expansion states. The researchers connect this finding to previous literature showing an association between improvements in individual health and household financial stabilization and an increased likelihood of volunteering.[386]
- An additional analysis found that Medicaid expansion is associated with increased responsiveness of the program to meet coverage needs during periods of high unemployment.[387]

Conclusion and Implications

As a whole, the large body of research on the effects of Medicaid expansion under the ACA suggests that expansion has had largely positive impacts on coverage; access to care, utilization, and affordability; and economic outcomes, including impacts on state budgets, uncompensated care costs for hospitals and clinics, and employment and the labor market. However, findings on provider capacity are mixed, with some studies suggesting that provider shortages are a challenge in certain contexts. Overall, these findings suggest potential for gains in coverage and access as well as economic benefits to states and providers in the remaining non-expansion states that may be considering adopting the expansion in the future.

While future research will be necessary to study the effects of new waiver provisions recently approved by or pending approval (https://www.kff.org/medicaid/issue-brief/which-states-have-approved-and-pending-section-1115-medicaid-waivers/) from the Trump administration, findings from this literature review on states with existing expansion waivers (such as Indiana) suggest that adding new restrictions or program complexities to Medicaid through Section 1115 waivers could compromise coverage and access gains achieved under expansion or slow future progress. Key questions for future consideration include whether increased flexibility under Section 1115 waiver authority will result in roll-backs in coverage, whether additional states will adopt the expansion and under what conditions, and how new Medicaid expansion-related restrictions and requirements will impact states, beneficiaries, and providers. We will continue to monitor and update this literature review as additional studies and state experiences provide insight into how various factors shape coverage, access to care, and costs in Medicaid expansion states and as states continue to consider expansion and reshape Medicaid coverage.

Appendix: Study list by category

APPENDIX: STUDY CITATIONS BY CATEGORY OF FINDINGS AND GEOGRAPHIC SCOPE

Coverage Effects of Expansion

NATIONWIDE STUDIES

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3. Frederic Blavin, Michael Karpman, Genevieve Kenney, and Benjamin Sommers, “Medicaid Versus Marketplace Coverage for Near-Poor Adults: Effects on Out-Of-Pocket Spending and Coverage,” Health Affairs 37 no. 2 (January 2018): 122-129 https://www.healthaffairs.org/doi/abs/10.1377/hlthaff.2017.1166 (https://www.healthaffairs.org/doi/abs/10.1377/hlthaff.2017.1166)

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7. Aparna Soni, Lindsay Sabik, Kosali Simon, and Benjamin Sommers, “Changes in Insurance Coverage Among Cancer Patients Under the Affordable Care Act,” Journal of the American Medical Association 4, no. 1 (January 2018): 122-124, https://jamanetwork.com/journals/jamaoncology/article-abstract/2657670?redirect=true&redirect=true (https://jamanetwork.com/journals/jamaoncology/article-abstract/2657670?redirect=true&redirect=true)

8. Susan Hayes, Sara Collins, David Radley, and Douglas McCarthy, What's at Stake: States' Progress on Health Coverage and Access to Care, 2013-2016 (The Commonwealth Fund, December 2017), http://www.commonwealthfund.org/publications/issue-briefs/2017/dec/states-progress-health-coverage-and-access (http://www.commonwealthfund.org/publications/issue-briefs/2017/dec/states-progress-health-coverage-and-access)

9. Ahmedin Jemal, Chun Chieh Lin, Amy Davidoff, and Xuesong Han, "Changes in Insurance Coverage and Stage at Diagnosis Among Nonelderly Patients with Cancer after the Affordable Care Act," Journal of Clinical Oncology 35, no. 35 (December 2017), http://ascopubs.org/doi/pdf/10.1200/JCO.2017.73.7817 (http://ascopubs.org/doi/pdf/10.1200/JCO.2017.73.7817)

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Economic Effects of Expansion

Impacts on State Budgets and Economies

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Endnotes

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Department of Health & Human Services

2017 ACTUARIAL REPORT

ON THE FINANCIAL OUTLOOK

FOR MEDICAID

Office of the Actuary

Centers for Medicare & Medicaid Services

United States Department of Health & Human Services

2017 ACTUARIAL REPORT ON THE FINANCIAL OUTLOOK FOR MEDICAID

Prepared by:

Christian J. Wolfe, FSA, MAAA
Kathryn E. Rennie, ASA
Christopher J. Truffer, FSA, MAAA

Office of the Actuary
Centers for Medicare & Medicaid Services
United States Department of Health & Human Services

STATEMENT FROM THE CHIEF ACTUARY

The Medicaid program is of critical importance to American society. After Medicare, it is the largest health program as measured by expenditures, representing one-sixth of the health economy, and it is the largest as measured by enrollment. In 2016, its outlays of $582 billion accounted for a sizeable portion of Federal and State budgets and were a significant source of revenue for health care providers and insurers. As importantly, Medicaid serves as a safety net for the nation's most vulnerable populations, covering an estimated 72 million beneficiaries in 2016, including more than 11 million expansion adults under the Affordable Care Act. In this report, we analyze key historical Medicaid trends—both financial and demographic—and include projections of expenditures and enrollment to inform the public and help policy makers gain insight into the future of the program.

The Medicaid projections shown here are developed under current law, and they do not assume any changes in future legislation. The economic assumptions used to generate the projections are the same as those used by the 2017 OASDI and Medicare Boards of Trustees in their annual reports to Congress.

Projections of health care costs are inherently uncertain. For Medicaid, such projections present an even greater challenge as enrollment and costs are very sensitive to economic conditions. Since CMS is still working to ensure the quality of data received through T-MSIS, these projections rely on MSIS data that are mostly complete through 2013. Our analysis finds that, without data from the last 4 years, there could be substantial variation in estimated and actual per enrollee expenditure costs. Therefore, we believe that the credibility of the per enrollee expenditure estimates is lower than in previous reports, and I caution readers against relying on these estimates and projections. Because of the greater degree of uncertainty, these projections have been moved into the Appendix of this year's report. If data of sufficient quality for analysis are not available going forward, it is possible that other estimates and projections provided in future reports may be less reliable as well. I also note that, because Medicaid financial reports include expenditures for expansion adults, the data we use for reporting historical per enrollee expenditures and projecting future expenditures for this population are more credible.

It is my opinion that (i) the techniques and methodology used herein to project the future costs of the Medicaid program are based upon sound principles of actuarial practice and are generally accepted within the actuarial profession, and (ii) the principal assumptions and resulting actuarial estimates are, individually and in the aggregate, reasonable for the purpose of projecting such costs under current law. Considering the substantial uncertainties inherent in projecting future health care costs, readers should be aware that actual future Medicaid costs could differ significantly from these estimates.

I would like to thank team leader Christopher Truffer and team members Christian Wolfe and Kathryn Rennie for their diligent efforts in preparing this report. We welcome feedback from readers; comments may be sent to Christian.Wolfe@cms.hhs.gov.

Paul Spitalnic, ASA, MAAA
Chief Actuary
Centers for Medicare & Medicaid Services

EXECUTIVE SUMMARY

The joint Federal-State Medicaid program provides health care assistance to certain low-income people and is one of the largest payers for health care in the United States. This report presents an analysis of past Medicaid trends and 10-year projections of expenditures and enrollment under current law. Underlying demographic or economic experience that is different than assumed or significant changes in legislation can materially affect the cost and enrollment projections included in this report.

HIGHLIGHTS AND FINDINGS

2016 Medicaid Information

- Total estimated Medicaid outlays in Federal fiscal year (FY) 2016 amounted to $580.9 billion and increased by 4.9 percent between 2015 and 2016. This is a slower rate of growth than in recent history, reflecting slower growth in expansion adult enrollment and expenditures.

- Federal Medicaid outlays in 2016 were $368.2 billion and grew 5.3 percent over the previous year. Federal outlays represented 63 percent of total spending on the program. State and local governments' estimated outlays were $212.7 billion, which constituted 37 percent of total program costs.

- Medicaid provided health care assistance for an estimated 72.2 million enrollees on average in 2016, including those enrolled in Territory Medicaid programs and 11.2 million expansion adults.[1] Enrollment is estimated to have grown by 3.1 percent between 2015 and 2016; expansion adult enrollment is estimated to have increased by 22.3 percent, and all other enrollment is estimated to have increased by 0.3 percent.

2017 Medicaid Estimates

- Medicaid expenditures are estimated to have increased 2.6 percent to $592.2 billion in 2017, with Federal expenditures having grown an estimated 1.7 percent to $370.6 billion. The Federal share of all Medicaid expenditures is estimated to have been 63 percent in 2017. State Medicaid expenditures are estimated to have increased 4.2 percent to $221.6 billion.

- Average Medicaid enrollment is estimated to have increased 2.1 percent to 73.8 million enrollees in 2017. The majority of the enrollment growth is

[1] Adults made newly eligible for Medicaid under the Affordable Care Act beginning in 2014 pursuant to section 1902(a)(10)(A)(i)(VIII) of the Social Security Act [42 U.S.C. § 1396a] are referred to in this report as expansion adults. The Affordable Care Act technically specifies an upper income threshold of 133 percent of the Federal Poverty Level (FPL) but also allows a 5-percent income disregard, making the effective threshold 138 percent.

estimated to have been among expansion adults (1.0 million of the 1.5-million increase).

10-Year Medicaid Projections (2017-2026)

- Over the next 10 years, expenditures are projected to increase at an average annual rate of 5.7 percent and to reach $1,005.7 billion by 2026. The Gross Domestic Product (GDP) is expected to grow by an average rate of 4.1 percent. As a result, Medicaid expenditures are projected to increase from 3.1 percent of GDP in 2016 to 3.7 percent of GDP in 2026. The increase in expenditures would place a growing strain on Federal and State budgets.

- Expenditures for capitated payments and premiums are projected to grow 7.8 percent per year on average from 2017 to 2026 and reach $578 billion in 2026. Acute care services are projected to grow by 3.9 percent per year to $220.5 billion in 2026. Long-term care spending is projected to grow by 3.2 percent per year and reach $158.7 billion in 2026. The average annual growth in disproportionate share hospital (DSH) payments is projected to be 2.4 percent, with projected expenditures of $24.8 billion in 2026.

- Enrollment is projected to increase at an average annual rate of 1.3 percent over the next 10 years and reach 82.3 million in 2026.

- Medicaid expenditures for expansion adults are projected to amount to $938 billion over the period 2017 through 2026. Most of these expenditures—$855 billion, or about 91 percent—are projected to be financed by the Federal government.

- An estimated 12.2 million expansion adult enrollees were covered in 2017, based on enrollment counts included in 2017 financial data reported by the States to CMS. By 2026, the expansion adult population is projected to grow to 13.3 million. These estimates are based on the assumption that 55 percent of potential expansion enrollees reside in States with expanded eligibility in 2017 and after.

Comparison to 2016 Actuarial Report Projections

- Compared to the prior report, total projected Medicaid expenditures for benefits and administrative costs are expected to be $104.1 billion less from 2016 through 2025, or 1.4 percent lower, reflecting slower growth in benefit expenditures (particularly for long-term care services). In addition, annual per enrollee costs are projected to grow by 4.2 percent, or at a 0.1-percent lower rate, over the same period.

CONTENTS

I. INTRODUCTION

Medicaid is a cooperative program between the Federal and State governments to pay for health care and medical services for certain low-income persons in the United States and its Territories. The Federal and the State governments share responsibilities in designing, administering, and funding the program. The Centers for Medicare & Medicaid Services (CMS) is the agency charged with administering Medicaid for the Federal government.

This is the ninth annual Medicaid report prepared by the Office of the Actuary (OACT) at CMS. Its purpose is to describe the past and projected trends for Medicaid expenditures and enrollment, including estimates for Federal fiscal year (FY) 2017 and projections over the next 10 years. It also describes the data available on Medicaid spending and enrollment, as well as the methodology and assumptions used in the projections. Finally, this report places the Medicaid program within the context of Federal and State government spending and the U.S. health care system.

II. OVERVIEW OF MEDICAID

Authorized by Title XIX of the Social Security Act, Medicaid was signed into law in 1965 and is an optional program for the States. Currently all States, the District of Columbia, and five U.S. Territories have Medicaid programs.[2]

The Federal government establishes certain requirements for the States' Medicaid programs. The States then administer their own programs, determining the eligibility of applicants, deciding which health services to cover, setting provider reimbursement rates, paying for a portion of the total program, and processing claims.

Eligibility for enrollment in Medicaid is determined by both Federal and State law. Title XIX of the Social Security Act specifies which groups of people must be eligible, and States have the flexibility to extend coverage to additional groups. In addition to income, eligibility is typically based on several other factors, including age, disability status, other government assistance, other health or medical conditions such as pregnancy, and in some cases financial resources (or assets). As of January 2014, States have had the authority to expand Medicaid eligibility to almost all individuals under age 65 who are living in families with income below 138 percent of the Federal poverty level (FPL) (and who are citizens or eligible legal residents), with the Federal government initially paying 100 percent of the costs for expansion adults, to be reduced to 90 percent by 2020.[3]

Title XIX specifies that certain medical services must be covered under Medicaid, while also granting the States flexibility to cover many other benefits. Services usually covered include hospital care, physician services, laboratory and other diagnostic tests, prescription drugs, dental care, and many long-term care services. The States also have the option to use managed care plans to provide and coordinate benefits, and they may apply for waivers of certain requirements that allow more flexibility in developing specialized benefit packages for specific populations. Generally, States must provide the same benefit package to most Medicaid enrollees. Exceptions to these requirements include the use of waivers, demonstration projects, and alternative benefit plans, and States must provide an alternative benefit plan, including all essential health benefits, to the expansion adult population. In addition, there may be limited benefits provided for individuals who are eligible based only on

[2] For more information on Medicaid, including information on eligibility and covered services, see B. Klees, C. Wolfe, and C. Curtis, "Brief Summaries of Medicare & Medicaid," November 2017, available at https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MedicareProgramRatesStats/Downloads/MedicareMedicaidSummaries2017.pdf.

[3] The estimated enrollment and expenditures for the expansion adults are presented in section III.D of this report.

medical need, through Medicare savings programs, or through family planning programs.[4]

The Federal government and the States share the responsibility for funding Medicaid. States pay providers or managed care plans for Medicaid costs and then report these payments to CMS. The Federal government pays for a percentage of the costs of medical services by reimbursing each State; this percentage, known as the Federal Medical Assistance Percentage (FMAP), is calculated annually for each State based on a statutory formula that takes into account State per capita income with some adjustments prescribed by legislation.[5] A separate FMAP is specified for expansion adults. Additionally, the Federal government pays for a portion of each State's administration costs. Beneficiary cost sharing, such as deductibles or co-payments, and beneficiary premiums are very limited in Medicaid and do not represent a significant share of the total cost of health care goods and services for Medicaid enrollees.

In contrast to the Federal Medicare program, Medicaid's financial operations are not financed through trust funds. Other than a very small amount of premium revenue from enrollees, as noted above, and certain other sources of State revenue (such as some provider taxes), there are no dedicated revenue sources comparable to the Medicare Hospital Insurance payroll tax. Medicaid costs are met primarily by Federal and State general revenues, on an as-needed basis; the States may also rely on local government revenues to finance a portion of their share of Medicaid costs. The Federal financing is authorized through an annual appropriation by Congress. These funds are then spent through daily draws from the general fund of the Treasury in the amounts required to pay that day's Federal matching amounts on the State program expenditures. As a result, Medicaid outlays and revenues are automatically in financial balance, there is no need to maintain a contingency reserve, and, unlike Medicare Part A, the *financial status* or funding adequacy of the program is not in question from an actuarial perspective.

Medicaid coverage is extremely valuable to the low-income individuals and families who qualify for the health care services provided by the program. By extension, the program is also valuable to society at large, as it enables the least-fortunate members of the population to obtain the health care they need in an orderly way and diminishes their financial burdens. Furthermore, the program provides financial benefits to

[4] The Medicare Savings Programs provide assistance to low-income aged persons and persons with disabilities for their share of Medicare costs. Different programs cover a combination of the beneficiary's Part A premium (if any), Part B premium, Part A deductible, and Part B cost-sharing requirements.

[5] In general, Title XIX specifies that the FMAP for each State cannot be lower than 50 percent or higher than 83 percent; in FY 2016, FMAPs ranged from 50.00 percent to 74.17 percent. Also, Title XIX provides for specific FMAP levels for certain States and, in some cases, for specific services or populations.

entities such as governments and health care providers that may otherwise not be compensated for providing health care services to these individuals and families. It is also important, of course, to consider the costs to society of providing this coverage and to anticipate likely future trends in such costs. The balance of this report is intended to describe these trends.[6]

[6] This report does not cover expenditures or enrollment under the Children's Health Insurance Program (CHIP), whether such expenditures are made for a program operated under Title XIX or Title XXI of the Social Security Act. CHIP provides health coverage to many children in households with income above Medicaid eligibility levels. Currently, funding for CHIP is authorized through 2027.

III. ACTUARIAL ANALYSIS

A. FISCAL YEAR 2016 MEDICAID OUTLAYS AND ENROLLMENT

The Federal government and the States collectively spent an estimated $580.9 billion for Medicaid in 2016. Of this amount, the Federal government paid $368.2 billion, representing about 63 percent of net program outlays, and the States paid an estimated $212.7 billion, or about 37 percent of net outlays. Table 1 summarizes total Medicaid outlays for 2016.

Table 1—Medicaid Outlays for Fiscal Year 2016 by Type of Payment
(in billions)

Title XIX Outlays[1]	Federal Share	State Share	Total
Medical Assistance Payments:			
Acute Care Benefits2	$92.7	$57.6	$150.3
Long-Term Care Benefits2	65.9	49.9	115.8
Capitation Payments and Premiums2	182.2	90.6	272.8
Disproportionate Share Hospital (DSH) Payments[2]	11.2	8.5	19.7
Adjustments[3]	−4.6	−3.5	−8.2
Subtotal, Medical Assistance Payments	347.4	203.0	552.1
Administration Payments	17.2	9.7	26.9
Vaccines for Children Program	4.4	—	4.4
Gross Outlays	369.1	212.7	581.8
Collections[4]	−0.9	—	−0.9
Net Outlays	368.2	212.7	580.9

Totals may not add due to rounding.

[1] Federal outlays are the funds drawn from the U.S. Treasury by the States. The State and total outlays are estimated, reflecting spending as reported by the States for the purposes of drawing Federal funding from the U.S. Treasury. Expenditures represent the spending as it was paid by the State to health care plans or providers. While expenditures and outlays are generally similar, they are not equal mainly due to the timing differences between the States paying for services and the States receiving Federal funds. Neither outlays nor expenditures include Title XIX costs in support of the Children's Health Insurance Program.

[2] Benefit expenditures as reported on the CMS-64 (Net Services).

[3] Adjustments include net adjustments of benefits from prior periods and the difference between expenditures and outlays.

[4] Collections from Medicare Part B for the Qualifying Individuals (QI) program and from other miscellaneous sources.

The great majority of Medicaid spending—95 percent of total outlays in 2016—was for medical assistance payments. In table 1, these payments are divided into four major categories: acute care benefits, long-term care benefits, capitation payments and premiums, and disproportionate share hospital (DSH) payments.

Acute care benefits include fee-for-service spending for inpatient and outpatient hospital care, physician and other medical professional services, prescription drugs, dental care, laboratory and imaging tests, mental health facility services, and case management costs, as well as coinsurance payments for beneficiaries in managed care plans. Long-term care benefits include fee-for-service spending on nursing home

services, home health care, intermediate care facility services for individuals with intellectual and developmental disabilities, and home and community-based services. Capitation payments and premiums include premiums paid to Medicaid managed care plans, pre-paid health plans, other health plan premiums, and premiums for Medicare Part A and Part B. DSH payments are provided to certain hospitals that have furnished care for a significant number of uninsured persons and Medicaid beneficiaries and that have acquired, as a result, a substantial amount of uncompensated care costs.

Of these four categories, capitation payments and other premiums represented the largest portion of Medicaid spending in 2016, accounting for $272.8 billion or 49 percent of Medicaid benefit expenditures. Capitation payments and other premiums grew significantly as a share of Medicaid benefit spending, increasing from 34 percent in 2013 to 49 percent by 2016. Fee-for-service acute care benefit expenditures were the next largest expenditure category, constituting $150.3 billion or 27 percent of benefit expenditures (a decrease from 31 percent in 2015). Medicaid spending for fee-for-service long-term care amounted to $115.8 billion, representing 21 percent of expenditures on benefits, and DSH payments accounted for $19.7 billion, or 4 percent, of Medicaid benefits in 2016 (each about the same share as in 2015).

Medicaid outlays for program administration totaled $26.9 billion in 2016—$17.2 billion in Federal outlays and $9.7 billion in State outlays—and represented 5 percent of Medicaid outlays. Included in administration outlays were $1.2 billion in health information technology incentive payments to providers.[7]

Medicaid also provided $4.4 billion in 2016 for the Vaccines for Children program.[8]

Enrollment is measured as *person-year equivalents*, or the average enrollment over the course of a year. In 2016, 72.2 million individuals are estimated to have been enrolled in Medicaid (including enrollment in the U.S. Territories).[9] Children are estimated to have numbered 28.1 million, representing 39 percent of overall Medicaid

[7] Health information technology incentive payments were provided for by the American Recovery and Reinvestment Act of 2009 and are paid entirely by the Federal government. This figure does not include payments to States to administer the health information technology incentive payment program.

[8] The Vaccines for Children program is administered by the Centers for Disease Control and Prevention and provides vaccines for children enrolled in Medicaid, as well as for other children who might otherwise not be able to afford vaccines. All Vaccines for Children program costs are paid by the Federal government.

[9] Since data for some States are not available for 2013 and 2014, and no data are available for 2015 and 2016, enrollment figures in this report are estimates for these years, as described further in section IV of the report. In addition, past reports have provided figures for *ever-enrolled* enrollment, or the number of people who were enrolled at any time during the year. As no data are currently available that show the number of expansion adults who were ever-enrolled, and since there is no historical experience with this population, this report does not provide an estimate of ever-enrolled enrollment for 2016.

enrollment. There were an estimated 15.3 million non-expansion adults (21 percent of enrollment) and an estimated 11.2 million expansion adults (15 percent). Finally, enrollees with disabilities and aged enrollees are estimated to have numbered 10.6 million and 5.7 million (15 percent and 8 percent of Medicaid enrollment, respectively). Another 1.4 million enrollees (2 percent) were estimated for the five U.S. Territories with Medicaid programs (Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and the Northern Mariana Islands).

In previous reports, this section has provided estimates of enrollment, expenditures, and per enrollee spending by eligibility group; however, the most recent data on enrollment and expenditures by eligibility group are from 2013 or 2014 for most States, and no information is available for 2015 or 2016. Given the lack of more recent data, estimates of expenditures per enrollee by eligibility category are less reliable than in past reports, and readers should be aware that expenditures per enrollee by eligibility group could vary significantly from those provided in this report. These figures can be found in section VI.F.

B. HISTORICAL MEDICAID TRENDS

Since the start of the program, the year-to-year growth rates of total Medicaid expenditures (Federal and State expenditures combined) and enrollment have varied substantially, as can be seen in figure 1 and figure 2. The growth in expenditures over time reflects growth in the number of enrollees in the program and growth in the cost per enrollee. Enrollment growth is a result of a change in the number of people eligible and electing to participate in the program, but it is also strongly influenced by legislative changes to the eligibility criteria. Similarly, per enrollee costs vary over time due to (i) changes in the use of medical services and the prices paid to providers of health care services and supplies, (ii) legislative and other policy changes to the benefits offered by State Medicaid programs, and (iii) changes in the relative shares of enrollment by eligibility group in Medicaid.

Figure 1— Historical and Projected Medicaid Expenditures and Annual Growth Rates, Fiscal Years 1966–2026

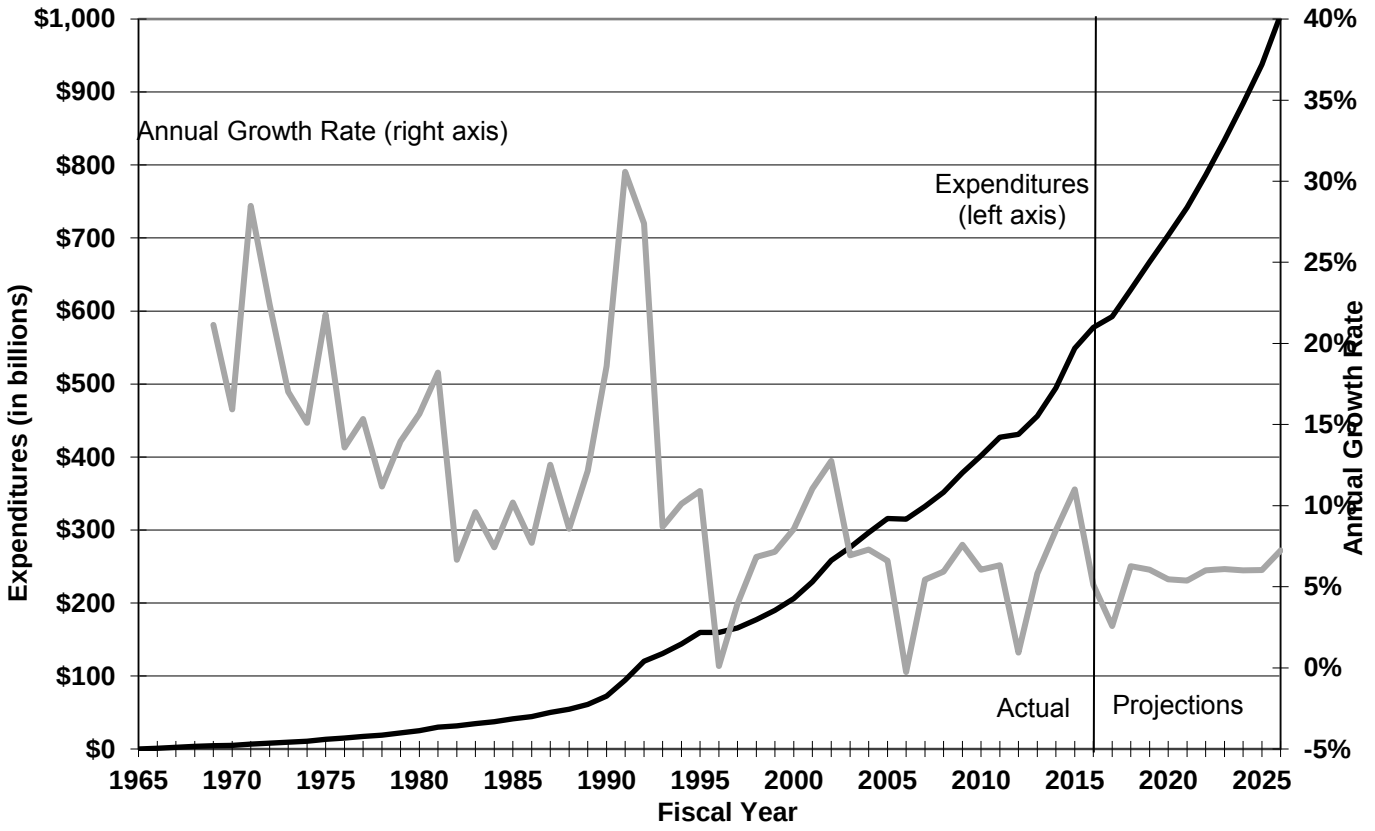
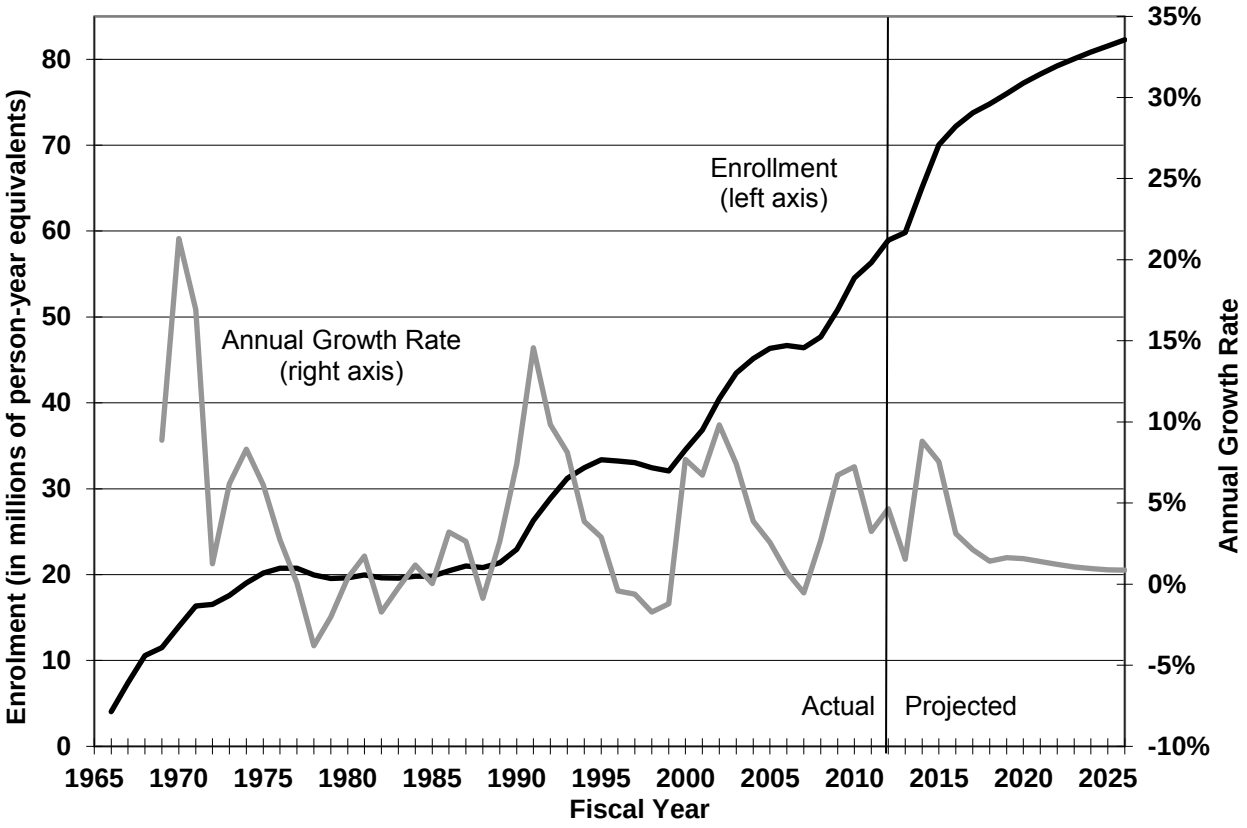


Figure 2—Historical and Projected Medicaid Enrollment and Annual Growth Rates, Fiscal Years 1966–2026



Note: Enrollment levels for 2013 through 2016 are estimated, and projected afterward.

From 2007 to 2016, Medicaid expenditures grew at an average annual rate of 6.2 percent, but during this period, annual growth rates varied from a low of 0.9 percent in 2012 to a high of 11.0 percent in 2015. Growth in health care expenditures is driven primarily by several key factors: growth in the population, changes in the use of health care services, and changes in the prices of health care services. In addition to these, several other factors affected Medicaid expenditure trends in recent history.

The American Recovery and Reinvestment Act of 2009 provided for temporary increases in the Federal share of Medicaid payments in 2009, 2010, and 2011, as well as for health information technology incentive payments that were funded entirely by the Federal government. While the increase in the Federal share of Medicaid payments was significant, it is not estimated to have affected total Medicaid expenditure growth in those years; in 2012, however, after the Federal share returned to typical levels, expenditure growth slowed considerably (from 6.3 percent in 2011 to 0.9 percent in 2012).

Although the Affordable Care Act had a number of provisions that affected Medicaid starting in 2010, most of the changes to the Medicaid program through 2013 are

estimated to have had only minor effects on Medicaid expenditure growth rates. Beginning in 2014, the expansion of eligibility to adults with incomes less than 138 percent of the FPL led to a significant increase in expenditures and enrollment. Continued expansion of State programs to cover expansion adults in 2015 (and further in 2016) resulted in the fastest program growth in more than a decade.

Medicaid expenditure growth is also affected by States' decisions in operating their programs. In the past, States took steps to control the costs of their Medicaid programs, especially during periods of relatively faster growth, and many States have taken such steps to slow the rate of expenditure growth in recent history.[10] Common methods have included freezing or reducing provider reimbursement rates and limiting or curtailing optional health care benefits. States have also used managed care and alternative care delivery approaches to control costs in their Medicaid programs.

Medicaid enrollment grew at an average annual rate of 4.5 percent from 2007 to 2016. Annual growth rates varied substantially, from a low of −0.5 percent in 2007 to a high of 8.8 percent in 2014. Outside of legislation affecting eligibility, changes in Medicaid enrollment are mainly driven by population growth and by changes in economic growth and unemployment rates. In general, Medicaid enrollment increases more quickly during economic recessions, and growth slows as the economy expands. Faster Medicaid enrollment growth in turn typically leads to increases in expenditure growth. Medicaid enrollment and expenditure trends followed these historical patterns during the 2001 recession, the 2007-2009 recession, and the subsequent economic recoveries. The Affordable Care Act provided for an expansion of Medicaid eligibility, which contributed to the substantial increase in enrollment in 2014 and 2015. Enrollment growth is estimated to have slowed to 3.1 percent in 2016, as growth in expansion adult enrollment decelerated following the start of the eligibility expansions.

[10] These State actions are well documented in the annual 50-State survey of Medicaid programs conducted by the Kaiser Family Foundation; see V. Smith, *et al.*, "Implementing Coverage and Payment Initiatives: Results from a 50-State Medicaid Budget Survey for State Fiscal Years 2016 and 2017," Kaiser Family Foundation, October 2016.

C. MEDICAID EXPENDITURES AND ENROLLMENT PROJECTIONS, FISCAL YEARS 2017–2026

The projections presented in this report reflect Medicaid medical assistance payments (or *benefit* expenditures) and Medicaid enrollment from the Mid-Session Review of the President's FY 2018 Budget. The benefit expenditure projections are based on current law, including legislation passed in 2018 prior to the publication of this report.[11] Administrative expenditures are also included and are based on the most recent estimates from OACT, as well as on administrative cost data reported to CMS.[12] Other Title XIX expenditures (such as the Vaccines for Children program) are not included. Historical and projected Medicaid expenditures for medical assistance payments and administration are shown in table 2.[13,14,15]

[11] Up to and including the Bipartisan Budget Act of 2018 (P. L. 115-123). This bill contained several provisions that affected Medicaid expenditures, though the impacts are not broken out in this report.
[12] The projections of administration expenditures are adjusted to be consistent with the expenditures reported in the CMS-64; total expenditures are also projected for administration, whereas the President's Budget projects only Federal outlays.
[13] In table 3, enrollment and expenditure data for the period 1966-1976 have been revised to be consistent with the current definition of the Federal fiscal year (October-September).
[14] There are differences between Medicaid outlays and Medicaid expenditures, mainly due to timing disparities between States paying for services and States receiving Federal funds. Thus, the levels and trends in outlays and expenditures differ slightly, and the amounts shown in table 4 differ from those shown in table 3.
[15] The projections of Territory expenditures include additional funding provided to Territory Medicaid programs through the Affordable Care Act and the Bipartisan Budget Act of 2018. Consistent with current law, these projections assume that the additional funds would not continue in future years.

Table 2—Historical and Projected Medicaid Enrollment and Expenditures and Average Federal Share of Expenditures, Selected Years

(Enrollment in millions of person-year equivalents, expenditures in billions of dollars)

Fiscal Year	Enrollment	Total Expenditures			Benefit Expenditures			Administration Expenditures			Avg. Federal Share
		Total	Federal	State	Total	Federal	State	Total	Federal	State	
Historical data:											
1966	4.0	$0.9	$0.5	$0.4	$0.9	$0.4	$0.4	$0.0	$0.0	$0.0	50%
1970	14.0	5.1	2.8	2.3	4.9	2.6	2.2	0.2	0.1	0.1	54
1975	20.2	13.1	7.3	5.9	12.6	6.9	5.6	0.6	0.3	0.3	55
1980	19.6	25.2	14.0	11.2	24.0	13.3	10.7	1.2	0.7	0.5	55
1985	19.8	41.3	22.8	18.4	39.3	21.7	17.6	2.0	1.2	0.8	57
1990	22.9	72.2	40.9	31.3	68.7	38.9	29.8	3.5	2.0	1.5	57
1995	33.4	159.5	90.7	68.8	151.8	86.5	65.3	7.7	4.2	3.4	57
2000	34.5	206.2	117.0	89.2	195.7	111.1	84.6	10.6	5.9	4.7	57
2005	46.3	315.9	180.4	135.5	300.7	172.1	128.7	15.1	8.3	6.8	57
2006	46.7	315.1	179.3	135.8	299.0	170.6	128.5	16.0	8.7	7.3	57
2007	46.4	332.2	189.0	143.2	315.8	180.0	135.8	16.4	9.0	7.5	57
2008	47.7	351.9	200.2	151.7	334.2	190.6	143.6	17.7	9.6	8.1	57
2009	50.9	378.6	246.3	132.3	360.3	236.3	124.0	18.3	10.0	8.3	65
2010	54.5	401.5	269.8	131.7	383.6	260.0	123.6	17.9	9.8	8.1	67
2011	56.3	427.0	270.5	156.4	407.5	259.6	147.9	19.5	10.9	8.6	63
2012	58.9	431.0	248.8	182.2	408.8	235.1	173.8	22.2	13.7	8.4	58
2013	59.8	456.0	263.0	193.0	433.1	248.8	184.3	22.9	14.2	8.7	58
2014	65.1	494.7	299.3	195.4	470.3	284.1	186.2	24.4	15.2	9.2	61
2015	70.0	549.1	346.0	203.1	523.9	329.8	194.0	25.2	16.2	9.0	63
2016	72.2	577.3	364.5	212.7	550.9	347.7	203.2	26.3	16.8	9.6	63
Projections:											
2017	73.8	592.2	370.6	221.6	563.7	352.1	211.6	28.5	18.4	10.0	63
2018	74.8	629.3	393.0	236.3	600.6	374.5	226.1	28.8	18.4	10.3	62
2019	76.0	667.4	419.7	247.6	638.5	401.4	237.1	28.9	18.3	10.5	63
2020	77.2	703.9	438.1	265.7	673.8	419.0	254.8	30.1	19.2	10.9	62
2021	78.3	741.7	461.1	280.6	710.1	441.0	269.2	31.6	20.1	11.4	62
2022	79.2	786.3	488.3	298.0	754.6	468.6	286.0	31.7	19.7	12.0	62
2023	80.1	834.2	518.0	316.2	801.0	497.5	303.6	33.1	20.5	12.6	62
2024	80.9	884.4	549.2	335.2	849.8	527.7	322.1	34.6	21.4	13.2	62
2025	81.6	937.7	582.1	355.6	901.6	559.8	341.8	36.1	22.4	13.8	62
2026	82.3	1,005.7	623.6	382.1	968.0	600.3	367.7	37.7	23.4	14.4	62

Note: Enrollment is estimated for 2013 through 2016.

Expenditures

Total Medicaid expenditures (Federal and State combined) for medical assistance payments and administration are estimated to have grown 2.6 percent in 2017 to $592.2 billion and are projected to reach $1,005.7 billion by 2026, increasing at an average rate of 5.7 percent per year through the projection period. Federal government spending on Medicaid medical assistance payments and administration costs is estimated to have increased by 1.7 percent to $370.6 billion in 2017, representing 63 percent of total Medicaid benefit expenditures. Federal spending on Medicaid is projected to reach $623.7 billion by 2026, or 62 percent of total spending. State Medicaid expenditures for benefits and administration are estimated to have increased to $221.6 billion in 2017, a growth rate of 4.2 percent, and are projected to reach $382.1 billion by 2026.

For much of history, the average annual Federal share has been about 57 percent of total expenditures, with several years of greater Federal shares due to changes specified in legislation. The average Federal share was 58 percent in 2013 and increased to 61 percent in 2014 due mainly to the higher FMAP for expansion adults, and it is estimated to have increased to 63 percent in 2015, 2016, and 2017. The matching rate for the expansion adults is set to decline gradually from 100 percent in 2016 to 95 percent in 2017 (and eventually to 90 percent by 2020), and the average Federal share is projected to decrease from 63 percent to 62 percent from 2018 through 2026.

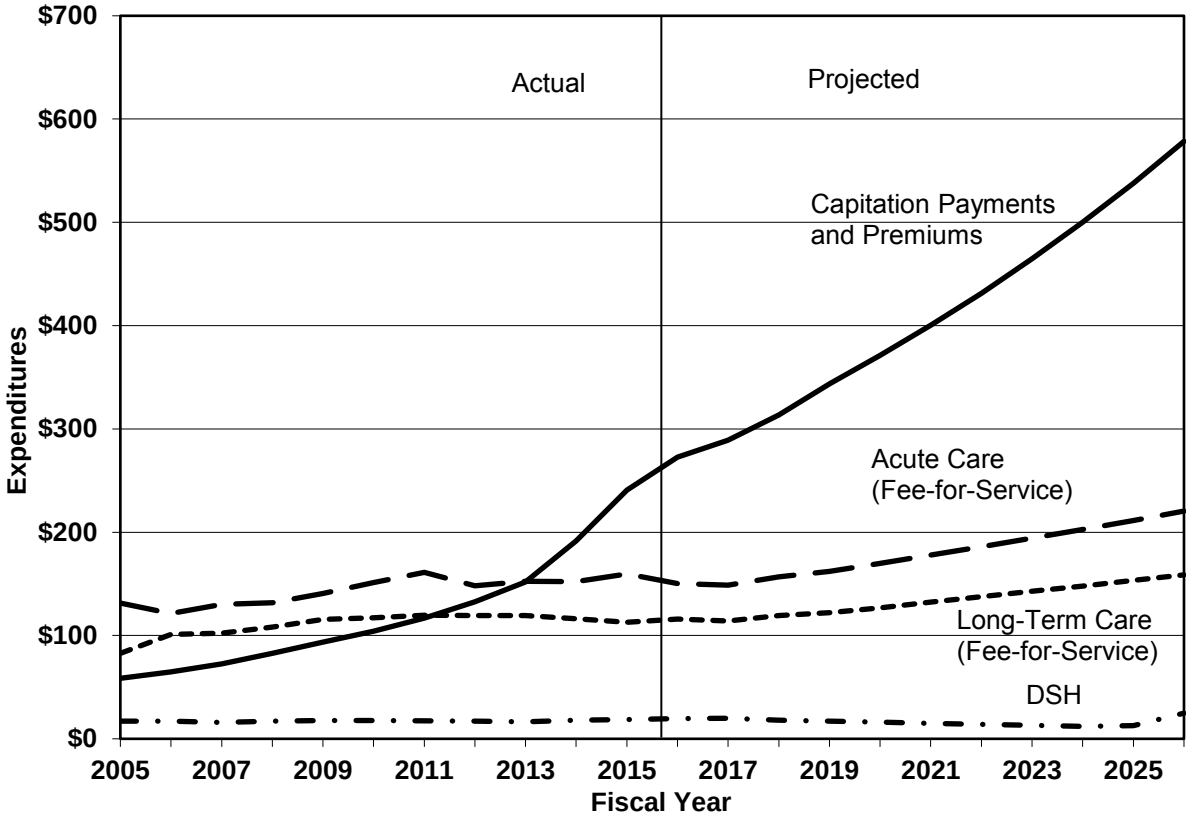
Total Medicaid expenditures (Federal and State combined) for medical assistance payments, excluding those for administration, are estimated to have grown 2.3 percent in 2017 to $563.7 billion. This is a slower rate of growth than in 2016 (5.2 percent) and is expected to be the result of continuing decelerations in enrollment growth (from 3.1 percent in 2016 to 2.1 percent in 2017) and per enrollee expenditure growth (from 1.9 percent in 2016 to 0.8 percent in 2017). Medicaid expenditures on total medical assistance payments are projected to reach $968.0 billion by 2026, increasing at an average rate of 5.8 percent per year through the projection period. Federal government spending on these Medicaid payments is estimated to have been $352.1 billion in 2017 and is projected to grow to $600.3 billion by 2026.

Administrative expenditures are estimated to have amounted to $28.5 billion in 2017, reflecting an increase of 8.2 percent, up from a growth rate of 4.5 percent in 2016. They are projected to reach $37.7 billion by 2026, growing at an average annual rate of 3.7 percent over the 10-year period. While administrative expenditures are estimated to have constituted 4.8 percent of total Medicaid costs in 2017, this percentage is projected to decline slightly to 3.7 percent by 2026.

Figure 3 shows historical and projected Medicaid benefit expenditures by four major categories of services: acute care fee-for-service, long-term care fee-for-service, capitation payments and premiums, and DSH payments.[16]

Figure 3—Past and Projected Medicaid Expenditures for Medical Assistance Payments, by Type of Payment, Fiscal Years 2005–2026[17]

(in billions)



Over the next 10 years, expenditures for capitation payments and premiums are expected to continue to grow more rapidly than expenditures for the other major Medicaid service categories, as shown in figure 3. These expenditures are projected to grow 7.8 percent per year on average from 2017 to 2026 (from $272.8 billion in 2016 to $578.4 billion in 2026), which would be 2.0 percentage points faster than overall Medicaid benefit growth. In 2014 through 2016, relatively faster growth in these payments was driven by the Medicaid eligibility expansion under the Affordable Care Act, since most of the expansion adults are enrolled in managed care plans. In addition, States increased the use of these plans by including managed long-term care services and support programs for their aged enrollees and persons with disabilities. From 2001 to 2013—prior to the Medicaid expansion in 2014—Medicaid payments for managed care plans and other premiums grew on average 12.2 percent per year, more rapidly than the overall Medicaid benefit expenditure growth rate of

[16] The data for selected figures in the report can be found in section VI.D.
[17] The data for this graph can be found in table 15 of section VI.D.

6.5 percent. In 2015 alone, these payments increased by 25.7 percent, due primarily to the continued enrollment of expansion adults in managed care programs. The use of managed care plans within Medicaid increased over time, with 80 percent of enrollees covered by at least one such plan and 65 percent covered by a comprehensive managed care program in 2015.[18] The increase in the use of these plans accounts for much of the difference between the capitation payment and overall Medicaid expenditure growth rates; however, this increase does not necessarily imply differences in per enrollee cost growth between those enrolled in managed care and those not enrolled.

Acute care fee-for-service expenditures are estimated to have decreased by 5.9 percent in 2016, due in part to continued managed-care contract use replacing fee-for-service delivery in the Medicaid program. Over the next decade, these expenditures are projected to grow at an average rate of 3.9 percent per year, from $150.3 billion in 2016 to $220.5 billion in 2026. States are expected to continue to approach the challenge of cost growth for aged beneficiaries and persons with disabilities through increased use of managed care programs for those populations.

Medicaid spending on fee-for-service long-term care is projected to grow by 3.2 percent on average for 2017 through 2026, increasing from $115.8 billion in 2016 to $158.7 billion in 2026. Aged enrollees and persons with disabilities receive the vast majority of long-term care services, and growth in these expenditures is driven in part by growth in enrollment among these beneficiaries. In recent years, Medicaid expenditures on these services declined; from 2011 through 2015, long-term care expenditures decreased at an average rate of 0.8 percent per year, compared to average annual growth of 7.2 percent from 2005 through 2010. This deceleration reflects relatively slower growth in reimbursement rates and utilization of long-term care. Additionally, over the last several years, there was an increase in the use of managed care for long-term care services in Medicaid, which resulted in several years of slow growth or contraction in fee-for-service expenditures for long-term care.

[18] Centers for Medicare & Medicaid Services, *Medicaid Managed Care Enrollment and Program Characteristics, 2015,* available at https://www.medicaid.gov/medicaid/managed-care/downloads/enrollment/2015-medicaid-managed-care-enrollment-report.pdf.

Accordingly, long-term care expenditures are estimated to have declined 1.6 percent in 2017.[19]

Medicaid DSH expenditures are typically expected to grow at the same rate as the Medicaid Federal DSH allotments, which are based on the Consumer Price Index (CPI). The Affordable Care Act, however, prescribes reductions in Medicaid DSH allotments, and subsequent legislation has extended those reductions through 2025.[20] Thus, the average growth rate for DSH spending is projected to be 1.4 percent over the next 10 years, with DSH expenditures decreasing from $19.7 billion in 2016 to $12.7 billion in 2025 before rising to $24.8 billion in 2026.

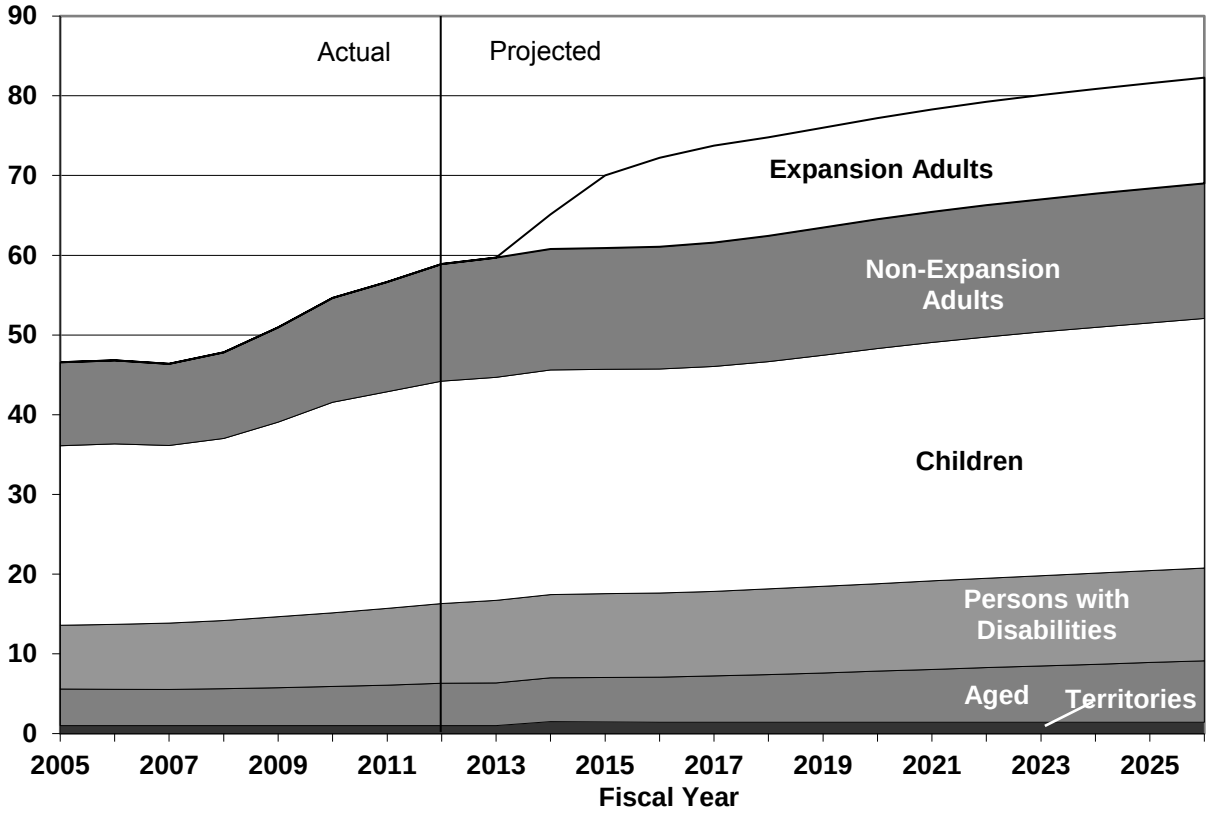
[19] Use of home and community-based services can substantially reduce expenditures for enrollees who would otherwise have had to enter a nursing home or who transition from institutional to community settings. Conversely, the expanding use of these services, by those who would not otherwise have had nursing home care, adds to overall program costs and may offset some amount of the savings realized by reducing the use of institutional long-term care services. Growth in the use of home and community long-term care reflects the increase in the number of home and community-based waivers in Medicaid, as well as the provision of such care through State plans. In addition, in *Olmstead v. L.C.*, 119 S. Ct. 2176 (1999), the Supreme Court ruled that, under the Americans with Disabilities Act of 1990, States must provide community-based placement for persons with disabilities when appropriate and consistent with consumer wishes. This ruling is also expected to have led to an increase in non-institutional long-term care expenditures in Medicaid.

[20] Several acts of legislation have combined to delay the start of DSH reductions until 2020 and extend the duration of the reductions through 2025: the Middle Class Tax Relief and Job Creation Act (Public Law 112-96); the American Taxpayer Relief Act (Public Law 112-240); the Bipartisan Budget Act (Public Law 113-67); the Protecting Access to Medicare Act (Public Law 113-93); the Medicare Access and CHIP Reauthorization Act (Public Law 114-10); and the Bipartisan Budget Act of 2018 (Public Law 115-123).

Enrollment

Increasing levels of Medicaid enrollment are expected to contribute to expenditure growth over the next 10 years. Historical and projected Medicaid enrollments are shown by category in figure 4.

Figure 4—Past and Projected Numbers of Medicaid Enrollees, by Category, Fiscal Years 2005–2026[21]
(in millions of person-year equivalents)



Note: Enrollment levels after 2012 are estimated for all but the expansion adults, whose levels are reported through 2016.

Total enrollment is estimated to have grown from 72.2 million in 2016 (including 1.4 million enrollees in the U.S. Territories) to 73.8 million in 2017—with the majority of the increase driven by expansion adults (1.0 million of the 1.5-million increase). Growth is estimated to have slowed after many States expanded Medicaid eligibility in 2014 and 2015; enrollment is estimated to have increased 8.8 percent in 2014 and 7.6 percent in 2015, but only 3.1 percent in 2016 and 2.1 percent in 2017. While fewer States expanded eligibility in 2016 (and none did so in 2017), expansion adults still account for the majority of enrollment growth. Excluding expansion adults, enrollment is estimated to have increased 0.2 percent in 2016 and 0.3 percent in 2017—a result that likely reflects recent economic growth and low unemployment

[21] The data for this graph can be found in table 16 of section VI.D.

rates, which would result in fewer people becoming eligible for Medicaid and more individuals finding other forms of health coverage.

During 2017 through 2026, the total number of Medicaid enrollees is projected to increase at a rate of about 1.3 percent per year, reflecting expected U.S. population growth and an increase in the number of aged enrollees as baby boomers continue to reach age 65. Growth in the number of aged adults is expected to be faster than that for the other categories of enrollment; the average annual growth rate for aged adults is projected to be 2.9 percent over the next 10 years. By 2026, Medicaid enrollment is projected to increase to 82.3 million.[22]

[22] Territory enrollment is projected to remain level at about 1.4 million persons from 2017 to 2026, despite the projected reduction in Federal expenditures for Territory Medicaid programs due to the expiration of additional funds provided by the Affordable Care Act and the Bipartisan Budget Act of 2018. These projections are based on the assumption that Territories would provide additional funding or make other program changes to maintain enrollment levels as Federal funding is reduced.

D. IMPACTS OF THE MEDICAID ELIGIBILITY EXPANSION

Expansion of Medicaid eligibility to almost all persons under age 65 who are living in families with incomes below 138 percent of the FPL (and who are citizens or eligible legal residents) began in 2014. Expansion adult enrollment was 11.2 million in 2016. In 2017, an estimated 12.2 million expansion adults were enrolled, and these adults are projected to number 13.3 million by 2026.

Total Medicaid benefit expenditures for the expansion adult population amounted to $66.5 billion in 2016. Expenditures are estimated to have increased to $70.8 billion in 2017 and are projected to reach $119.9 billion by 2026. For expansion adult beneficiaries, a higher Federal matching rate is specified, decreasing from 100 percent through 2016 to 95 percent in 2017 and then gradually declining to 90 percent by 2020 and beyond. By 2026, the States are projected to pay $12.0 billion of the costs for expansion adults.

Unlike the per enrollee costs for non-expansion populations (which are excluded from the body of this year's report for reasons explained in section VI.F), expansion adult expenditures per enrollee are calculated from the CMS-64 financial statements, which include a reliable accounting of the number of expansion adults enrolled in each State for every month of its expansion. As a result, the calculated per enrollee costs for this population are considered credible and are included below.

The average per enrollee costs for expansion adults grew from $5,511 in 2014 to $6,365 in 2015 (an increase of 15.5 percent). These per enrollee costs were notably higher than those for non-expansion adults, as many States included adjustments to reflect a higher level of acuity or morbidity. In most States, these adjustments were positive, and in some cases the adjustments were substantial.[23] States also included other adjustments in the capitation rates for expansion adults; many projected increased costs due to pent-up demand, expecting that those who were previously uninsured would use additional services in the first several months of coverage. In addition, some States included adjustments for adverse selection with the anticipation that the persons who were most likely to enroll in the first year would be those with the greatest health care needs.

[23] It is difficult to generalize about the adjustments estimated by the States for several reasons. States may have used different definitions for the non-expansion adult population that served as the basis for comparison with the expansion adults. (For example, States may have compared the expansion adults to only non-expansion childless adults or to childless adults and parents or caretaker adults, or States may have compared the expansion adults to only non-disabled adults or to non-disabled adults and some adults with disabilities.) Most States also removed from the comparison pregnant women who are not expansion adults under Medicaid, but the projections in this report include pregnant women among non-expansion adults; thus, it is difficult to directly compare the assumptions made by the States with the projections and analyses in this report. In addition, the States used various methodologies to develop these adjustments and in some cases combined them with other adjustments (for example, for adverse selection or pent-up demand).

In 2016, expansion adult per enrollee costs are estimated to have decreased by 6.3 percent to $5,965. These costs are estimated to have decreased further to $5,813 in 2017 (a decline of 2.5 percent). The effects of pent-up demand and adverse selection are expected to end after the earliest years of the eligibility expansion, and more recent information (including the results of risk-sharing arrangements between States and managed care plans) indicates that the actual average costs of expansion adults were significantly lower than the States anticipated. Moreover, prior period adjustments by some States indicate that certain adjustments significantly lowered payments made in 2015 and 2016.

Data for the expansion adult population are still limited. While CMS has reported some enrollment and expenditure information for this group, data on claims and managed care encounters, and on the health status and demographics of these enrollees, are not available. Thus, there is still uncertainty about the health care costs of expansion adults in 2014 through 2017, as well as for future years. (As additional data are provided in the financial reports for the expansion adults, it is possible to provide per enrollee cost estimates for this group. See section IV for more information.)

Given the uncertainty inherent in covering a large new population in Medicaid (many of whom were expected to have been previously uninsured), most States that implemented the eligibility expansion included risk-sharing arrangements in their contracts with managed care plans for expansion adults in 2014 and 2015, with some States continuing these arrangements into 2016.[24] The most common approaches were to use a risk corridor or to use a minimum medical loss ratio. Under a risk corridor, the managed care plans would return some payments to the State and the Federal government if the average benefits per enrollee or loss ratio fell below a certain level or ratio, and the plans would receive additional payments from the State and the Federal government if the average benefits per enrollee or loss ratio exceeded a certain level or ratio. In States requiring a minimum medical loss ratio, the managed care plans would return some payments to the State and the Federal government if the loss ratio fell below a certain level, but the plans would not receive additional funding if the loss ratio was higher than expected.

As a result of these arrangements, there is the potential that the ultimate payments for expansion adults in 2014, 2015, and 2016 may be notably different from those currently reported. By the end of 2017, most States had reported at least preliminary 2014 and 2015 results, but several of these contractual arrangements have yet to be finalized. Some States without finalized arrangements effectively made prepayments to the Federal government through prior period adjustments (which are adjustments to payments prior to the settlement of risk corridors and minimum loss ratios). Based

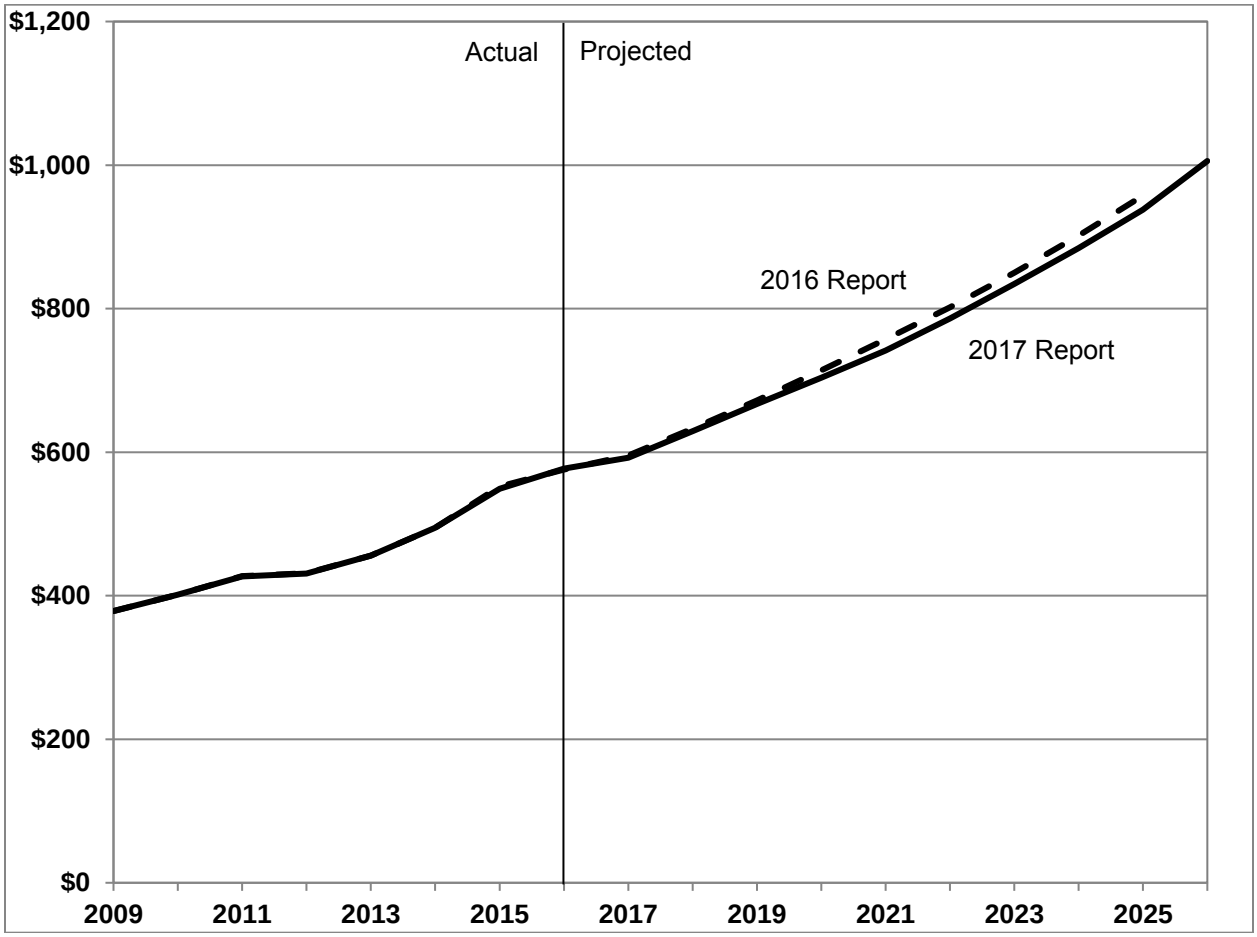
[24] Of the States that did not use a risk-sharing arrangement, several covered expansion adults under fee-for-service arrangements, and one covered enrollees through private health insurance plans using premium assistance. Several other States chose not to use risk-sharing arrangements.

on the results of States that have reported such information and on comparisons of the costs for expansion and non-expansion adults enrolled in Medicaid, the Federal government is expected to receive an estimated $3.2 billion from the risk-mitigation strategies and prior period adjustments due from 2014 experience, an estimated $5.5 billion due from 2015, and an estimated $4.0 billion due from 2016. These figures represent about 9 percent of capitation payments for expansion adults in 2014 and 2015 and about 8 percent in 2016. Of the total $12.7 billion estimated to ultimately be paid to the Federal government, $1.2 billion was paid in 2016, while 2017 and 2018 recoveries are estimated to total $4.1 billion and $7.4 billion, respectively. In 2016, the entire $1.2 billion in recoveries was paid through the settlement of risk-mitigation arrangements. The $4.1 billion estimated to have been paid in 2017 was only $0.8 billion in such settlements, with the remaining $3.3 billion being accounted for through prior period adjustments. In 2018, the $7.4 billion in estimated recoveries is projected to be $5.4 billion in settlements and $2.0 billion in prior period adjustments. Since only some States have reported the results of these contractual provisions, and because of the various arrangements employed by those States and the uncertainty regarding the costs of the new adult enrollees, it is possible that the actual amounts returned to the Federal government could differ significantly from those estimated here. In addition, it is possible that the actual payments to the Federal government (or potentially from the Federal government) could occur later than expected.

E. COMPARISON TO 2016 REPORT PROJECTIONS

The projections of Medicaid expenditures in this report are slightly lower than in the *2016 Actuarial Report on the Financial Outlook for Medicaid*. Figure 5 compares the 2017 projections of total Medicaid expenditures (including Federal and State) to those in last year's report.

Figure 5—Projected Medicaid Expenditures: Comparison of 2017 versus 2016 Actuarial Reports on the Financial Outlook for Medicaid, Fiscal Years 2009–2025[25]
(in billions)



Expenditures in 2017 ($592.2 billion) are estimated to have been slightly lower than estimated last year ($595.5 billion), representing a 0.6-percent difference resulting from lower estimated benefit expenditures for eligibility groups other than expansion adults. Projected spending of $937.7 billion in 2025 is 2.1 percent lower than the corresponding amount from last year ($957.5 billion). In total, the 10-year projections from 2016 through 2025 are $104.1 billion, or 1.4 percent, lower. The decrease over

[25] The data for this graph can be found in table 18 of section VI.D.

the 10-year period is primarily due to revised projections of the growth in use and complexity of certain services.

In addition, projected increases in utilization (or the residual factors) were slower in this year's report than in last year's (including those for long-term care services). As recent historical expenditures have grown more slowly, the outlook for future utilization growth in the program has changed accordingly.

Medicaid enrollment is projected to be slightly higher over the 10-year projection period than in last year's report, partially offsetting lower 2016 spending and slower growth in the utilization of some services. Increases in the projected enrollment of expansion adults in 2016 and beyond reflect higher reported enrollment than was previously anticipated.

Medicaid enrollment is projected to reach 81.6 million by 2025, which is about the same as projected in the 2016 report. Historical enrollment across all categories was higher than previously estimated for 2012 and 2013, resulting in higher enrollment levels over the projection period. In addition, expansion adult enrollment is estimated to have been 1.8 percent higher in 2017 than previously estimated (12.2 million as opposed to 12.0 million in the previous report), and it is projected to reach 13.2 million by 2025 (about the same as previously projected).

F. MEDICAID IN CONTEXT

From the estimates and analysis of health spending in the United States provided by the national health expenditure accounts (NHEA), additional insight can be obtained into the role of Medicaid within the total U.S. health care system.[26] Medicaid spending in the 2016 NHEA represented 16.9 percent of total national health expenditures. Private health insurance was the largest source of spending on health care in 2016, accounting for 33.7 percent of total national health expenditures, while Medicare paid for 20.1 percent.[27]

The historical NHEA also present health care spending by the original source of financing (or sponsor). In calendar year (CY) 2016, Medicaid represented 37.9 percent of Federal government expenditures on health services and supplies and 36.8 percent of such spending by State and local governments. For the third consecutive year, Medicaid was larger than Medicare as a share of Federal government expenditures on health services and supplies. (Trust fund and general revenue Medicare expenditures accounted for 31.3 percent of Federal spending on health services and supplies in 2016.)[28] Medicaid is the largest source of Federal general revenue-based spending on health services. A sizeable portion of Medicare spending is funded by income from dedicated revenue sources—which include Medicare Part A payroll taxes and Part B and Part D beneficiary premiums—with the balance from Federal general revenues. In contrast, Medicaid does not have any dedicated Federal revenue source; all Federal spending on Medicaid comes from general revenue. For State governments, Medicaid is the largest source of general revenue-based spending on health services.[29]

Moreover, Medicaid has a greater number of enrollees than Medicare. In FY 2016, Medicaid is estimated to have covered 72.2 million individuals (including persons residing in U.S. Territories). In comparison, Medicare covered an average of

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[26] The historical Medicaid spending data and projections presented in this report differ slightly from the national health expenditure estimates and projections in several ways. Some of the differences are as follows: (i) the data and projections featured in this report are shown on a fiscal year basis, whereas the national health expenditure amounts are on a calendar year basis; (ii) the NHEA make several adjustments to Medicaid, such as classifying Medicaid spending for Medicare premiums as Medicare spending; and (iii) the NHEA use somewhat different definitions of services than do the data presented in this report.

[27] M. Hartman, *et al*., "National Health Spending in 2016: Spending and Enrollment Growth Slow after Initial Coverage Expansions," *Health Affairs*, 37, no.1 (2018): 150-160.

[28] National Health Expenditures Historical 2016, Tables 5.3, 5.4. https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.html

[29] *Ibid*. There are some State dedicated revenues for Medicaid. For more detail on this analysis of health care spending by sponsor, see the methodology paper at http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/dsm-11.pdf.

56.8 million people during CY 2016.[30] Within these totals, there are substantial differences between the programs in the number and nature of people covered. For example, Medicare automatically covers nearly all people over age 65 (47.8 million beneficiaries in 2015), but only those aged individuals with very low incomes and assets—and who apply for the coverage—become Medicaid enrollees (estimated at 5.7 million). Enrollment for persons with disabilities was more similar between the two programs in 2016; Medicaid covered an estimated average of 10.6 million such persons that year, while Medicare covered 9.0 million of these beneficiaries. Although the definition of disability is essentially the same for both programs, the other eligibility criteria are entirely different.[31] Finally, as noted earlier, a majority of Medicaid enrollees are either children or non-disabled non-aged adults in families with low incomes; Medicare does not have comparable categories of beneficiaries. The Medicare Payment Advisory Commission (MedPAC) and Medicaid and CHIP Payment and Access Commission (MACPAC) found that 9.5 million persons (or about 15 percent of all enrollees) were dually eligible in 2013 and that, in that year, dual-eligible beneficiaries accounted for $118.9 billion in Medicaid expenditures (or about 32 percent of Medicaid benefit spending).[32]

Among the different types of health care services, Medicaid plays the largest role in the funding of long-term care. According to the 2016 NHEA, during that year Medicaid is estimated to have paid for 36.8 percent of all freestanding home health care and 30.7 percent of all freestanding nursing home care in the United States. In addition, Medicaid covered an estimated 56.7 percent of other health, personal, and residential care in 2016, including Medicaid payments for intermediate care facilities for individuals with intellectual and developmental disabilities and such payments for home and community-based waivers.[33] Medicaid has a major responsibility for providing long-term care because the program covers some aged persons and many persons with disabilities of all ages—individuals who tend to be the most frequent and most costly users of such care—and because private health insurance and Medicare often furnish only limited coverage for these benefits. Many people who pay privately for nursing home care or community-based long-term care become

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[30] *The 2017 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds,* available at https://www.cms.gov/research-statistics-data-and-systems/statistics-trends-and-reports/reportstrustfunds/downloads/tr2017.pdf.

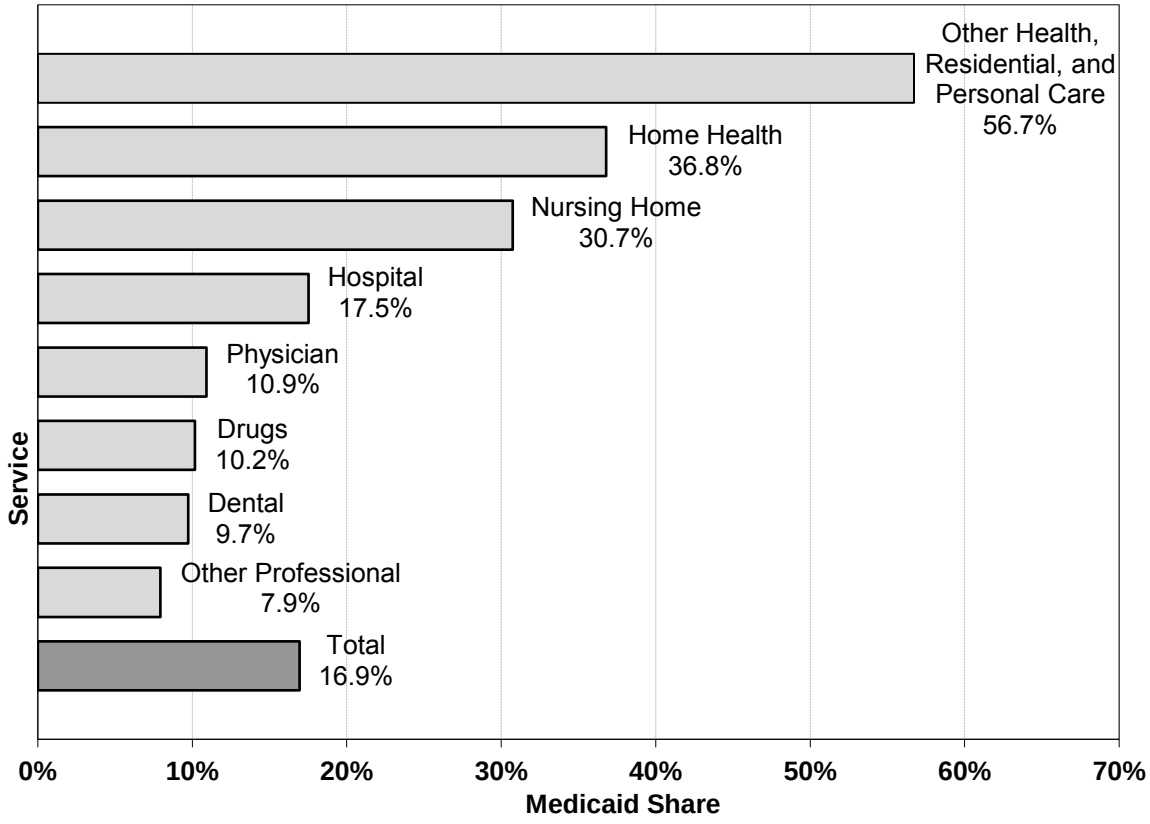
[31] Medicaid eligibility for persons with disabilities is based on income and asset criteria (among other measures). Medicare eligibility for persons with disabilities generally depends on an individual's sufficient participation in the paid work force prior to disability. Furthermore, in many cases the time period to determine eligibility for Medicare on the basis of disability is longer than that for determining Medicaid eligibility. Despite these different requirements, a significant number of persons with disabilities qualify for coverage under both Medicaid and Medicare.

[32] Medicare Payment Advisory Commission and Medicaid and CHIP Payment and Access Commission, *Data Book: Beneficiaries Dually Eligible for Medicare and Medicaid*, January 2018, available at http://medpac.gov/docs/default-source/data-book/jan18_medpac_macpac_dualsdatabook_sec.pdf?sfvrsn=0 .

[33] M. Hartman, *et al.*, "National Health Spending in 2016: Spending and Enrollment Growth Slow after Initial Coverage Expansions."

impoverished due to the expense; as a result, these people eventually become eligible for Medicaid. Figure 6 shows the percentage of total spending for the major health care services that Medicaid covers.

Figure 6—Medicaid Expenditures as Percentage of Total U.S. Health Expenditures, by Service Category, Calendar Year 2016



Medicaid represents a significant share of the Federal and State budgets. In FY 2017, out of a total of $4,062 billion spent by the Federal government for all purposes, $378 billion (or 9.3 percent) can be attributed to Medicaid. Under the President's FY 2019 Budget, Federal outlays on Medicaid are projected to account for 9.2 percent of all Federal outlays by 2027.[34]

According to the National Association of State Budget Officers (NASBO), Medicaid represented an estimated 28.7 percent of all State government spending in State fiscal year 2016.[35] This amount, however, includes all Federal contributions to State Medicaid spending, as well as expenditures from State general revenue funds and

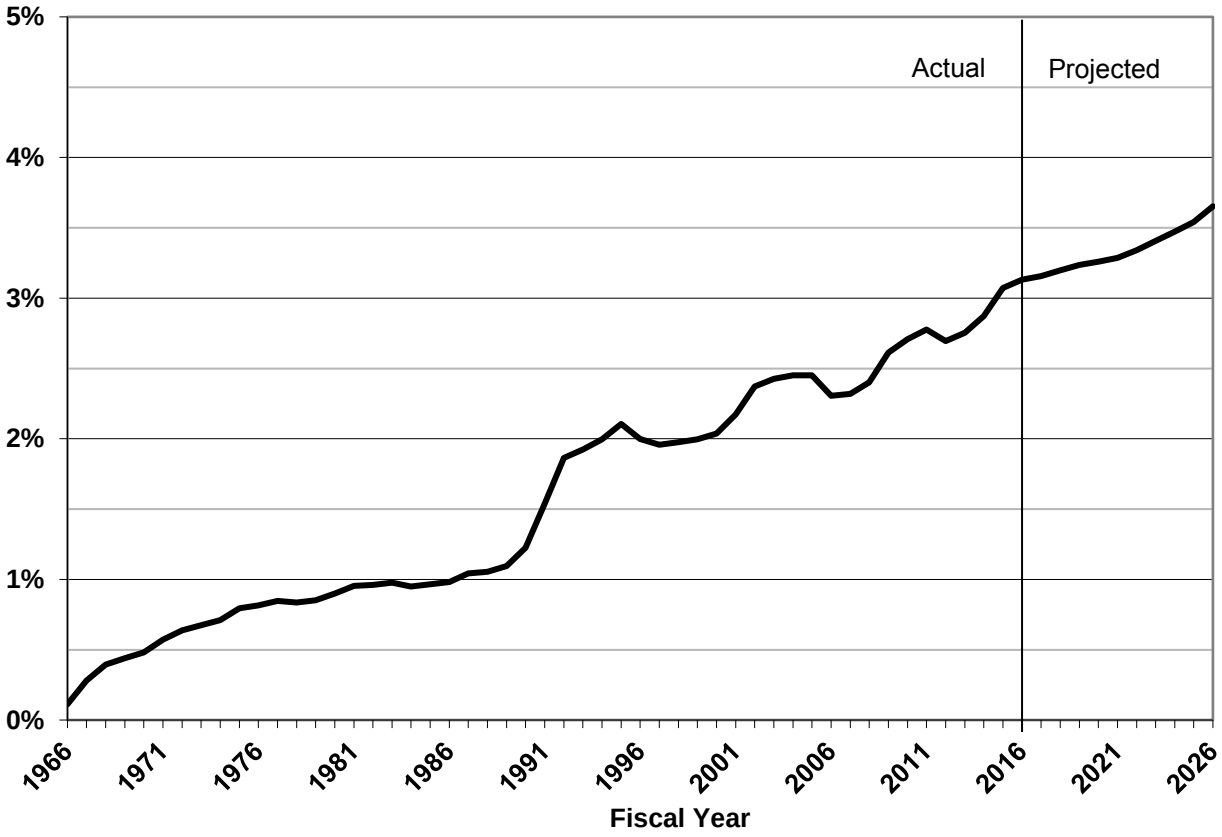
[34] Figures from the President's Budget differ from those shown in this report. More information on the Federal budget is available in *Analytical Perspectives, Budget of the United States Government, Fiscal Year 2019*.

[35] *State Expenditure Report: Examining Fiscal 2015–2017 State Spending*, National Association of State Budget Officers, 2017.

other State funds (which for Medicaid may include provider taxes, fees, donations, assessments, and local funds). According to NASBO, Medicaid was the largest program in 2016. When only State general revenues are considered, however, Medicaid spending constituted an estimated 15.9 percent of State expenditures in 2016, placing it well behind elementary and secondary education. Overall in 2016, State general revenue expenditures for Medicaid increased by 4.0 percent, which was faster than the overall State general revenue expenditure growth rate of 3.2 percent.

As shown in figure 7, Medicaid represented about 3.1 percent of the Gross Domestic Product (GDP) in 2016. This gradual increase from 2.8 percent in 2013 largely reflects the continued growth in Medicaid expenditures associated with the eligibility expansion starting in 2014.

Figure 7—Past and Projected Medicaid Expenditures as Share of GDP, Fiscal Years 1966–2026[36]



Note: Percentages are affected by economic cycles.

In 2017, GDP is estimated to have grown by 1.7 percent. This growth rate is slightly less than that for Medicaid spending, which is estimated to have increased by 2.6 percent, as the main effects of the coverage expansion under the Affordable Care

[36] The data for this graph can be found in table 19 of section VI.D.

Act slowed. Medicaid spending is estimated to have increased to 3.2 percent as a share of GDP in 2017.

As seen in figure 7, the program's expenditures are projected to continue to grow to 3.7 percent of GDP by 2026. From 2017 through 2026, Medicaid expenditures are projected to increase about 1.6 percentage points faster than GDP per year. This difference is driven by relatively faster projected growth in per enrollee spending for the program overall, averaging 4.5 percent from 2017 through 2026, as well as by increases in DSH expenditures starting in 2026 following the expiration of the temporary DSH allotment reductions most recently updated in the Bipartisan Budget Act of 2018 (Public Law 115-123).

This projection of Medicaid spending as a share of GDP is greater than that included in last year's report. The share of GDP devoted to Medicaid in 2025 is projected to be 3.5 percent, about 0.1 percentage point higher than the 2016 projection. This result is due to the fact that GDP is projected to grow more slowly than previously assumed, averaging 4.0 percent annually from 2015 through 2025 as opposed to 4.8 percent over the same period in the 2016 report.

IV. SUMMARY OF DATA, ASSUMPTIONS, AND METHODOLOGY

Projections of Medicaid expenditures and enrollment are highly dependent on both demographic and economic assumptions. The most important such assumptions are those regarding the growth of health care prices, growth in the use of health care goods and services, overall economic growth, individual wage growth, and population growth. In addition, there are various programmatic factors that have historically influenced Medicaid expenditure and enrollment trends, including decisions by the States regarding eligibility and payment rules for their Medicaid plans, the coverage of and enrollment in other health insurance programs, including Medicare and private health insurance, and changes in the participation rates of eligible persons in Medicaid. The projections also depend on the nature and quality of the available data on Medicaid operations. This section briefly describes the sources of data and assumptions that are used to generate the Medicaid projections shown in this report; further detail is provided in sections VI.A and VI.B.

Data Sources

The data and assumptions on which these Medicaid projections are based are derived from three major sources. The first source is CMS data, which are submitted by the States to CMS on a regular basis. These data include the CMS-64 Financial Management Report (FMR) and the Medicaid Analytic eXtract (MAX).

The FMR provides separate Federal and State expenditures for all Medicaid fee-for-service programs and capitation arrangements.[37] The data and projections in this Medicaid actuarial report rely on the *Net Services* FMR, while Medicaid reports prior to 2015 used the *Base* FMR. Both the Net Services and Base FMRs provide the same total expenditures, but the former allocates prior period adjustments by service, while the latter does not. Neither the total expenditures reported nor the projected total expenditures are changed as a result of the switch from the Base to the Net Services FMR, but the benefit expenditures per enrollee are generally increased (since the benefit expenditures are more complete and thus are greater), as are the benefit expenditures for some categories of service. OACT made this change because using the Net Services FMR provides a more accurate allocation of the costs (by category of service and by enrollment category) than does reporting a significant portion of expenditures as prior period adjustments, and because further complications arise when the Base FMR is used and adjustments are allocated to the expansion adults. The effects of changing from the Base to the Net Services FMR are described more fully in section VI.A.

[37] More information on the CMS-64 is available on the CMS website at https://www.medicaid.gov/medicaid/finance/state-expenditure-reporting/expenditure-reports/index.html. Additional detail is provided in section VI.A.

Table 3 shows the 2016 Medicaid medical assistance payments and administration costs reported in the Net Services FMR.

Table 3—Total Medical Assistance Payments and Administration Expenditures from the CMS-64 Financial Management Report, Fiscal Year 2016

Type of Payment	Total	Federal	State
Medical Assistance Payments	$550,881,322,328	$347,661,763,592	$203,219,558,736
Administration Costs	26,323,092,634	16,754,797,718	9,568,294,916
Total Expenditures	577,204,414,962	364,416,561,310	212,787,853,752

Note: The complete CMS-64 Financial Management Report for medical assistance payments and administrative costs in FY 2016 is provided in section VI.D and is available on the CMS website at https://www.medicaid.gov/medicaid/finance/state-expenditure-reporting/expenditure-reports/index.html.

CMS data also include MAX, which contains both service and demographic data supplied by the States, including provider payments and enrollment counts, and are derived from the Medicaid Statistical Information System (MSIS).[38] MAX expenditure data include only total Medicaid expenditures and do not provide data separately for Federal or State expenditures. Several adjustments are made to merge the CMS-64 and MAX data together for use in preparing projections.

Table 4 shows average annual Medicaid enrollment by enrollment category for the last 4 years of complete enrollment data (2009 through 2012).Enrollment data are available in only 44 States in 2013. Enrollment levels are estimated for all States after 2013.

[38] More information regarding MAX can be found on the CMS website at https://www.cms.gov/research-statistics-data-and-systems/computer-data-and-systems/medicaiddatasourcesgeninfo/maxgeneralinformation.html.

Table 4—Average Annual Medicaid Enrollment by MAX Enrollment Category, Fiscal Years 2009–2012

Enrollment Category	2009	2010	2011	2012
Aged	4,742,798	4,906,857	5,070,917	5,281,836
Persons with Disabilities	8,915,394	9,223,315	9,651,883	10,069,328
Children	23,338,750	25,314,793	26,079,135	26,802,765
Adults	11,675,142	12,875,583	13,550,526	14,446,790
Children (Unemployed Parent)	182,751	217,681	234,629	235,524
Unemployed Adults	148,525	181,847	200,381	204,703
Foster Care Children	897,986	880,464	839,805	848,280
Breast and Cervical Cancer Act Enrollees	38,152	39,968	41,963	43,300
Total	49,939,498	53,640,509	55,669,239	57,932,526

Note: MAX data for 2012 are supplemented with 2011 MAX data for Colorado and Idaho, as information for these two States is unavailable in the 2012 MAX data.

Key Assumptions

The Boards of Trustees for Old-Age, Survivors, and Disability Insurance (OASDI, or Social Security) and Medicare constitute the second source for the data and assumptions.[39] The projections in this Medicaid report are based on the same economic and demographic assumptions that were developed by the Trustees and used to determine the intermediate estimates presented in their statutory 2017 annual reports to Congress on the financial status of the OASDI and Medicare programs. The Trustees' intermediate economic assumptions are also used to develop the health care service price forecasts underlying the projections in this report.[40]

The third source of underlying data and assumptions—national health expenditure historical data and projections—is used for comparing Medicaid expenditures and enrollment with Medicare, private health insurance, and total health care spending

[39] *The 2017 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds,* available at https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/ReportsTrustFunds/downloads/tr2017.pdf, and *The 2017 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds,* available at https://www.ssa.gov/OACT/TR/2017/.

[40] These assumptions are different from those used for projections in the President's FY 2018 Budget. Consequently, the projections presented in this report usually differ somewhat from the President's Budget projections. In addition, due to differences in the timing of this report and the Budget, later data are generally available for use in this report. Finally, while the Trustees' economic assumptions underlie both the Medicare Trustees Report and the Medicaid actuarial report, the two sets of health care service price growth forecasts are not the same. The two programs have significantly different statutory mechanisms for setting provider price updates, and these differences are reflected in the updated assumptions for each program.

in the United States. OACT develops the national health expenditure data and projections.[41]

For the purpose of projecting enrollment of, and expenditures for, expansion adults, OACT developed assumptions regarding States' decisions to implement the eligibility expansion. Of all people who were potentially newly eligible Medicaid enrollees, 45 percent are estimated to have resided in States that elected to expand Medicaid eligibility in 2014, and 50 percent are estimated to have resided in States that expanded eligibility by 2015. Assumptions about the effective national participation rate of the States for the eligibility expansion after 2015 were developed using public information and statements for each State regarding its intent to implement the expansion. Based on this information, OACT assumed that 50 percent of all people who were potential expansion adults in 2016 resided in States that elected to expand Medicaid eligibility and, for 2017 and thereafter, that 55 percent of such individuals will reside in expansion States. This assumption is the same as the percentages assumed in the 2016 report.

In the future, actual participation by States could differ from these assumptions. A greater or lesser number of States could elect to expand eligibility than has been assumed, and States' decisions may change over time (either to expand if they have not done so previously or to end the expansion sometime in the future).[42]

The Medicaid expenditure and enrollment projections shown in this report are based on current law. That is, they are consistent with current legislation and administrative policy regarding Medicaid as of February 9, 2018 to include the signing of the Bipartisan Budget Act of 2018, which extended funding for the Children's Health Insurance Program (CHIP) through the projection window.[43] No other attempts have been made to forecast any future changes in policy or legislation

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[41] More information on the historical NHEA and projections is available on the CMS website at https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/index.html. Also, see M. Hartman, *et al.*, "National Health Spending in 2016: Spending and Enrollment Growth Slow after Initial Coverage Expansions," *Health Affairs*, 37, no.1 (2018): 150-160; and S. Keehan, *et al.*, "National Health Expenditure Projections, 2016-25: Price Increases, Aging Push Section to 20 Percent of Economy," *Health Affairs*, 36, no. 3 (2017): 553-563.

[42] Currently we assume all states that have expanded prior to January 1, 2018 will remain expansion states. The only state we presume will expand after this in our current modeling is Maine, which we estimated would expand in July 2018. Since these projections were completed, the start of the eligibility expansion in Maine has been delayed, and Virginia is expected to expand eligibility. These changes are not reflected in the projections in this report.

[43] This report does not cover expenditures and enrollment under CHIP, whether operated under Title XIX or Title XXI of the Social Security Act. CHIP provides health coverage to many children in households with income above Medicaid eligibility levels. In addition, this report does not consider any potential effects on Medicaid if CHIP funding exhausted prior to FY 2027. Should CHIP experience a shortfall in available funding, children enrolled in Medicaid expansion CHIP would be eligible for coverage in Medicaid, and projected Medicaid expenditures and enrollment would be higher than the projections in this report.

that, if realized, would affect the Medicaid program—including Federal Medicaid, State Medicaid, or Medicare policy and legislation or other legislation that could affect private health insurance plans. Thus, while changes in Federal or State Medicaid policy have been significant factors affecting the patterns of growth in expenditures and enrollment over the historical period, no future changes in policy are assumed (beyond those already scheduled under current law).

Methodology

Health actuaries typically base estimates of medical expenditures on three major factors:

- C – the number of people enrolled in the program (*caseload*),
- U – the quantity of services each person uses (*utilization*), and
- P – the reimbursement (*price*) for each unit of service.

The product of these three factors yields an estimate of total expenditures for medical services:

$$E = C \times U \times P \qquad (1)$$

Direct application of equation (1) requires data on utilization and reimbursement rates for Medicaid that are not currently available or practical to maintain.[44] An alternative recursive approach is therefore used for the projections, as described below.

Instead of using equation (1), the projection algorithm begins with development of data on the current level of Medicaid expenditures, by eligibility category and by type of medical service, to serve as a projection base. *Changes* in the three determinants of expenditures in equation (1) are then projected for future years and applied sequentially to the base year expenditures. Thus, if E_y represents expenditures in year y, then

$$E_{y+1} = E_y \times (1 + c_{y+1}) \times (1 + u_{y+1}) \times (1 + p_{y+1}) \qquad (2)$$

where c_{y+1}, u_{y+1}, and p_{y+1} are the assumed or projected rates of change in caseload, utilization, and prices, respectively, between years y and y+1. Equation (2) is applied separately to expenditures for each combination of the Medicaid eligibility categories and categories for type of service.

[44] No comprehensive sources are available that track reimbursement rates and use by service for all Medicaid programs. Because the expenditure data reported by the States in the CMS-64 are at an aggregate service level, each category likely includes various services with different numbers of claims and distinct reimbursement rates. Additionally, reimbursement rates and service use are different for each State.

With a few exceptions, caseload factors vary by eligibility category, price factors vary by type of service, and utilization factors can vary by both eligibility category and type of service. The projected caseload factors are determined by trend and regression analysis of Medicaid enrollment data. Projections of future enrollment by eligibility category are based on estimates of the change in the share of the U.S. population enrolled in Medicaid, which has historically varied with changes in the unemployment rate. The relationship between Medicaid enrollment and unemployment reflects (i) how many people are without other forms of insurance and (ii) how many people might qualify for Medicaid based on its income requirements. Historically, this relationship has varied by eligibility category; in general, child and adult enrollment in Medicaid has been more sensitive to changes in the unemployment rate, and the enrollment of aged persons and persons with disabilities has been relatively less sensitive.

Price changes are derived from economic forecasts produced for the 2017 Medicare Trustees Report, including forecasts for economy-wide inflation, inflation for prices of medical services, and wage growth. Utilization is treated as the residual between total growth and the growth due to enrollment and price changes. The estimate of utilization is determined by an analysis of the historical interrelationship of expenditure, caseload, and price factor growth.[45] The residual factor, while termed *utilization*, reflects not only the change in the average number of services per enrollee but also changes in the *intensity* or average complexity of the services. In addition, any errors in the measurement of the number of enrollees and price per service are implicitly included in the residual.

The methodology used to develop the utilization factor for the projections is calculated by service and by enrollment category. While for some services historical utilization is similar across enrollment categories, utilization in services disproportionately concentrated in one or two enrollment categories can vary significantly by enrollment category. In these cases, projecting utilization by both type of service and enrollment category improves the accuracy of the forecast. In addition, the growth of managed care in Medicaid has reduced historical fee-for-service utilization for several types of service. The extent to which States appear to have maximized their use of managed care or are likely to continue to expand is measured and projected in the utilization factor for managed care services and the affected fee-for-service categories.

The results obtained from the *Caseload, Utilization, Price* (*CUP*) recursive forecast, using equation (2), are frequently adjusted to be consistent with recent expenditure data and outlay trends.

It is important to note that some of the reported line items in the financial data are not projected using category- or service-specific growth rates with respect to caseload, utilization, or price. Collections reported by the States constitute the largest such

[45] More details on the trend residual methodology are included in section VI.C.

item, and they are projected to grow at the underlying total Medicaid expenditure growth rate, calculated net of all reported collections. In addition, payments for the Medicare Part A and Part B premiums are projected to grow at rates based on the most recent premium amounts and projections developed for the Social Security and Medicare Boards of Trustees in their 2017 reports to Congress. Separate utilization and price trends are not developed.

The projections of expansion adult enrollment and costs are based on currently available data from the CMS-64 and on several assumptions, including projections of population growth, eligibility for and enrollment in other forms of health care coverage (such as employer-sponsored insurance and the Health Insurance Marketplaces), and growth in the utilization and prices of health care services. In addition, preliminary indications are that the actual costs for these beneficiaries are significantly less than the payments made to managed care plans to cover them. These results are considered in developing the projected per enrollee costs for expansion adults. Section III of the report discusses this issue in more detail.

The projections in the report also include estimated payments that the Federal government is anticipated to receive from managed care plans (via the States), through risk corridors and minimum medical loss ratio requirements, for the expansion adults covered in managed care in 2014 and 2015 and for some States in 2016. (These payments are described in more detail in section III.D of the report.) To develop these estimates, per enrollee costs of the expansion adults in 2014, 2015, and 2016 were compared to projections of the costs of non-expansion adults. The costs for the non-expansion adults were based on data from the MAX files, adjusted to discount the costs of pregnant women (as pregnant women are not expected to be among the expansion population) and projected forward using the data and assumptions of per enrollee costs underlying this report. The costs of the expansion adults were compared to the projected costs for non-expansion adults after adjusting for assumptions of additional costs due to pent-up demand among the new enrollees. The amounts estimated to be owed by plans in each State were then determined using a model risk corridor (reflecting average terms for the risk corridor, such as how much risk remained with the plan and how much remained with the Federal government), and those amounts were adjusted to match in the States that have reported preliminary risk corridor or minimum medical loss ratio amounts to CMS. While this methodology provides a reasonable indication of the amounts that the Federal government is likely to receive from the managed care plans, in actuality the amounts could be significantly greater, or less, than estimated.

In addition to benefit expenditures, this report includes projections of administration costs that are based on historical administrative cost reporting, as well as projected growth rates from the Mid-Session Review of the President's FY 2018 Budget, updated to include more recent data.

Like any projection of future health care costs, the Medicaid projections presented here are necessarily uncertain. Actual numbers of enrollees, the number of services used, and the reimbursement levels per service will depend on all of the factors described previously—none of which can be predicted with certainty. Past increases in Medicaid and other health care costs have often been relatively volatile, adding to the difficulty of correctly anticipating future trends. Moreover, the impacts of the numerous sections of the Affordable Care Act that affect Medicaid, especially the broadening of Medicaid eligibility in 2014, introduce additional uncertainty into these projections. Finally, there is relatively limited experience for people who became eligible for and enrolled in Medicaid between 2014 and 2017; accordingly, while these estimates are more certain than those in previous reports, they should still be considered uncertain due to the relative lack of program data and experience to inform them and the uncertainty about which States will expand their eligibility standards in the future.

The projections shown in this report should be regarded only as a reasonable indication of future Medicaid costs under current law and from today's perspective. It is important to recognize that actual costs in the future could differ significantly from these projections, as a result of (i) unanticipated developments in demographic, economic, or health cost growth trends and (ii) any further changes in the legislation governing Medicaid.

Sections VI.A and VI.B include additional detail regarding the data, assumptions, and methodologies used in the projections in this report.

V. CONCLUSION

Medicaid expenditures are estimated to have grown 2.6 percent in 2017, down from 5.1 percent in 2016, and to have reached $592.2 billion. Growth is estimated to have decelerated in 2017 due to the slowdown in enrollment of expansion adults, decreases in per enrollee costs for expansion adults, and the collection of payments from States for managed care risk mitigation strategies that were put in place for those individuals. In 2018 and beyond, enrollment and expenditures are expected to steadily increase, with total Medicaid expenditures growing to a projected $1,005.7 billion by 2026. The projected annual average growth rate of Medicaid expenditures from 2017 to 2026 is 5.7 percent—notably faster than the projection of average annual GDP growth of 4.1 percent over the same period. Should these trends continue as projected under current law, Medicaid's share of State budgets would continue to expand absent other changes to the program, budget expenditures, or budget revenues, while its share of the Federal budget would remain about the same.

The proportion of Medicaid expenditures for capitation payments and premiums is projected to increase, as is the number of enrollees that receive all or some of their Medicaid benefits through a managed care plan. This trend has accelerated since 2014 as many States have covered expansion enrollees through managed care plans. In addition, States have continued to expand the use of managed care to cover aged enrollees and persons with disabilities and to provide for long-term care services through managed care programs. Thus, understanding how the use of managed care in Medicaid will affect future expenditure growth—and how fee-for-service expenditures for acute care and long-term care will also be affected—will be an important consideration for Medicaid programs in the future.

Because Medicaid does not have any dedicated revenue source at the Federal level or a trust fund approach to financing, the solvency of the program is not an issue in the same way it may be for the Medicare Hospital Insurance (or Part A) trust fund; the expenditures of each State (or Territory) program are covered by the State's revenues plus Federal matching general revenues. However, even without solvency as a concern, Medicaid constitutes a significant portion of spending by both Federal and State governments and thus is important to evaluate as part of the respective budgets. A growing share of budget expenditures on the Medicaid program could displace spending on other important programs, or additional taxes or other revenue sources could be required to fund Medicaid.

Typically the cost growth rates of different payers and programs, such as Medicare, Medicaid, and private health insurance plans, are related. Attempts by one payer or program to affect costs can have a direct or indirect impact on other payers and programs. Whether such efforts are focused on the payment or management of health care specific to certain programs, or on the delivery or practice of health care generally, it will be important to consider the potential effects not just on Medicaid but across all health care payers. Programs and demonstrations that focus on health

care provided for persons enrolled in both Medicare and Medicaid (dual-eligible beneficiaries), or that focus on Medicare but also include some dual-eligible beneficiaries, may have effects on the costs and quality of care paid for by Medicaid.

This report includes projections of the current-law Medicaid program. As policy makers consider changes or reforms to the program, for Medicaid specifically or for the broader health care system, particular attention may need to be paid to the ways in which Medicaid differs from other types of health care coverage—for example, in its administration, the benefits offered, the populations covered, and the ways in which it pays for health care. Other important issues for consideration, as Medicaid's role continues to evolve, are provider participation, Medicaid payment rates, and beneficiary access to services.

VI. APPENDIX

A. DATA SOURCES

Projections of Medicaid expenditures and enrollment are highly dependent on both demographic and economic assumptions, as well as on program data. This section describes the sources and limitations of data and assumptions that are used to generate the Medicaid projections shown in this report.

CMS-64 (Financial Management Reports)

The CMS-64 reports (Financial Management Reports, or FMRs) are products of the Medicaid and CHIP Budget and Expenditure Systems (MBES/CBES). These reports are submitted by the States quarterly and provide current fiscal year spending. The expenditure amount shown on the FMR is a summary of expenditures for the various mandatory and optional services covered by the Medicaid State programs. In addition, in 2014 the CMS-64 began reporting monthly enrollment data by enrollment category as well as quarterly expenditures for expansion adults.[46]

The mandatory services contained in the FMR include inpatient and outpatient hospital care, physician services, nursing facility care for individuals aged 21 or older, family planning services, rural health clinic services, home health care, laboratory and x-ray tests, other practitioner services, federally qualified health center services, and early and periodic screening, diagnostic, and treatment services for children under age 21 (EPSDT). Among the many reported optional services that States may provide are clinic services, prescription drugs, services furnished by intermediate care facilities for the intellectually disabled, hospice care, home and community-based care to certain persons with chronic impairments, and targeted case management services. Additionally, the FMR captures expenditures for DSH payments, offsets to drug spending through rebates, Medicare Part A and Part B premiums paid for those dually eligible for Medicare and Medicaid, premiums paid for Medicaid-only capitated arrangements, and expenditures for home and community-based waiver programs.

The FMR also includes the separate Federal and State expenditures for all Medicaid fee-for-service programs and capitation arrangements. The FMR is available on a *Net Services* basis and a *Base* basis, both of which report the same total expenditures. The historical data and projections provided here are based on the expenditure data

[46] The CMS-64 reports enrollment and expenditures for enrollees in the *VIII group*, which includes those persons who are eligible under the criteria of section 1902(a)(10)(A)(i)(VIII) of the Social Security Act. Most enrollees in this group are expansion adults, but some adults who may have been eligible under pre-2014 criteria are in this group as well. The CMS-64 provides data on both expansion adults and other enrollees in the VIII group separately starting in 2014.

in the Net Services reports. All Medicaid reports published prior to 2015 used the Base reports for historical data and projections.

The main difference between the Net Services and Base reports is that the Base report provides service-level expenditures that were both incurred and paid in the current quarter, whereas the Net Services report shows expenditures by service on a paid basis. The Base report allocates expenditures that were paid in a different quarter than the services were incurred as prior period adjustments, and it similarly groups all collections (negative adjustments to payments) together. The Net Services report allocates all prior period adjustments to individual services, and it reports as collections only those collections that are not associated with a specific service (such as recoveries for fraud, waste, and abuse). Total expenditures are the same in both reports.

Because the Net Services report allocates prior period adjustments by service, the net effect is that the amount of prior period adjustments to expenditures is reduced while expenditures by category of service are increased. Therefore, the amounts reported for benefit expenditures by category of service and for benefit expenditures per enrollee are more complete and effectively higher under the Net Services report than under the Base report, and, as a result, these benefit expenditures by category of service and the accompanying projections are greater than shown in previous Medicaid reports.

Medicaid Analytic eXtract (MAX) and the Medicaid Statistical Information System (MSIS)

The Medicaid Statistical Information System (MSIS) is the basic source of State-submitted eligibility and claims data on the Medicaid population, its demographic characteristics, utilization of health care services, and payments. The purpose of MSIS is to collect, manage, analyze, and disseminate information on eligible individuals, beneficiaries, utilization, and payment for services that are covered. States provide CMS with quarterly files consisting of specified data elements for persons covered by Medicaid and adjudicated claims for medical services reimbursed with Title XIX funds. Four types of claims files representing inpatient services, long-term care, prescription drugs, and non-institutional services are submitted. Claims records contain information on the types of services used, providers, service dates, costs, and types of reimbursements. Eligibility characteristics, such as basis-of-eligibility and maintenance assistance status, are the foundation of the enrollment projections; specifically, the primary basis-of-eligibility categories consist of aged persons, persons who are blind or have other disabilities, non-disabled children (including foster care children), and non-disabled non-aged adults (including women eligible under the Breast and Cervical Cancer Act eligibility expansion).

The data and projections in this report generally rely on the Medicaid Analytic eXtract (MAX). MAX contains both service and demographic data supplied by the States, including provider payments and enrollment counts, and is derived from MSIS.[47] As is the case with MSIS, MAX expenditure data include only total Medicaid expenditures, and MAX does not provide data separately for Federal or State expenditures. Several adjustments are made to the CMS-64 and MAX data to merge them together for use in preparing projections.

Prior to the 2015 Medicaid report, historical data and projections relied on data from MSIS—mainly from the Annual Person Summary (APS) files. It is worth noting that MAX data are based on claims data from MSIS, and although there are differences in the way the claims are summarized, these differences do not have a significant impact on the projections in this report. Historical data shown in the report from 2000 through 2004 are based on MSIS.

Users of Medicaid data may note discrepancies between the expenditure information captured in MAX and the CMS-64. For example, DSH payments and Medicare premiums do not appear in MAX. Whereas actual payments are reflected in the CMS-64, in MAX adjudicated claims data are used. Service definitions vary in these two sources as well. Territorial data for American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands appear in the CMS-64, but not in MAX. Each State has a different system for capturing statistical (MSIS) and financial (CMS-64) data.

It is important to note the limitations that are associated with the data described in this section. First, MAX data are available for 48 States through 2011, for 49 in 2012, for 44 in 2013, and for only 20 states in 2014. MAX (and the MSIS data from which MAX is derived) is the only available source of complete enrollment data.[48] Consequently, to relate 2011, 2012, 2013, and 2014 actual expenditures to the number of enrollees, estimates of Medicaid enrollment are prepared for those years for the missing States.[49] For 2015 (and for the projections for 2016 through 2025), enrollment is estimated using a regression model and historical data, including available (2011, 2012, 2013, and 2014) State data. MAX also does not provide data on enrollment in Territory programs, and thus enrollment figures for Territories are

[47] More information regarding MAX can be found on the CMS website at https://www.cms.gov/research-statistics-data-and-systems/computer-data-and-systems/medicaiddatasourcesgeninfo/maxgeneralinformation.html.

[48] While the CMS-64 provides enrollment data starting in 2014, the MSIS and MAX data overlap with the CMS-64 in 2014 for only a small number of States, and thus it is not possible to determine how closely the two sources match. Further, the 2014 MAX data do not differentiate between expansion adults and non-expansion adults. The figures in this report are based on the MAX data, and the CMS-64 enrollment data are used only for expansion adults and for enrollment in the Territories.

[49] In this report, child Medicaid enrollees consist of non-disabled children, children of unemployed parents, and foster care children; adult Medicaid enrollees consist of non-disabled non-aged adults, unemployed adults, and women covered under the Breast and Cervical Cancer Act expansion; and disabled Medicaid enrollees consist of blind or disabled persons.

estimated from previous data; to estimate enrollment in the Territories for 2014 and 2015, for example, data from the CMS-64 are used.

CMS is currently implementing a new data system to replace MSIS: the Transformed Medicaid Statistical Information System, or T-MSIS. This new system will collect and report data from 2014 onwards (although States may have switched from MSIS to T-MSIS at different points in time in 2014 and 2015). T-MSIS is currently not available for use in providing historical data or in projecting Medicaid expenditures or enrollment, due to limited access to the data, incomplete data, and concerns about data quality. As a result, this report does not rely on T-MSIS data in any way. Also unavailable at this time are MAX data derived from T-MSIS data. As a result of the lack of recent data on Medicaid enrollment and expenditures by eligibility group, some of the projections in this report are less credible—most notably, the expenditures per enrollee by eligibility group, the estimates and projections for which can be found in section VI.

Another qualification is that it was only in 2014 that the CMS-64 began providing data on enrollment or spending by enrollment category (and, in the case of spending by enrollment category, only for expansion adults or other adults in the *VIII group*).[50] In addition, the definitions of medical service categories are not consistent between MAX (or MSIS) and the other data sources. Adjustments are made to develop a data set that contains not only service-level expenditures that match the CMS-64 data but also expenditures by enrollment group; accordingly, MAX and the CMS-64 are merged together to provide a more complete understanding of Medicaid spending. Since the service definitions are different between these two sources, MAX data are used to estimate spending by enrollment group for each Medicaid service reported in the CMS-64.[51] While every State that chose to expand its program is reporting enrollment data in the CMS-64, regular updates to these submissions indicate that the data are not yet final for FY 2016. To develop the enrollment estimates and projections for this report, the CMS-64 enrollment data were used only for the number of expansion adults enrolled.

Finally, OACT reviewed the data sources used in these projections for reasonableness but relied on CMS program components and the States to ensure the quality of the data.

[50] The *VIII group* refers to enrollees who are eligible under section 1902(a)(10)(A)(i)(VIII) of the Social Security Act, including expansion adults.

[51] Certain services in the CMS-64 for which there is little to no history are combined with other services assumed to have a matching underlying distribution of spending by eligibility category.

B. KEY ASSUMPTIONS

The primary demographic, economic, and health cost inflation assumptions underlying the Medicaid projections shown in this report are the same as those used by the Social Security and Medicare Boards of Trustees in their 2017 reports to Congress.[52] Final 2018 Medicare premium amounts were used in place of projected premium amounts to more accurately reflect anticipated expenditures.

The price assumptions used to develop the Medicaid expenditure projections are derived from the assumptions included in the Social Security and Medicare Trustees Reports. While these price assumptions are specifically meant to measure the changes in the prices that Medicare would pay providers, they also generally reflect the projected growth in the prices of health care services.

As noted in section IV of this report, there is no single data source available that tracks all Medicaid prices or price changes. In addition, since States do not have a prescribed methodology for updating provider reimbursement rates, there are no specific or consistent forecasts of the changes in the prices for health care services that can be used across all Medicaid programs. Accordingly, OACT relies on other forecasts from Medicare, which are assumed to be reasonable projections of the underlying growth in health care prices that States would consider when changing provider reimbursement rates within their Medicaid programs.

The principal economic assumptions include growth in average wages and the CPI. These and other assumptions are used to generate health care service input price indices (or *market baskets*) for inpatient hospital and home health care services. These indices serve as indicators of increases in Medicaid payments per service.

It is important to note that these price assumptions may not accurately measure the underlying changes in the prices paid by Medicaid programs year to year. States have significant discretion in setting reimbursement rates, and in any given year the changes in rates paid to providers may differ from the changes in the price assumptions that are used to project future price changes for Medicaid expenditures. Thus, while these price forecasts are expected to reasonably estimate the changes in prices over time, they may not be precise measures of the actual changes in prices in any State Medicaid program. Moreover, to the extent that any specific price assumption is not an accurate assessment of the change in the price paid for any particular service, the difference between the actual change in price and the change in the price assumption would be reflected in the residual factor. While in general the

[52] Further information on the Trustees' population projections and economic assumptions is available in the 2017 Social Security and Medicare Trustees Reports, the latter of which can be found at https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/ReportsTrustFunds/downloads/tr2017.pdf.

residual factor is meant to represent changes in utilization, it would also incorporate errors in the measurement of prices.

Medicaid enrollment is projected by eligibility category: aged persons, persons with disabilities, children, expansion adults, and other adults. The model measures enrollment by eligibility category as a percentage of the U.S. population by relevant age group (aged—U.S. population aged 65 and over; disabled—U.S. population aged 0-64; children—U.S. population aged 0-19; and adults—U.S. population aged 20-64). Historical enrollment is measured for 1992 through 2013—the period for which reliable enrollment data exist in MSIS (1992-2004) and MAX (2005-2013).

The relationship between the change in the share of the U.S. population enrolled in Medicaid by eligibility category and the change in the national U.S. unemployment rate is measured using a regression model. Analysis conducted in developing this enrollment model has shown that the unemployment rate is the most meaningful factor in analyzing changes in historical Medicaid enrollment. Other economic variables either are not statistically significant or do not improve the accuracy of the model. In addition, changes in the unemployment rate have a strong theoretical relationship with Medicaid enrollment. As the unemployment rate increases, fewer people have jobs, leading in turn to a greater number of people with lower incomes and more individuals likely to be eligible for Medicaid. Moreover, a decrease in the number of people with jobs is likely to lead to fewer people with private health insurance, and as a result more people may enroll in Medicaid for health care coverage. Conversely, as the unemployment rate decreases, an increase in the number of people with jobs is likely to lead to increases in income and more people with private health insurance, and consequently enrollment growth in Medicaid may be slower. The Trustees do not typically forecast economic cycles, and thus the projections of Medicaid enrollment in this report do not exhibit the same cyclical variation that enrollment has experienced historically.

The change in the share of the U.S. enrolled population is projected forward using the results of the regression model and forecasts of the unemployment rate from the 2017 Social Security Trustees Report for each eligibility category. Enrollment is projected using those results and the forecasts of the U.S. population from the 2017 Trustees Report. The projections from the model may be adjusted, in particular for estimates of enrollment in recent years (in this Medicaid report, enrollment is estimated for 2014 through 2016, and for any States missing data in prior years); in estimating historical enrollment, other data or information is often used to adjust the results from the Medicaid enrollment models. Typically, other sources do not provide enrollment at the same level of detail as shown in MAX or in this Medicaid report, but such sources may inform the overall level of enrollment or the growth rate of total enrollment in those historical years.

Changes in the utilization of services and other changes in expenditures not reflected in changes in enrollment or prices are reflected in the *residual* factors in the model.

The trend residual approach to projecting Medicaid expenditures begins with an analysis of historical Medicaid expenditures per enrollee on a service-by-service basis. The annual percent change in these per enrollee expenditures is compared to the change in the applicable price indicator (listed below), and the differential, or residual, is calculated. This residual measures the collective impact of changes in utilization and *intensity* (average complexity) of services, case mix effects, and other factors, and it is calculated by service and by eligibility category. For the purpose of developing projected expenditures, the residual may be calculated as the average across all eligibility categories (typically when the residuals across eligibility categories have similar values, or when the amount of spending for one or more eligibility categories is relatively small and there are potential concerns about the credibility of the residual factor). The basis of the projected residual is the historical average of the residual value (either as a weighted average or an unweighted average over the previous several years), but adjustments may be made by gradually increasing or decreasing the residual toward the average residual for a broader category of services (such as all acute care, all long-term care, or all medical services).

The residuals are adjusted to limit the value of any particular service from significantly increasing or decreasing more than the value of all services (or broader categories of services). In general, the residual of all services (or broader categories of services) tends to be more stable, but it is necessary to use residuals by service to account for changes in the Medicaid program as well. Often, these adjustments are made to reflect areas in which there has likely been a shift between services or categories of services in recent history, but projecting those changes to continue at the same rate over 10 years would not necessarily be the best estimate of future expenditures.

One key example concerns the historical shifts of Medicaid expenditures from fee-for-service programs (especially acute care services, such as hospital services, physician and other professional services, and prescription drugs) to managed care. As part of the adjustment, managed care expenditures as a share of total expenditures were reviewed by State and by eligibility category. This review provided more detailed information on the use of managed care across States, as well as some evidence regarding the extent to which recent expenditure growth in managed care programs was driven by the States' expansion of their use of these programs. The analysis suggested that managed care expenditures were likely to continue to grow relatively quickly but, over time, were more likely to slow, as the rate at which States shift expenditures to managed care programs slows. Similarly, the analysis suggested that the residuals for acute care services in general would increase over the same period as the shift from fee-for-service programs decelerates.

The following table 5 shows the price indicators currently used to produce Medicaid expenditure projections.

Table 5—Price indicators for selected Medicaid Types of Service

Type of Service	Price Indicator
Inpatient and outpatient hospital	Medicare hospital input price index (market basket), before the application of productivity adjustment
Physician, clinic, and related services	Medical CPI increase
Institutional long-term care	Maximum of CPI increase and average wage increase
Community long-term care and home and community-based waiver services	Medicare home health input price index, before the application of productivity adjustment
Prescription drugs	CPI increase
Managed care	Medical CPI increase

One exception to the trend residual methodology occurs in the case of some premiums. The costs for Medicare premiums financed by Medicaid are based on the projected premium rates for Medicare Parts A and B in the President's FY 2018 Budget. The proportions of aged and blind or disabled enrollees whose Medicare costs are financed by the States or the Federal government through premium payments are assumed to remain at historical levels.

C. RESIDUAL ANALYSIS RESULTS AND ASSUMPTIONS

This section provides the results of the analysis used to calculate the residual factors for the projections. The following tables show the historical residual factors and the projected values by eligibility category and by service for the largest five services (as measured by total 2016 expenditures); however, due to the lack of more recent data, the estimates of expenditures by eligibility group are subject to considerable uncertainty.

Table 6—Historical and Projected Residual Factors for Aged Enrollees, Selected Services, Fiscal Years 2011–2026

Fiscal Year	Nursing Facility	Managed Care	Home and Community-Based Waivers	Inpatient Hospital	Personal Care
Historical data:					
2011	−3.5%	6.8%	−0.4%	−10.5%	24.0%
2012	−10.8	28.2	−6.6	−10.6	−15.4
2013	−3.0	12.6	−3.1	2.7	0.2
2014	−7.7	−0.1	−3.3	−5.6	−17.5
2015	−12.9	21.3	10.0	−4.6	5.8
2016	−7.1	15.9	0.2	−5.1	−3.6
Projections:					
2017	−6.5	13.4	0.2	−4.5	−3.1
2018	−5.8	10.9	0.2	−3.8	−2.6
2019	−5.2	8.5	0.2	−3.2	−2.1
2020	−4.5	6.0	0.2	−2.5	−1.6
2021	−3.9	3.5	0.2	−1.9	−1.1
2022	−3.9	3.5	0.2	−1.9	−1.1
2023	−3.9	3.5	0.2	−1.9	−1.1
2024	−3.9	3.5	0.2	−1.9	−1.1
2025	−3.9	3.5	0.2	−1.9	−1.1
2026	−3.9	3.5	0.2	−1.9	−1.1

Table 6 shows the residual factors for the largest five services for aged enrollees based on estimates of 2016 expenditures; spending for these services constituted 82 percent of total estimated Medicaid expenditures for aged enrollees, as shown in table 7. (Medicare Part B premiums are shown below, but residual factors are not calculated for Medicare premiums.)

Table 7—Fiscal Year 2016 Selected Service Expenditures for Aged Enrollees
(in billions)

Service	2016 Expenditures
Nursing Facility	$32.9
Managed Care	16.5
Home and Community-Based Waivers	7.3
Medicare Part B Premiums	6.3
Inpatient Hospital	3.5
Personal Care	2.1
Total Expenditures for Aged Enrollees	83.6

Table 8—Historical and Projected Residual Factors for Persons with Disabilities, Selected Services, Fiscal Years 2011–2026

Fiscal Year	Managed Care	Home and Community-Based Waivers	Inpatient Hospital	Nursing Facility	Prescription Drugs
Historical data:					
2011	7.9%	−4.0%	5.6%	−2.6%	−14.7%
2012	28.5	−3.7	−15.1	−8.4	−45.7
2013	15.3	−1.8	−0.3	−3.2	−26.2
2014	18.4	−2.9	−17.3	−1.6	5.9
2015	16.9	6.4	1.5	−14.6	31.9
2016	14.1	0.2	−4.6	−5.8	−4.8
Projections:					
2017	8.8	0.2	−4.0	−5.3	−4.2
2018	3.5	0.2	−3.4	−4.8	−3.5
2019	3.5	0.2	−2.8	−4.3	−2.9
2020	3.5	0.2	−2.2	−3.8	−2.3
2021	3.5	0.2	−1.6	−3.3	−1.7
2022	3.5	0.2	−1.6	−3.3	−1.7
2023	3.5	0.2	−1.6	−3.3	−1.7
2024	3.5	0.2	−1.6	−3.3	−1.7
2025	3.5	0.2	−1.6	−3.3	−1.7
2026	3.5	0.2	−1.6	−3.3	−1.7

Table 8 shows the residual factors for the top five services for persons with disabilities based on estimates of 2016 expenditures; spending for these services constituted 72 percent of total estimated Medicaid expenditures for persons with disabilities, as shown in table 9. (Prescription drug expenditures shown in table 9 do not include Medicaid prescription drug rebates.)

Table 9—Fiscal Year 2016 Selected Service Expenditures for Persons with Disabilities
(in billions)

Service	2016 Expenditures
Managed Care Organizations	$62.4
Home and Community-Based Waivers	42.5
Inpatient Hospital	21.9
Prescription Drugs	12.3
Nursing Facility	10.5
Total Expenditures for Persons with Disabilities	208.5

Table 10—Historical and Projected Residual Factors for Child Enrollees, Selected Services, Fiscal Years 2011–2026

Fiscal Year	Managed Care	Inpatient Hospital	Prescription Drugs	Physician	Outpatient Hospital
Historical data:					
2011	7.3%	0.1%	−11.9%	−2.0%	−1.4%
2012	−4.6	−13.9	−35.4	−17.9	−16.5
2013	14.6	2.4	−24.3	−10.0	1.3
2014	9.8	−11.0	2.4	−4.9	−8.8
2015	16.5	1.8	−0.3	−17.1	−10.0
2016	5.7	−4.5	−5.2	−7.4	−6.9
Projections:					
2017	3.6	−3.0	−3.6	−5.2	−4.8
2018	1.4	−1.6	−1.9	−3.0	−2.8
2019	1.4	−1.6	−1.9	−3.0	−2.8
2020	1.4	−1.6	−1.9	−3.0	−2.8
2021	1.4	−1.6	−1.9	−3.0	−2.8
2022	1.4	−1.6	−1.9	−3.0	−2.8
2023	1.4	−1.6	−1.9	−3.0	−2.8
2024	1.4	−1.6	−1.9	−3.0	−2.8
2025	1.4	−1.6	−1.9	−3.0	−2.8
2026	1.4	−1.6	−1.9	−3.0	−2.8

Table 10 shows the residual factors for the top five services for the child population based on estimates of 2016 expenditures; spending for these services constituted 83 percent of total estimated Medicaid expenditures for children, as shown in table 11. (Prescription drug expenditures shown in table 11 do not include Medicaid prescription drug rebates.)

Table 11—Fiscal Year 2016 Selected Service Expenditures for Child Enrollees
(in billions)

Service	2016 Expenditures
Managed Care Organizations	$60.5
Inpatient Hospital	12.1
Prescription Drugs	4.4
Physician Services	2.9
Outpatient Hospital	2.7
Total Expenditures for Children	99.9

Table 12—Historical and Projected Residual Factors for Adult Enrollees, Selected Services, Fiscal Years 2011–2026

Fiscal Year	Managed Care	Inpatient Hospital	Outpatient Hospital	Prescription Drugs	Physician
Historical data:					
2011	11.8%	14.1%	5.2%	−10.5%	1.3%
2012	3.1	−13.2	−12.1	−49.9	−16.3
2013	12.0	4.6	8.7	−27.5	−8.5
2014	10.2	−11.2	−8.3	4.0	−5.0
2015	12.9	9.5	−5.7	25.0	−20.6
2016	8.8	−1.4	−2.5	−0.5	−7.8
Projections:					
2017	5.2	−0.7	−1.6	−0.1	−5.5
2018	1.5	0.0	−0.6	0.4	−3.2
2019	1.5	0.0	−0.6	0.4	−3.2
2020	1.5	0.0	−0.6	0.4	−3.2
2021	1.5	0.0	−0.6	0.4	−3.2
2022	1.5	0.0	−0.6	0.4	−3.2
2023	1.5	0.0	−0.6	0.4	−3.2
2024	1.5	0.0	−0.6	0.4	−3.2
2025	1.5	0.0	−0.6	0.4	−3.2
2026	1.5	0.0	−0.6	0.4	−3.2

Table 12 shows the residual factors for the top five services for the adult population based on estimates of 2016 expenditures; spending for these services constituted 92 percent of total estimated Medicaid expenditures for adults, as shown in table 13. (Prescription drug expenditures shown in table 13 do not include Medicaid prescription drug rebates.)

Table 13—Fiscal Year 2016 Selected Service Expenditures for Adult Enrollees
(in billions)

Service	2016 Expenditures
Managed Care Organizations	$49.4
Inpatient Hospital	14.0
Outpatient Hospital	4.1
Prescription Drugs	2.5
Physician Services	2.4
Total Expenditures for Adults	79.1

Table 14—Historical and Projected Price Factors and Unemployment Rates, Fiscal Years 2010–2026

Fiscal Year	Medical consumer price index	Consumer price index	Home health input price index	Inpatient price index	Wages	Unemployment rate (CY)
Historical data:						
2010	3.4%	1.7%	2.2%	2.1%	1.6%	9.6%
2011	3.1	2.7	2.1	2.6	2.9	8.9
2012	3.5	2.0	2.3	3.0	3.2	8.1
2013	2.8	1.6	2.3	2.6	1.7	7.4
2014	2.4	1.6	2.3	2.5	2.9	6.2
2015	2.6	0.1	2.5	2.9	3.4	5.3
2016	3.6	0.6	2.4	2.4	2.9	4.9
Projections:						
2017	4.1	1.9	2.7	2.7	3.7	5.0
2018	4.5	2.8	3.5	3.9	4.7	5.3
2019	4.4	2.7	3.6	3.8	4.6	5.5
2020	4.2	2.6	3.4	3.7	4.5	5.5
2021	4.2	2.6	3.4	3.6	4.3	5.5
2022	4.2	2.6	3.3	3.5	4.0	5.5
2023	4.2	2.6	3.1	3.4	3.8	5.5
2024	4.2	2.6	3.1	3.4	3.8	5.6
2025	4.2	2.6	3.1	3.4	3.8	5.6
2026	4.2	2.6	3.1	3.4	3.8	5.6

D. DATA FOR SELECTED FIGURES

The following tables provide the data underlying selected figures in the report.

Table 15—Past and Projected Medicaid Expenditures for Medical Assistance Payments, by Type of Payment, Fiscal Years 2000–2026
(Data for Figure 3)
(in billions)

Fiscal Year	Acute care FFS	Long-term care FFS	Capitation payments & premiums	Disproportionate share hospital payments
Historical data:				
2000	$78.8	$67.9	$33.9	$14.4
2001	88.2	73.9	37.8	15.5
2002	103.2	81.1	44.7	15.4
2003	114.0	84.2	50.7	13.0
2004	124.0	87.3	52.7	15.4
2005	131.4	82.8	58.6	17.1
2006	121.3	101.1	65.0	17.1
2007	130.1	102.3	72.6	16.0
2008	131.7	108.1	82.8	17.1
2009	140.7	115.7	93.5	17.8
2010	151.2	117.2	104.3	17.6
2011	161.3	119.5	116.9	17.3
2012	148.0	119.3	132.5	17.1
2013	152.6	119.4	151.8	16.4
2014	152.2	116.3	191.6	18.1
2015	159.7	112.8	240.9	18.6
2016	150.3	115.8	272.8	19.7
Projections:				
2017	148.8	114.0	289.1	19.8
2018	156.8	119.2	313.4	17.9
2019	162.0	122.0	343.5	17.0
2020	169.7	126.9	371.3	16.1
2021	177.8	132.3	400.3	15.1
2022	186.0	137.6	431.4	14.1
2023	194.2	142.8	464.7	13.0
2024	202.7	148.0	500.0	12.0
2025	211.5	153.3	537.8	12.7
2026	220.5	158.7	578.4	24.8

Table 16—Past and Projected Numbers of Medicaid Enrollees, by Category, Fiscal Years 2000–2026
(Data for Figure 4)
(in millions of person-year equivalents)

Fiscal Year	Aged	Disabled	Children	Adults	Expansion adults	Territories[53]
Historical data:						
2000	3.6	6.7	16.1	6.9	n/a	0.9
2001	3.7	6.9	17.3	7.7	n/a	0.9
2002	4.0	7.2	19.1	8.9	n/a	1.0
2003	4.3	7.5	20.9	9.7	n/a	1.0
2004	4.4	7.7	21.9	10.1	n/a	1.0
2005	4.6	8.0	22.5	10.5	n/a	1.0
2006	4.5	8.2	22.6	10.5	n/a	1.0
2007	4.5	8.3	22.3	10.2	n/a	1.0
2008	4.6	8.6	22.8	10.8	n/a	1.0
2009	4.7	8.9	24.4	11.9	n/a	1.0
2010	4.9	9.2	26.4	13.1	n/a	1.0
2011	5.1	9.7	27.2	13.8	n/a	1.0
2012	5.3	10.0	27.9	14.7	n/a	1.0
Projections:						
2013	5.4	10.4	28.0	15.0	n/a	1.0
2014	5.5	10.4	28.2	15.2	4.3	1.5
2015	5.6	10.5	28.1	15.2	9.1	1.5
2016	5.7	10.6	28.1	15.3	11.2	1.4
2017	5.8	10.6	28.2	15.5	12.2	1.4
2018	6.0	10.7	28.5	15.8	12.4	1.4
2019	6.2	10.9	29.0	16.0	12.5	1.4
2020	6.4	11.0	29.5	16.2	12.7	1.4
2021	6.6	11.1	29.9	16.4	12.8	1.4
2022	6.9	11.2	30.3	16.5	13.0	1.4
2023	7.1	11.3	30.6	16.6	13.0	1.4
2024	7.3	11.4	30.9	16.7	13.1	1.4
2025	7.5	11.5	31.1	16.8	13.2	1.4
2026	7.7	11.6	31.3	16.9	13.3	1.4

[53] Territory enrollment is projected to remain level at about 1.4 million persons from 2016 to 2025, despite the projected reduction in Federal expenditures for Territory Medicaid programs due to the expiration of additional funds provided by the Affordable Care Act and the Bipartisan Budget Act of 2018. These projections are based on the assumption that Territories would provide additional funding or make other program changes to maintain enrollment levels as Federal funding was reduced.

Table 17—Projected Medicaid Expenditures: Comparison of 2016 versus 2017 Actuarial Reports on the Financial Outlook for Medicaid, Fiscal Years 2000–2026
(Data for Figure 5)
(in billions)

Fiscal Year	2017 Report	2016 Report
Historical data:		
2000	$206.2	$206.2
2001	229.0	229.0
2002	258.2	258.2
2003	276.2	276.2
2004	296.3	296.3
2005	315.9	315.9
2006	315.1	315.1
2007	332.2	332.2
2008	351.9	351.9
2009	378.6	378.6
2010	401.5	401.5
2011	427.0	427.4
2012	431.0	431.2
2013	456.0	455.6
2014	494.7	494.7
2015	549.1	552.3
2016	577.3	575.9
Projections:		
2017	592.2	595.5
2018	629.3	632.9
2019	667.4	672.0
2020	703.9	713.8
2021	741.7	757.4
2022	786.3	801.9
2023	834.2	850.1
2024	884.4	901.5
2025	937.7	957.5
2026	1005.7	n/a

Table 18—Past and Projected Medicaid Expenditures as Share of GDP, Fiscal Years 1966–2026, Selected Years
(Data for Figure 7)
(in billions)

Fiscal Year	Total expenditures	Expenditures as share of GDP
Historical data:		
1966	$0.9	0.1%
1970	5.1	0.5
1975	13.1	0.8
1980	25.2	0.9
1985	41.3	1.0
1990	72.2	1.2
1995	159.5	2.1
2000	206.2	2.0
2001	229.0	2.2
2002	258.2	2.4
2003	276.2	2.4
2004	296.3	2.5
2005	315.9	2.5
2006	315.1	2.3
2007	332.2	2.3
2008	351.9	2.4
2009	378.6	2.6
2010	401.5	2.7
2011	427.0	2.8
2012	431.0	2.7
2013	456.0	2.8
2014	494.7	2.9
2015	549.1	3.1
2016	577.3	3.1
Projections:		
2017	592.2	3.2
2018	629.3	3.2
2019	667.4	3.2
2020	703.9	3.3
2021	741.7	3.3
2022	786.3	3.3
2023	834.2	3.4
2024	884.4	3.5
2025	937.7	3.5
2026	1005.7	3.7

E. FINANCIAL MANAGEMENT REPORT DATA

Table 19—CMS-64 Financial Management Report, Net Services, Medical Assistance Payments, Fiscal Year 2016

Service Category	Total	Federal	State
Inpatient Hospital - Reg. Payments	$32,840,778,823	$20,842,639,363	$11,998,139,460
Inpatient Hospital – DSH	16,528,701,585	9,411,564,140	7,117,137,445
Inpatient Hospital - Sup. Payments	19,803,423,427	11,426,180,187	8,377,243,240
Inpatient Hospital - GME Payments	1,866,406,424	1,135,395,000	731,011,424
Mental Health Facility Services - Reg. Payments	3,066,009,469	1,860,296,663	1,205,712,806
Mental Health Facility – DSH	3,131,569,896	1,752,214,479	1,379,355,417
Nursing Facility Services - Reg. Payments	41,001,035,349	23,609,823,065	17,391,212,284
Nursing Facility Services - Sup. Payments	3,037,256,523	1,807,340,437	1,229,916,086
Intermediate Care Facility - Public	4,962,404,008	2,828,585,755	2,133,818,253
Intermediate Care Facility - Private	4,747,490,579	2,693,925,628	2,053,564,951
Intermediate Care Facility: Supplemental Payments	124,124,055	62,947,776	61,176,279
Physician & Surgical Services - Reg. Payments	8,173,579,368	5,385,475,453	2,788,103,915
Physician & Surgical Services - Sup. Payments	1,318,461,061	780,604,008	537,857,053
Phys. & Surg. Services - Evaluation and Mgmt.	440,352,522	440,336,782	15,740
Physician & Surgical Services - Vaccine codes	2,841,225	2,841,204	21
Outpatient Hospital Services - Reg. Payments	10,644,593,144	7,311,042,001	3,333,551,143
Outpatient Hospital Services - Sup. Payments	4,505,451,231	2,608,507,920	1,896,943,311
Prescribed Drugs	22,807,196,019	14,950,913,498	7,856,282,521
Drug Rebate Offset – National	-12,885,689,016	-8,500,166,255	-4,385,522,761
Drug Rebate Offset - State Sidebar Agreement	-864,806,347	-591,633,060	-273,173,287
MCO - National Agreement	-15,859,240,388	-10,495,826,039	-5,363,414,349
MCO - State Sidebar Agreement	-230,435,858	-143,805,577	-86,630,281
Increased ACA OFFSET - Fee for Service	-576,527,028	-576,527,028	0
Increased ACA OFFSET – MCO	-776,169,673	-776,169,673	0
Dental Services	3,929,375,134	2,454,127,420	1,475,247,714
Other Practitioners Services - Reg. Payments	2,331,687,868	1,365,224,804	966,463,064
Other Practitioners Services - Sup. Payments	15,464,622	7,889,828	7,574,794
Clinic Services	5,013,155,117	3,324,893,599	1,688,261,518
Laboratory/Radiological	1,371,001,448	940,188,681	430,812,767
Home Health Services	3,740,533,822	2,136,858,816	1,603,675,006
Sterilizations	59,208,444	47,863,278	11,345,166
Abortions	78,918	48,010	30,908
EPSDT Screening	846,860,331	530,769,662	316,090,669
Rural Health	1,106,824,986	736,349,746	370,475,240
Medicare - Part A	3,076,553,587	1,674,863,377	1,401,690,210
Medicare - Part B	12,206,565,579	7,066,953,051	5,139,612,528
120% - 134% Of Poverty	787,244,932	787,244,932	0
Coinsurance	1,088,990,259	654,333,684	434,656,575
Medicaid – MCO	249,597,719,407	168,372,890,152	81,224,829,255
Medicaid MCO - Evaluation and Management	200,373,644	195,196,048	5,177,596
Medicaid MCO - Vaccine codes	133,593,110	133,593,111	-1
Medicaid MCO - Community First Choice	6,927,060,089	3,964,848,354	2,962,211,735
Medicaid MCO - Preventive Services	144,418,246	86,332,595	58,085,651
Prepaid Ambulatory Health Plan	1,456,917,029	944,205,602	512,711,427
MCO PAHP - Evaluation and Management	1,603,357	1,605,124	-1,767
MCO PAHP - Vaccine codes	-34,270	-34,270	0
MCO PAHP - Community First Choice	0	0	0
MCO PAHP - Preventive Services	0	0	0
Prepaid Inpatient Health Plan	12,566,672,684	8,213,361,058	4,353,311,626
MCO PIHP - Evaluation and Management	6,734	6,734	0

Service Category	Total	Federal	State
MCO PIHP - Vaccine codes	238	238	0
MCO PIHP - Community First Choice	0	0	0
MCO PIHP - Preventive Services	0	0	0
Medicaid - Group Health	1,395,501,528	1,273,767,366	121,734,162
Medicaid – Coinsurance	282,289,969	276,309,801	5,980,168
Medicaid – Other	575,183,476	499,891,117	75,292,359
Home & Community-Based Services (HCBW)	42,919,167,616	23,984,049,480	18,935,118,136
HCBW – (State Plan 1915−i) Only Payments	878,856,833	456,235,875	422,620,958
HCBW – (State Plan 1915−j) Only Payments	91,318,070	55,959,080	35,358,990
HCBW – (State Plan 1915−k) Comm. First Choice	6,871,400,739	4,133,677,509	2,737,723,230
All-Inclusive Care Elderly	1,572,021,276	853,577,711	718,443,565
Personal Care Services - Reg. Payments	7,465,527,291	4,187,070,696	3,278,456,595
Personal Care Services - SDS 1915−j)	85,349,390	48,419,103	36,930,287
Targeted Case Man. - Com. Case-Man.	2,100,529,888	1,205,437,033	895,092,855
Case Management - State Wide	538,173,157	304,549,277	233,623,880
Primary Care Case Management	431,701,827	284,786,672	146,915,155
Hospice Benefits	1,988,000,999	1,191,752,544	796,248,455
Emergency Services for Undocumented Aliens	1,670,732,934	974,236,690	696,496,244
Federally-Qualified Health Center	4,492,402,625	2,955,921,818	1,536,480,807
Non-Emergency Medical Transportation	1,690,965,367	1,121,335,935	569,629,432
Physical Therapy	127,873,768	78,451,732	49,422,036
Occupational Therapy	98,175,912	59,187,015	38,988,897
Services for Speech, Hearing & Language	259,119,586	159,568,635	99,550,951
Prosthetic Devices, Dentures, Eyeglasses	363,567,887	234,507,702	129,060,185
Diagnostic Screening & Preventive Services	58,851,624	41,036,414	17,815,210
Preventive Services Grade A OR B, ACIP Vaccines	213,238,139	129,889,172	83,348,967
Nurse Mid-Wife	22,690,437	16,002,321	6,688,116
Emergency Hospital Services	1,800,626,492	1,185,616,742	615,009,750
Critical Access Hospitals	749,345,055	497,048,318	252,296,737
Nurse Practitioner Services	229,212,137	154,995,041	74,217,096
School Based Services	3,296,004,079	1,868,066,990	1,427,937,089
Rehabilitative Services –(non-school-based)	3,558,152,166	2,281,796,370	1,276,355,796
Private Duty Nursing	732,631,808	429,494,194	303,137,614
Freestanding Birth Center	11,191,956	7,194,292	3,997,664
Health Home w Chronic Conditions	750,289,448	430,709,804	319,579,644
Tobacco Cessation for Preg Women	254,999	169,028	85,971
Other Care Services	16,817,148,852	9,114,865,939	7,702,282,913
Balance	558,548,179,043	351,961,696,777	206,586,482,266
Collections	-7,666,856,715	-4,299,933,185	-3,366,923,530
Total Net Expenditures	550,881,322,328	347,661,763,592	203,219,558,736
Total Expansion	65,162,107,693	65,160,286,902	1,820,791
Total Not Newly	17,099,611,520	12,838,613,125	4,260,998,395
Total VIII Group	82,261,719,213	77,998,900,027	4,262,819,186

Table 20—CMS-64 Financial Management Report, Net Services, Administration Costs, Fiscal Year 2016

Service Category	Total	Federal	State
Family Planning	$29,943,111	$26,948,809	$2,994,302
MMIS - Inhouse Activities	127,400,230	109,878,697	17,521,533
MMIS - Private Sector	855,573,688	740,478,492	115,095,196
Skilled Professional Medical Personnel - Single State Agency	273,952,571	205,159,233	68,793,338
Skilled Professional Medical Personnel - Other Agency	443,489,284	332,617,012	110,872,272
Approved MMIS: Inhouse	467,878,742	350,580,885	117,297,857
Approved MMIS: Private	1,774,966,501	1,328,544,506	446,421,995
Mechanized Systems - In-House	49,851,449	24,980,346	24,871,103
Mechanized Systems: Private Sector	251,029,781	125,514,940	125,514,841
Mechanized Systems - Not Approved under MMIS Procedures: Interagency	20,815,942	10,407,974	10,407,968
Peer Review Organizations	224,764,353	168,573,308	56,191,045
TPL - Recovery	2,582,056	1,291,035	1,291,021
TPL - Assignment Of Rights	853,632	426,823	426,809
Immigration Status	2,042,463	2,042,463	0
Nurse Aide Training Costs	18,281,777	9,140,967	9,140,810
Preadmission Screening	111,957,580	83,968,248	27,989,332
Resident Review	15,968,238	11,976,195	3,992,043
Drug Use Review	14,152,515	7,076,306	7,076,209
Outstationed Eligibility	54,705,263	27,991,915	26,713,348
TANF Base	0	0	0
TANF Secondary 90%	0	0	0
TANF Secondary 75%	0	0	0
External Review	30,289,573	22,396,918	7,892,655
Enrollment Brokers	200,873,082	100,436,579	100,436,503
School Based Administration	1,197,098,370	603,109,935	593,988,435
Program Integrity/Fraud, Waste, and Abuse Activities	52,645,354	26,322,714	26,322,640
County/Local ADM Costs	2,397,838,022	1,198,919,042	1,198,918,980
Interagency Costs (State Level)	3,295,831,427	1,647,921,519	1,647,909,908
Translation and Interpretation	28,255,024	21,191,280	7,063,744
Health Insurance Technology Administration	0	0	0
HIT: Planning: Cost of In-house Activities	0	0	0
HIT: Planning: Cost of Private Contractors	0	0	0
HIT: Implementation and Operation: Cost of In-house Activities	40,640,038	36,576,051	4,063,987
HIT: Implementation and Operation: Cost of Private Contractors	191,404,254	172,263,843	19,140,411
HIT Incentive Payments: Eligible Professionals	746,041,049	746,041,049	0
HIT Incentive Payments: Eligible Hospitals	270,764,783	270,764,783	0
Citizenship Verification Technology CHIPRA	0	0	0
CVT Development CHIPRA	0	0	0
CVT Operation CHIPRA	0	0	0
Planning for Health Home for Enrollees with Chronic Conditions	456,357	319,876	136,481
Recovery Audit Contractors Contigency Fee	0	0	0
Recovery Audit Contractors State Administration	6,259,346	3,129,685	3,129,661
Design Development/Installation of Medicaid Elig. Determ. Sys. – Cost of In-house Activities	282,714,157	250,367,602	32,346,555
Design Development/Installation of Medicaid Elig. Determ. Sys. – Cost of Private Sec. Contractors	1,265,229,480	1,131,375,648	133,853,832
Operation of an Approved Medicaid Eligibility Determination Systems – Cost of In-house Activities	246,873,852	185,155,428	61,718,424
Operation of an Approved Medicaid Eligibility Determination Sys. – Cost of Private Sec. Contractors	570,629,690	427,951,478	142,678,212

Service Category	Total	Federal	State
Eligibility Determination Staff – Cost of In-house Activities	3,451,315,417	2,588,486,606	862,828,811
Eligibility Determination Staff – Cost of Private Sector Contractors	406,093,952	304,570,499	101,523,453
Eligibility Determination Staff – Cost of In-house Activities – 50% FFP	201,435,299	100,717,677	100,717,622
Eligibility Determination Staff – Cost of Private Sector Contractors – 50% FFP	113,314,312	56,657,171	56,657,141
Non-Emergency Medical Transportation	332,451,228	166,225,629	166,225,599
Other Financial Participation	6,266,766,767	3,133,574,639	3,133,192,128
Balance	26,335,430,009	16,762,073,805	9,573,356,204
Collections	-12,337,375	-7,276,087	-5,061,288
Total Net Expenditures	26,323,092,634	16,754,797,718	9,568,294,916

F. EXPENDITURES PER ENROLLEE ESTIMATES AND PROJECTIONS

CMS is currently implementing a new data system to replace MSIS: the Transformed Medicaid Statistical Information System, or T-MSIS. This new system will collect and report data from 2014 onwards (although States may have switched from MSIS to T-MSIS at different points in time in 2014 and 2015). T-MSIS is currently not available for use in providing historical data or in projecting Medicaid expenditures or enrollment, due to limited access to the data, incomplete data, and concerns about data quality. As a result, this report does not rely on T-MSIS data in any way. Also unavailable at this time are MAX data derived from T-MSIS data. As a result of the lack of recent data on Medicaid enrollment and expenditures by eligibility group, some of the projections in this report (most notably, the expenditures per enrollee by eligibility group) are less credible.

In the interest of providing the estimates and projections that underlie the projections shown in this report, we have moved detail that was contained in the Analysis section of past reports (section III) to the Appendix (section VI). These estimates and projections are more uncertain due to the lack of more recent data, and caution should be exercised in relying on them for any other purposes.

Table 21 shows estimated enrollment and expenditures by eligibility group for 2016.[54] Historically, children have been the largest group of Medicaid enrollees. In 2016, children are estimated to have numbered 28.1 million, representing 40 percent of overall Medicaid enrollment. There were an estimated 15.3 million non-expansion adults (22 percent of enrollment) and an estimated 11.2 million expansion adults (16 percent). Finally, enrollees with disabilities and aged enrollees are estimated to have numbered 10.6 million and 5.7 million (15 percent and 8 percent of Medicaid enrollment, respectively). Another 1.4 million enrollees (2 percent) were estimated for the five U.S. Territories with Medicaid programs (Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and the Northern Mariana Islands).

[54] There are some differences between Medicaid outlays and Medicaid expenditures, mainly due to timing differences between States paying for services and States receiving Federal funds. Thus, the levels and trends in outlays and expenditures differ slightly.

Table 21—Estimated Enrollment, Expenditures, and Per Enrollee Expenditures, by Enrollment Category, Fiscal Year 2016

Eligibility Group	Enrollment[1] (in millions)	Expenditures (in billions)	Per Enrollee Spending (2016)	Per Enrollee Spending (2015)	Percent Change
Children	28.1	$99.9	$3,555	$3,339	6.5%
Adults	15.3	79.1	5,159	5,103	1.1
Expansion Adults	11.2	66.5	5,965	6,365	−6.3
Persons with Disabilities	10.6	208.4	19,754	19,152	3.1
Aged	5.7	83.6	14,700	14,365	2.3
Subtotal	70.8	537.5	7,590	7,451	1.9
Territories[2]	1.4	2.6	1,864	1,696	9.9
Collections and Adjustments	—	−8.2	—	—	—
DSH	—	19.7	—	—	—
Administration	—	26.3	—	—	—
Total	72.2	592.2	8,029	7,993	0.5

Totals may not add due to rounding.

[1] Measured in person-year equivalents.

[2] Territory enrollment is estimated and based on the data reported in the CMS-64. Expenditures reflect only the amounts paid by the Federal government and the corresponding Territory share; some Territory programs spend additional amounts beyond what is covered by the Federal allotments and Territory share.

The average per enrollee cost for 2016 is estimated to have been $7,590 (including Federal and State shares, based on person-year equivalent enrollment, and excluding DSH outlays, Territorial enrollees and costs, adjustments, and administration costs). In estimated average benefits for 2016, children in Medicaid received $3,555, non-expansion adults received $5,159, and expansion adults received $5,965. These average costs reflect the relatively healthier status of children and adults enrolled in the program, as compared to aged enrollees and persons with disabilities; however, among adult enrollees, a significant number are pregnant women, whose costs are on average relatively greater than those for other adults. As would be expected, expenditures are substantially greater for the aged and persons with disabilities. Aged beneficiaries received an estimated $14,700 in benefits on average, a 2.3-percent increase. Beneficiaries with disabilities are estimated to have received an average of $19,754 in benefits, a 3.1-percent increase from 2015.[55]

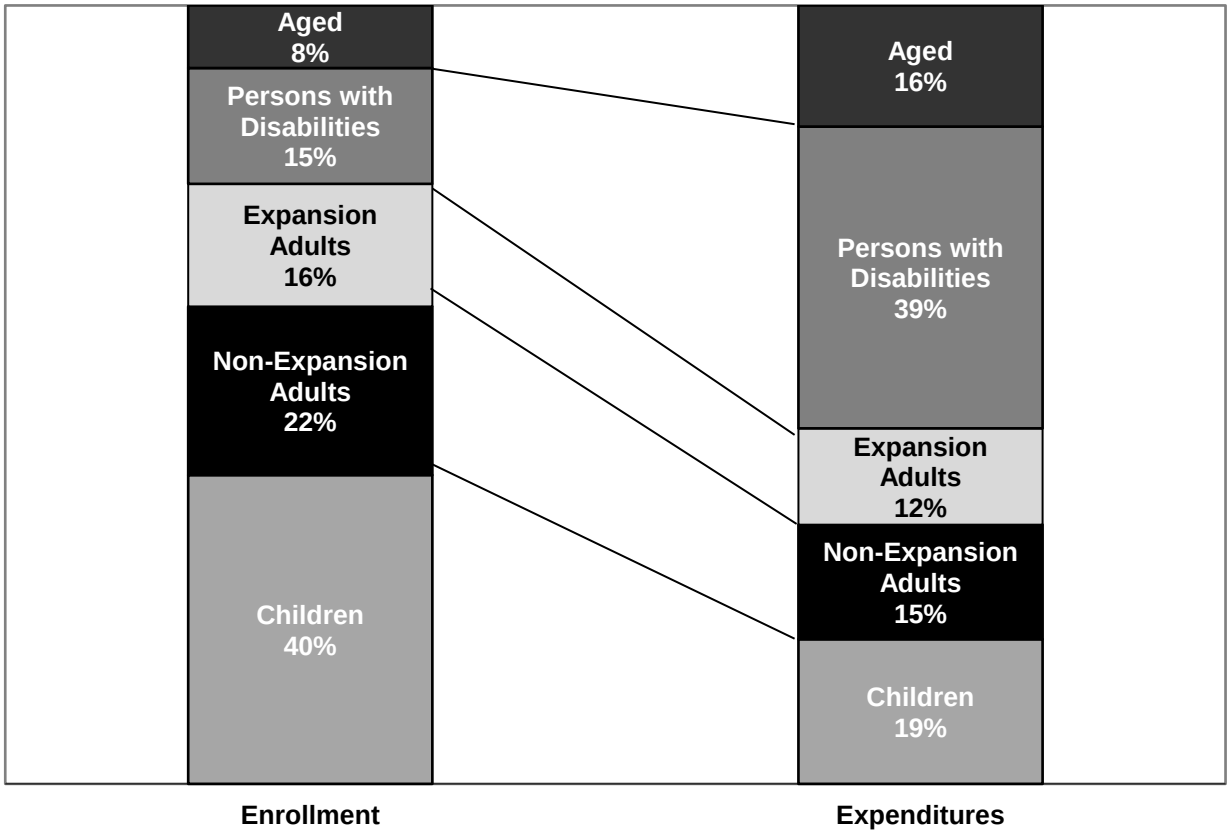
Territory per enrollee expenditures ($1,864 in 2016) are less than those of other populations covered by Medicaid, as costs of care are lower in the Territories and fewer services are provided by Territory programs. In addition, these amounts reflect only the Federal allotments and the Territory expenditures necessary to draw down

[55] The average per enrollee costs may also vary substantially among States. These variations may reflect differences in State Medicaid programs (for example, eligibility levels, benefits offered, provider reimbursement rates, or program design) and differences in the overall health care market across States.

those allotments (including additional funds provided by the Affordable Care Act); some Territory programs spend above this amount for their Medicaid programs.

Figure 8 shows each enrollment group's relative share of enrollment and expenditures in Medicaid in 2016. While enrollees with disabilities and aged enrollees are the smallest enrollment groups in Medicaid, they account for the majority of spending. Conversely, children and adults are the largest enrollment groups in Medicaid, but they account for a relatively smaller share of expenditures.

Figure 8—Estimated Medicaid Enrollment and Expenditures by Enrollment Group, as Share of Total, Fiscal Year 2016



Note: Totals and components exclude DSH expenditures, Territorial enrollees and expenditures, and adjustments. Totals may not add to 100 percent due to rounding.

Combined, spending on aged beneficiaries and beneficiaries with disabilities constituted 54 percent of Medicaid benefit expenditures in 2016, but these groups accounted for only 23 percent of all enrollees. Children and adults represented 77 percent of all enrollees in 2016, while only 46 percent of benefit expenditures were for enrollees in these groups.

These differences between the relative shares of enrollment and expenditures result from per enrollee costs that vary dramatically among the enrollment groups. The differences in average costs, while substantial, actually understate the impact of

differences in health status for these groups. In particular, Medicaid pays almost all health care costs for enrolled children and adults. However, many aged beneficiaries or beneficiaries with disabilities are also enrolled in Medicare, which is the primary payer of benefits before Medicaid; thus, the per enrollee Medicaid estimates are less than the total cost of such beneficiaries' annual health care across all payers.[56]

In the third year of the eligibility expansion provided for by the Affordable Care Act, expenditures and enrollment grew more slowly in 2016 than in recent years. Expenditures increased 5.2 percent, as compared to 11.4 percent in 2015. Enrollment is estimated to have grown 3.1 percent, compared to 7.6 percent in 2015.

Per enrollee benefit costs are estimated to have risen from $7,451 to $7,590 (an increase of 1.9 percent from 2015), as costs for children (who constitute the majority of Medicaid enrollment) grew at faster rates than in recent history. Meanwhile, expansion adults saw a 6.3-percent decrease in per enrollee costs from $6,365 in 2015 to $5,965 in 2016.

Projections

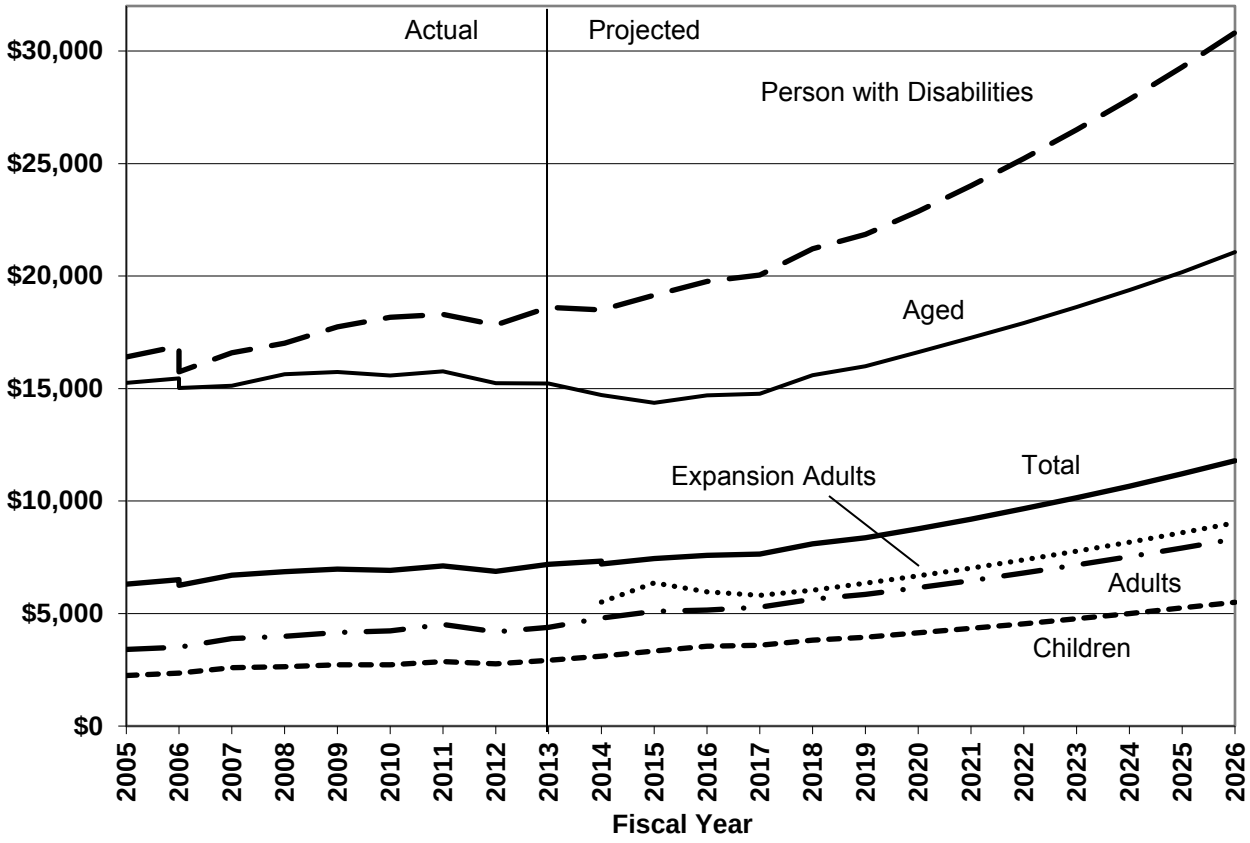
Per Enrollee Costs

As stated previously in the report, the most recent data on enrollment and expenditures by eligibility group are from 2013 or 2014 for most States, and no data are available for 2015 or 2016. Given the lack of more recent data, estimates of expenditures per enrollee by eligibility category are less credible than in past reports, and readers should be aware that actual per enrollee expenditures could vary significantly from those provided below.

The average costs of benefits for all enrollees are projected to increase over the next 10 years. Figure 9 displays historical and projected average Medicaid benefit expenditures per enrollee for all enrollees collectively and by eligibility group.

[56] In 2013, Medicaid expenditures for persons eligible for Medicare and full Medicaid benefits (full-benefit dual-eligible beneficiaries) amounted to $118.9 billion, and Medicare expenditures for these persons were $193.5 billion, for a total of $312.4 billion in expenditures between both programs. Medicaid accounted for about 38 percent of the total spending on full-benefit dual-eligible beneficiaries. In addition, for persons eligible for Medicare and limited Medicaid benefits (generally payments for Medicare premiums or cost sharing), Medicaid benefits are typically an even smaller proportion of their total benefits ($2.1 billion of $47.9 billion, or 4.4 percent, in 2013). See Exhibit 3 in *Data Book: Beneficiaries Dually Eligible for Medicare and Medicaid*, Medicare Payment Advisory Commission and Medicaid and CHIP Payment and Access Commission, 2018.

Figure 9—Past and Projected Medicaid Expenditures on Medical Assistance Payments Per Enrollee, by Enrollment Category, Fiscal Years 2005–2026[57]



Note: Per enrollee amounts for 2013, 2014, 2015, and 2016 are based on actual expenditures and estimated enrollment.

In 2017, per enrollee benefit costs are projected to have increased 0.8 percent, down from growth of 1.9 percent in 2016. For most populations, per enrollee costs grew in 2017. Costs are projected to have increased for aged enrollees (from $14,700 to $14,769, 0.5 percent), children (from $3,555 to $3,592, 1.1 percent), enrollees with disabilities ($19,754 to $20,048, 1.5 percent), and adults ($5,159 to $5,288, 2.5 percent). For expansion adults, projected per enrollee costs decreased from $5,965 to $5,813 in 2016 (−2.5 percent); these trends are described in more detail later in this section of the report.

Per enrollee benefit costs are projected to grow somewhat faster from 2017 through 2026 than they did in the previous 10 years.[58] For aged Medicaid enrollees, benefit costs per enrollee fell from $15,023 in 2006 to $14,700 in 2016 (an average annual

[57] The data for this graph can be found in table 17 of section VI.D.

[58] The years from 2007 to 2015 are used as a reference as they cover a sufficiently long period to compare long-term trends while excluding the effects of the start of the Medicare prescription drug program in 2006, which significantly lowered Medicaid per enrollee costs, especially for aged enrollees and persons with disabilities.

growth rate of −0.5 percent over the period) but are projected to reach $21,063 in 2026 (an average annual rate of 3.7 percent over 2017 to 2026). Per enrollee benefit costs for persons with disabilities increased from $15,743 in 2006 to $19,754 in 2016 (an average annual growth rate of 2.3 percent) and are projected to reach $30,815 in 2026 (4.5-percent average annual growth over 2017 to 2026).

The slow rate of growth of long-term care expenditures in recent history contributed to limited growth in the benefit costs for aged enrollees and persons with disabilities, as these individuals receive the vast majority of long-term care services. Expenditures for institutional long-term care (primarily nursing facility services) grew very slowly, while costs for community long-term care (including home and community-based waiver services) grew relatively quickly in comparison. Slow cost growth for long-term care through fee-for-service programs was partially offset by increasing managed care expenditures, especially for managed long-term care services. During and immediately after the 2007-2009 recession, States took stronger actions to limit Medicaid expenditure growth, including freezing or reducing provider reimbursement rates.[59]

Aged enrollees are projected to experience the lowest average per enrollee benefit cost growth over the next 10 years compared to other enrollee groups, due in large part to projected relatively slower growth in the cost of long-term care services. States are expected to continue to use more home and community-based long-term care to postpone enrollees' need for long-term care facilities as long as possible. In addition, States are projected to shift long-term care expenditures from fee-for-service programs into managed care. As a result, managed care expenditures are expected to grow more quickly and to constitute a larger share of benefits for aged enrollees.

While average benefit cost growth is expected to be slower over the next 10 years for aged enrollees than for other populations in Medicaid, it is expected to be faster than in recent history. States have instituted fewer provider reimbursement rate freezes and reductions and have allowed for more recent rate increases, and these increases are expected to continue in the future.[60]

Benefit costs per enrollee for adults (excluding the expansion adults) are projected to grow somewhat more rapidly over the next 10 years. Adult per enrollee costs increased from $3,503 in 2006 to $5,159 in 2016 (a 3.9-percent annual average growth rate), and they are projected to increase to $8,317 by 2026 (a 4.9-percent average annual growth rate). Benefit costs per enrollee for children are also expected to grow faster over the next decade, though only slightly, having grown from $2,348 in 2006 to $3,555 in 2016 (a 4.2-percent average annual growth rate), and such costs are projected to grow to $5,502 by 2026 (a 4.5-percent average annual growth rate). As was the case for aged enrollees, States took steps to control Medicaid expenditure

[59] V. Smith, *et al.*, "Implementing Coverage and Payment Initiatives: Results from a 50-State Medicaid Budget Survey for State Fiscal Years 2016 and 2017."
[60] *Ibid.*

growth that occurred during and after the 2007-2009 recession, especially in limiting or reducing provider reimbursement rates, but more recently States have implemented fewer rate reductions and freezes and more rate increases, which are expected to continue.[61] The Affordable Care Act also provided for temporary increases in primary care physician payments in CYs 2013 and 2014, which contributed to faster growth in expenditures for physician services in those years, particularly among children and adults (as many aged enrollees and enrollees with disabilities receive physician services through Medicare). Spending for managed care represented more than 60 percent of Medicaid expenditures for adults and children in 2015, and, for these enrollees, this type of care is expected to be the fastest growing service category over the next 10 years.

Although the average benefit costs for expansion adults were greater than those for other adults in 2014 and 2015, per enrollee costs for the expansion adults are estimated to have declined in 2016 and to have continued declining through 2017, when relative costs for these individuals are expected to have been lower than those for non-expansion adults. After 2017, per enrollee costs for expansion adults are projected to grow at a similar rate as those for other adults. More detail on these projections is provided below.

Enrollment Mix

The growth in average Medicaid benefit expenditures per enrollee for all enrollment categories is significantly affected by the relative proportion of enrollment across these categories. In this report, the *enrollment mix* is defined as the contribution of the change in these relative proportions to the growth in Medicaid benefit expenditures per enrollee. This concept is similar to *age-gender mix* effects in other health care plans or programs (which measure the contribution to health care expenditures of changes in the relative proportion of enrollees by age and by gender in a plan). The enrollment mix differs in that it does not specifically consider gender and considers age in only broad ranges, but it does take into account the disability status of enrollees.

The enrollment mix is an important consideration in analyzing and projecting Medicaid benefit expenditures. While the effects of age-gender mix on other programs are usually relatively small and do not change significantly from year to year, the effect of enrollment mix on Medicaid expenditures can be substantially larger or smaller and may vary greatly from year to year. This variation can occur because Medicaid enrollment categories experience substantially different average costs—average Medicaid costs for aged enrollees and persons with disabilities are much greater than those of child and adult enrollees—and because the enrollment growth for these groups may vary among categories and may fluctuate annually.

[61] *Ibid.*

For this report, the enrollment mix is measured as the difference between the increase in Medicaid benefit expenditures per enrollee and the increase in Medicaid benefit expenditures per enrollee if enrollment were held constant each year. To calculate this difference, enrollment was set at 2012 levels for each enrollment category.[62]

From 2007 to 2015, Medicaid benefit expenditures per enrollee grew at an average annual rate of 2.0 percent (including expansion adults). The effects of changes in enrollment mix over this time period reduced spending growth by an average of 0.6 percentage point per year; that is, excluding the impacts of changes in enrollment, Medicaid benefit expenditures per enrollee would have grown 2.6 percent per year. The effects of the changes in enrollment mix on spending ranged from −2.2 percent to 1.0 percent over these 9 years. The negative effects were the result of relatively faster enrollment growth for children and adults than for aged enrollees and persons with disabilities, especially from 2008 to 2010, and the addition of expansion adults in 2014 and 2015.

Medicaid benefit expenditures per enrollee are estimated to have increased only 1.3 percent in 2016 (including expansion adults). Excluding the impact of the change in the enrollment mix, these Medicaid expenditures are estimated to have increased 2.0 percent. This relatively large difference is primarily the result of an increase in the enrollment of expansion adults, whose per enrollee costs are estimated to have been relatively lower than the average costs of all enrollees.

While Medicaid benefit expenditures per enrollee are projected to grow more rapidly from 2017 to 2026 at an average annual rate of 4.4 percent, changes in enrollment mix are projected to negligibly decrease this growth by an average of less than 0.1 percentage point per year over this time period.

The average effect of enrollment mix changes is projected to be small over the next 10 years, but there are some differences year to year. The projected enrollment of more expansion adults in 2016, 2017, and 2018 (with costs that are projected to be less than the average Medicaid cost per enrollee) contributes to negative and slow enrollment mix effects through 2018 (from −0.7 percent to 0.1 percent per year). After 2018, the enrollment mix effect is projected to be positive (between 0.1 percent and 0.3 percent per year) because the projected growth rate of aged Medicaid enrollees is expected to be faster than that of other populations as more members of the baby boom generation reach age 65. Excluding the expansion adults, the projected effect of enrollment mix from 2017 through 2026 would be an average increase of 0.1 percent.

Medicaid benefit expenditures per enrollee grew at an average annual rate of 1.7 percent per year from 2007 through 2016, excluding the effects of changes in the

[62] As the base year for enrollment, 2012 was selected because it was the latest year for which nearly all States reported Medicaid enrollment data to CMS. A review of the measurement of enrollment mix using other years as the base year showed no significant differences in results.

enrollment mix. For 2017 through 2026, such expenditures are projected to increase 4.4 percent per year on average. This difference is the result of two factors: (i) efforts by States to limit Medicaid expenditure growth (most notably, in 2011 and 2012) are not projected to continue with the same intensity into the future; and (ii) medical price inflation is projected to be modestly faster after 2016 than in recent history—averaging 4.2 percent from 2017 through 2026, as compared to 3.3 percent over the prior 10 years.

Table 22—Past and Projected Medicaid Expenditures on Medical Assistance Payments Per Enrollee, by Enrollment Category, Fiscal Years 2000–2026
(Data for Figure 9)
(in dollars per person-year equivalent enrollee)

Fiscal Year	Aged	Disabled	Children	Adults	Expansion adults	Average of all enrollees
Historical data:						
2000	$14,222	$12,237	$1,819	$2,962	n/a	$5,496
2001	15,068	13,240	1,925	2,968	n/a	5,718
2002	15,682	14,453	2,076	3,123	n/a	5,969
2003	14,782	15,168	2,124	3,169	n/a	5,960
2004	15,314	15,869	2,125	3,311	n/a	6,124
2005	15,254	16,405	2,247	3,407	n/a	6,308
2006	15,023	15,743	2,348	3,503	n/a	6,255
2007	15,124	16,589	2,591	3,894	n/a	6,700
2008	15,631	17,013	2,640	3,987	n/a	6,863
2009	15,738	17,744	2,723	4,162	n/a	6,982
2010	15,577	18,172	2,731	4,225	n/a	6,926
2011	15,757	18,295	2,865	4,517	n/a	7,124
2012	15,235	17,824	2,762	4,192	n/a	6,874
Projections:						
2013	15,220	18,614	2,924	4,385	n/a	7,188
2014	14,708	18,499	3,109	4,799	$5,511	7,202
2015	14,365	19,152	3,339	5,103	6,365	7,451
2016	14,700	19,754	3,555	5,159	5,965[63]	7,590
2017	14,769	20,048	3,592	5,288	5,813	7,648
2018	15,595	21,209	3,822	5,645	6,036	8,093
2019	15,991	21,853	3,952	5,855	6,355	8,371
2020	16,623	22,878	4,139	6,152	6,682	8,770
2021	17,252	24,016	4,338	6,467	7,019	9,198
2022	17,909	25,223	4,550	6,803	7,385	9,658
2023	18,616	26,500	4,772	7,156	7,770	10,146
2024	19,373	27,851	5,003	7,524	8,167	10,662
2025	20,178	29,291	5,248	7,914	8,591	11,212
2026	21,063	30,815	5,502	8,317	9,031	11,793

[63] Per Enrollee costs for 2016 and 2017 exclude payments made to the Federal government from the States for risk-sharing arrangements and MLRs to avoid distorting the paid trend.

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Medicaid Expansion Spending and Enrollment in Context: An Early Look at CMS Claims Data for 2014

Laura Snyder, Katherine Young, Robin Rudowitz and Rachel Garfield

There have been long-standing questions about the effect the Medicaid expansion would have on spending and enrollment. Preliminary data from the Medicaid Budget and Expenditure System (MBES) released by the Centers for Medicare and Medicaid Services (CMS) may provide some early insights into these questions. CMS released preliminary spending and enrollment data from the MBES that covers the period from January 2014 through December 2014. This period is of particular interest because these are the first quarters that the Medicaid expansion was in effect. During this period, 27 states including DC, had implemented the Medicaid expansion; all but two of these states – Michigan (April 1, 2014) and New Hampshire (August 15, 2014) – implemented the Medicaid expansion January 1, 2014.

The MBES provides monthly Medicaid enrollment and quarterly Medicaid expenditure data with specific information about enrollment and spending for the new adult eligibility group, also referred to as the "Group VIII." The new adult group includes both those newly eligible under the Medicaid expansion (eligible for 100% federal match through December 2016) and those previously eligible (that were matched at traditional match rates but now receive a higher federal match.) While all states have reported expenditure data for the January – December 2014 period, California and North Dakota have not reported enrollment data for that same period.[1] This brief examines the MBES data to be able to put the spending and enrollment for the expansion into the context of total Medicaid spending and enrollment. Key findings from this data show:

- The new adult group represented a relatively small share (10%) of total Medicaid spending across all states in CY 2014. Looking at just expansion states, spending for the new adult group made up a slightly larger share (16%) total spending. The vast majority of spending for the new adult group is federal dollars (94%). This is driven by the 100% federal match available for those newly eligible adults, which make up three-quarters of enrollment in the new adult group.
- Looking at current enrollment data available, the new adult group made up a relatively small share (13%) of total enrollment. The new adult group made up a larger share of total enrollment in expansion states. However, data are preliminary and enrollment data for large states like California are missing.
- Spending per enrollee for the new adult group is notably lower than spending per enrollee across all groups ($4,513 vs. $7,150.)

Since this data claiming and reporting process is new, ensuring that the data are comparable and accurate across states may take time. This analysis is preliminary and will continue to be updated as data from missing states are added and data continue to be revised and updated.

Background

Data from the Medicaid Budget and Expenditure System (MBES) released by the Centers for Medicare and Medicaid Services (CMS) provides monthly enrollment and quarterly expenditure data with specific information about enrollment and spending on the new adult group (Group VIII). Historically, states have reported only expenditure data through the MBES, not enrollment data. However, to enable states to claim the enhanced funding available for adults made newly eligible by the ACA, CMS revised the form to require states to report claims separately by eligibility group, including separate reporting of claims for the new adult eligibility group, also referred to as the "Group VIII." Group VIII or the new adult group consists of those who are newly eligible as well as some other adults described in the box below. Those that do not qualify under the new adult group are referred to as "traditional Medicaid" for this analysis, which includes individuals with disabilities, the elderly, children, pregnant women and some low-income parents. Since this data claiming and reporting process is new, ensuring that the data are comparable and accurate across states may take time. Additionally, the enrollment data reported through the MBES differ in important ways from other enrollment data reported by CMS through the Performance Indicator process (see Appendix A for more details.)

Data included in this analysis looks at enrollment and expenditure data for January 1, 2014 through December 31, 2014, the first calendar year that the Medicaid expansion was in effect. During this period, 27 states including DC, had implemented the Medicaid expansion; all but two of these states – Michigan (April 1, 2014) and New Hampshire (August 15, 2014) – implemented the Medicaid expansion January 1, 2014. States that expanded after December 31, 2014 (Pennsylvania, Indiana, Alaska and Montana) are treated as non-expansion states in this analysis.

While all states have reported expenditure data for the January – December 2014 period, California and North Dakota have not reported enrollment data for that same period; other states had reported some but not all quarters.[2] This brief examines the MBES data to be able to put the spending and enrollment for the expansion into the context of total spending and enrollment.

Who is eligible under the New Adult Group (Group VIII)

Newly-Eligible Adults. Beginning in 2014, newly eligible adults consist of non-elderly, non-disabled adults with incomes up to 138% FPL who would not be eligible for Medicaid under the rules that a state had in place on December 1, 2009. The ACA provides 100% federal financing for those made newly eligible for Medicaid by the law; the federal match rate falls to 95% in 2017, 94% in 2018, 93% in 2019, and then 90% in 2020 and beyond.

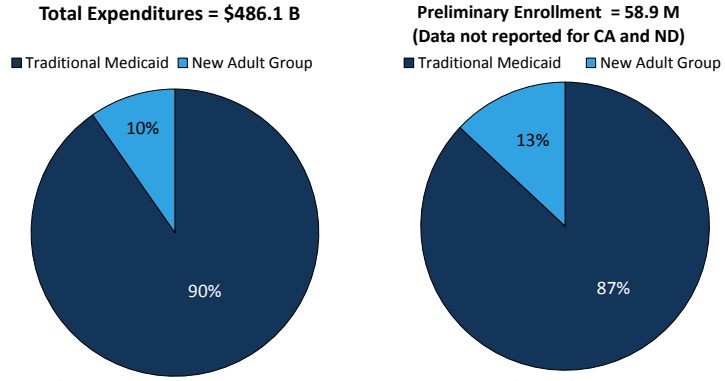
Other Group VIII Adults. Other Group VIII Adults include some childless adults in early expansion states as well as those who may be subject to technical adjustments. Some states already provided coverage at the traditional match rate to parents and adults without dependent children up to at least 100% FPL statewide as of March 23, 2010, when the ACA was enacted. The law provides additional federal funding to these states through the "expansion state match rate" for adults without dependent children under age 65; this "expansion state match rate" is higher than the traditional match rate.[3] A few states were able to make adjustments to account for individuals who would not have been eligible because of asset test requirements in place on December 1, 2009, enrollment caps in effect for waiver populations receiving full benefits as of December 1, 2009, and other special circumstances. These adjustments may result in some adults being enrolled in the expansion category who do not qualify for the 100% federal match for newly eligible adults.[4]

Trends across All States

During calendar year 2014, Medicaid expenditures totaled $486.1 billion dollars. This includes Medicaid spending for all groups – the new adult group as well as the traditional Medicaid population (individuals with disabilities, the elderly, children, etc.) (Appendix Table 2) Spending for the new adult group represented only 10 percent of all Medicaid spending – the vast majority of Medicaid spending was for the traditional population, funded at the regular matching rate. (Figure 1) Across all states and all groups, federal dollars made up nearly 62 percent of Medicaid spending – reflecting both the regular matching rates for the traditional Medicaid population as well as the enhanced funds for the new adult group. The share of federal dollars funding Medicaid spending has increased; historically the federal share has been lower (57%.)

Figure 1

Across all states, the vast majority of Medicaid spending in CY 2014 was for the traditional Medicaid population.

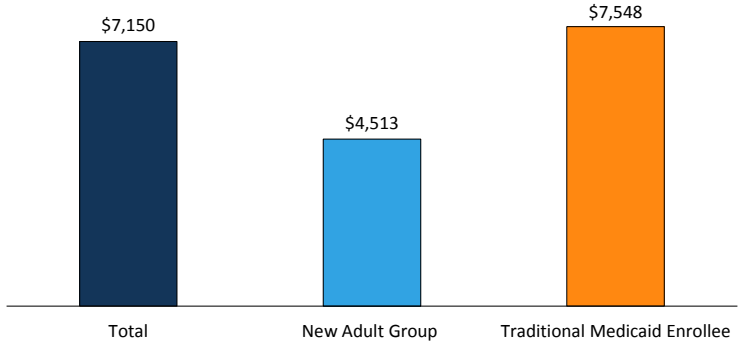


NOTES: Data for January through December 2014. All states reported expenditure data, while all but 2 states (CA and ND) reported enrollment data. Enrollment data reflect the highest enrollment for each state during this period.
SOURCE: Kaiser Commission on Medicaid and the Uninsured analysis of Medicaid spending and enrollment data collected from the Medicaid Budget and Expenditure System (MBES), Centers for Medicare and Medicaid Services, accessed December 2015. http://medicaid.gov/medicaid-chip-program-information/by-topics/financing-and-reimbursement/expenditure-reports-mbes-cbes.html

Over calendar year 2014, at least 58.9 million individuals were enrolled in Medicaid for at least some part of the year across the states that reported data. (Appendix Table 3) The inclusion of enrollment data as part of the MBES reporting process was new in 2014. While all states reported data for expenditures, not all states were able to report enrollment data, including large states like California. As revised data are published, this figure is expected to increase. Just as with spending, the new adult group made up a relatively small share (13%) of total Medicaid enrollment. (Figure 1) Among those states reporting both spending and enrollment data, spending per enrollee for the new adult group was much lower than total spending per enrollee across all groups (traditional Medicaid and the new adult group) - $4,513 vs. $7,150. (Figure 2)

Figure 2

Spending per enrollee for the new adult group was much lower than total spending per enrollee.



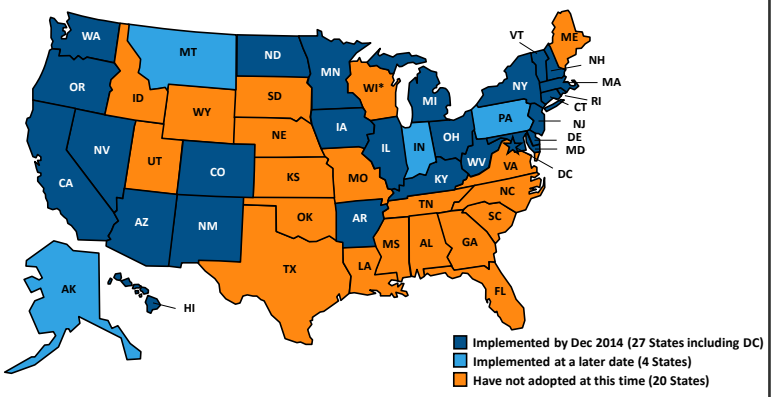
NOTES: Data for January through December 2014. Data are not reported for California and North Dakota. Total spending per enrollee refers includes the new adult group and the traditional Medicaid population.
SOURCE: Kaiser Commission on Medicaid and the Uninsured analysis of Medicaid spending and enrollment data collected from the Medicaid Budget and Expenditure System (MBES), Centers for Medicare and Medicaid Services, accessed December 2015. http://medicaid.gov/medicaid-chip-program-information/by-topics/financing-and-reimbursement/expenditure-reports-mbes-cbes.html

Trends in Expansion States

One of the major changes in the Affordable Care Act was the Medicaid expansion – establishing a new eligibility floor for non-elderly, non-disabled groups at 138 percent FPL and eliminating the long-standing exclusion of childless adults. The June 2012 Supreme Court decisions effectively made this optional for states. As of December 31, 2014, there were 27 states that had implemented the Medicaid expansion; states that expanded later (Pennsylvania, Indiana, Alaska and Montana) are treated as non-expansion states in this analysis. (Figure 3) The remainder of this analysis focuses on spending and enrollment trends in the 27 expansion states only.

Figure 3

Twenty-seven states had the Medicaid expansion in place as of December 2014.



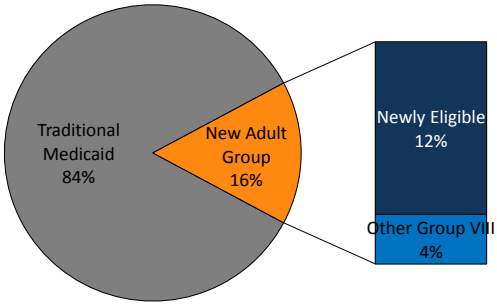
NOTES: Status of Medicaid expansion implementation as of December 31, 2014. All but 2 of the states (MI and NH) had implemented the Medicaid expansion effective January 1, 2014. MI implemented the Medicaid expansion effective April 1, 2014; New Hampshire implemented effective August 15, 2014. WI covers adults up to 100% FPL in Medicaid, but did not adopt the ACA expansion.

Total and New Adult Group Spending

Across the 27 states that implemented the expansion during calendar year 2014, spending for the new adult group totaled $47.2 billion, representing 16 percent of total Medicaid spending across these states. (Figure 4) The vast majority of this spending (78%) was for those newly eligible adults whose expenditures qualify for the 100 percent federal match. The remaining share of spending for the new adult group was for those adults that were previously eligible at traditional match rates or subject to technical adjustments (see Box 1 for more details); expenditures for these adults are still matched at a higher rate than the traditional match rate, but not the 100 percent federal match.

Figure 4

Looking just at the Expansion states, spending for the new adult group still represents a small share of total spending.

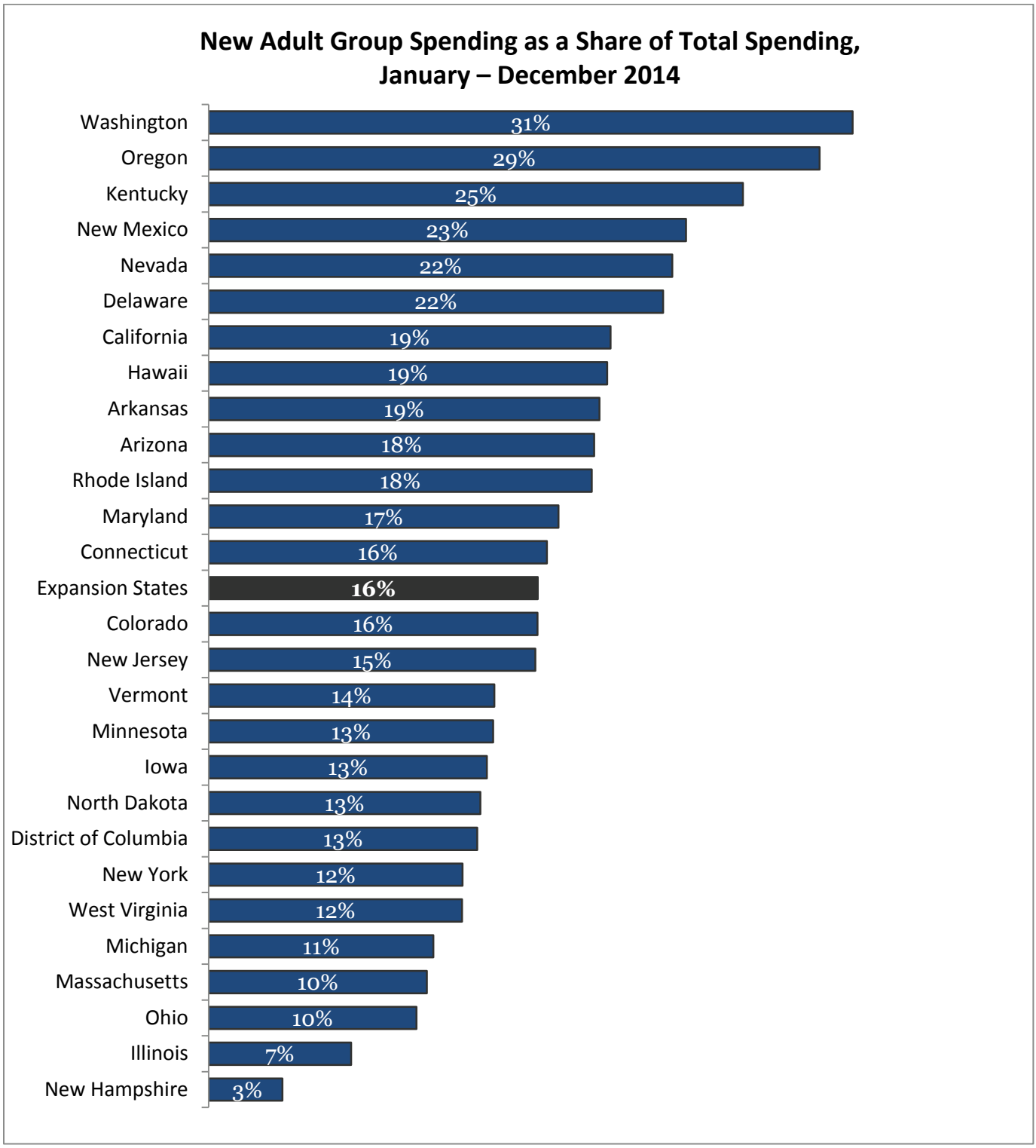


Total Spending in Expansion States, CY 2014 = $301.8 Billion

NOTES: Data are limited to expenditures in the 27 states that had implemented the Medicaid expansion as of December 31, 2014. Data reflect expenditures for January through December 2014.
SOURCE: Kaiser Commission on Medicaid and the Uninsured analysis of Medicaid spending and enrollment data collected from the Medicaid Budget and Expenditure System (MBES), Centers for Medicare and Medicaid Services, accessed December 2015. http://medicaid.gov/medicaid-chip-program-information/by-topics/financing-and-reimbursement/expenditure-reports-mbes-cbes.html

Spending for the new adult group as a share of total Medicaid spending for this period varies across expansion states, ranging from more than 25 percent in Washington, Oregon and Kentucky to less than 10 percent in Illinois and New Hampshire (New Hampshire implemented the Medicaid expansion later - August 15, 2014.) (Figure 5)

Figure 5: The share of spending for the new adult group varies across expansion states.



NOTES: Data are limited to expenditures in the 27 states that had implemented the Medicaid expansion as of December 31, 2014. Data reflect expenditures for January through December 2014.
SOURCE: Kaiser Commission on Medicaid and the Uninsured analysis of Medicaid spending and enrollment data collected from the Medicaid Budget and Expenditure System (MBES), Centers for Medicare and Medicaid Services, accessed December 2015. http://medicaid.gov/medicaid-chip-program-information/by-topics/financing-and-reimbursement/expenditure-reports-mbes-cbes.html

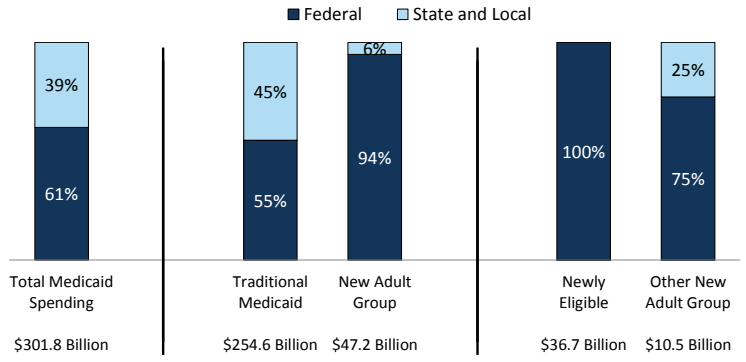
Federal and State Spending Distribution of Spending

Across all expansion states, the federal share for all Medicaid spending in calendar year 2014 was 61 percent and the state share of spending was 39 percent (virtually the same as at the national level.) (Figure 6) However, there were large differences in these shares for the traditional Medicaid program and the new adult group.

The federal government paid more than half of the costs for the traditional Medicaid population in expansion states (55%). This share varies by state according to the traditional FMAP. For the new adult group, virtually all of the expenditures (94%) were paid for with federal dollars. As noted earlier, the new adult group consists of spending for those newly eligible (which are paid for with 100% federal dollars) as well as some other adults that qualify for the new adult group but are not newly eligible. The newly eligible group accounted for more than 3 out of 4 dollars spent on the new adult group ($36.7 billion of the $47.2 billion in new adult group spending). While the other new adult enrollees are not eligible for the 100 percent federal match, the federal share for this group is still well above the traditional match rates that had previously applied to expenditures for these adults.

Figure 6

The vast majority of the expenditures for the new adult group are paid for with federal dollars.



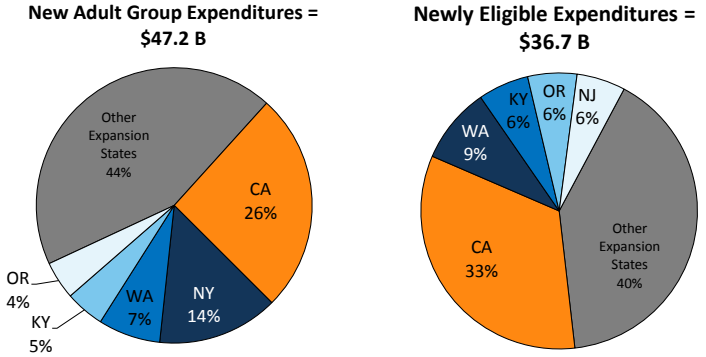
NOTES: Data are limited to expenditures in the 27 states that had implemented the Medicaid expansion as of December 31, 2014. Data reflect expenditures for January through December 2014.
SOURCE: Kaiser Commission on Medicaid and the Uninsured analysis of Medicaid spending and enrollment data collected from the Medicaid Budget and Expenditure System (MBES), Centers for Medicare and Medicaid Services, accessed December 2015. http://medicaid.gov/medicaid-chip-program-information/by-topics/financing-and-reimbursement/expenditure-reports-mbes-cbes.html

Distribution of Spending for the New Adult Group by State

In calendar year 2014, states claimed $47.2 billion in total Medicaid spending for the new adult group. Looking at the distribution across states, it is not surprising that larger expansion states had a higher share of expenditures for this group. Expenditures for the new adult group in California represent one quarter (26%) of all the expenditures for the new adult group during this period, followed by New York (14%), Washington (7%), Kentucky (5%) and Oregon (4%). Focusing just on expenditures for the newly eligible (which are 100% federally funded,) California reported one-third of all of these expenditures during this period, followed by Washington (9%), Kentucky, Oregon and New Jersey (all at 6%.) (Figure 7) Some large states, such as New York, Massachusetts and Arizona, which had expanded coverage prior to the ACA, reported larger shares of new adult group spending for other new adult group enrollees whose expenditures don't qualify for the 100 percent federal match. However, even in these states the vast majority of expenditures for the new adult group were federal, as the expenditures for the other new adult group enrollees still received a higher federal match than the traditional match rate available before.

Figure 7

Expenditures for the new adult group are concentrated in larger Expansion states.



NOTES: Data for January through December 2014.
SOURCE: Kaiser Commission on Medicaid and the Uninsured analysis of Medicaid spending and enrollment data collected from the Medicaid Budget and Expenditure System (MBES), Centers for Medicare and Medicaid Services, accessed August 2015. http://medicaid.gov/medicaid-chip-program-information/by-topics/financing-and-reimbursement/expenditure-reports-mbes-cbes.html

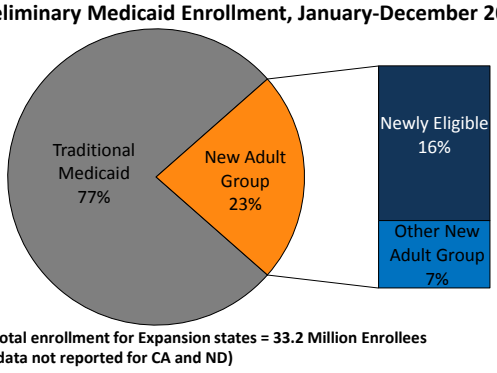
Total and Group VIII Enrollment

The MBES data have historically not included information about enrollment or spending by eligibility group. To account for the newly eligible federal match rate, CMS has revised the CMS-64 form to require states to report claims separately by eligibility group, including separate reporting for newly eligible adults, as well as to report enrollment by eligibility group. Since this data reporting process is new, ensuring that the data are comparable and accurate across states may take time. Moreover, because these initial data are preliminary, states may continue to provide updates to the enrollment data over time, so the numbers will change. Not all states were able to report enrollment data; enrollment data are not reported for California and North Dakota for all three quarters.

In the expansion states that reported enrollment data, approximately 23 percent of Medicaid enrollment was for the new adult group. (Figure 8) The remaining 77 percent of Medicaid enrollment was for those eligible under the "traditional" Medicaid program (e.g. children, pregnant women, elderly and individuals with disabilities.) However, this varies across expansion states. Enrollment in the new adult group made up nearly half of total enrollment in Oregon (48%) ranging down to 17 percent in Ohio, Minnesota and Massachusetts. (Figure 9)

Figure 8

Enrollment among the new adult group makes up a relatively small share of total enrollment among expansion states.

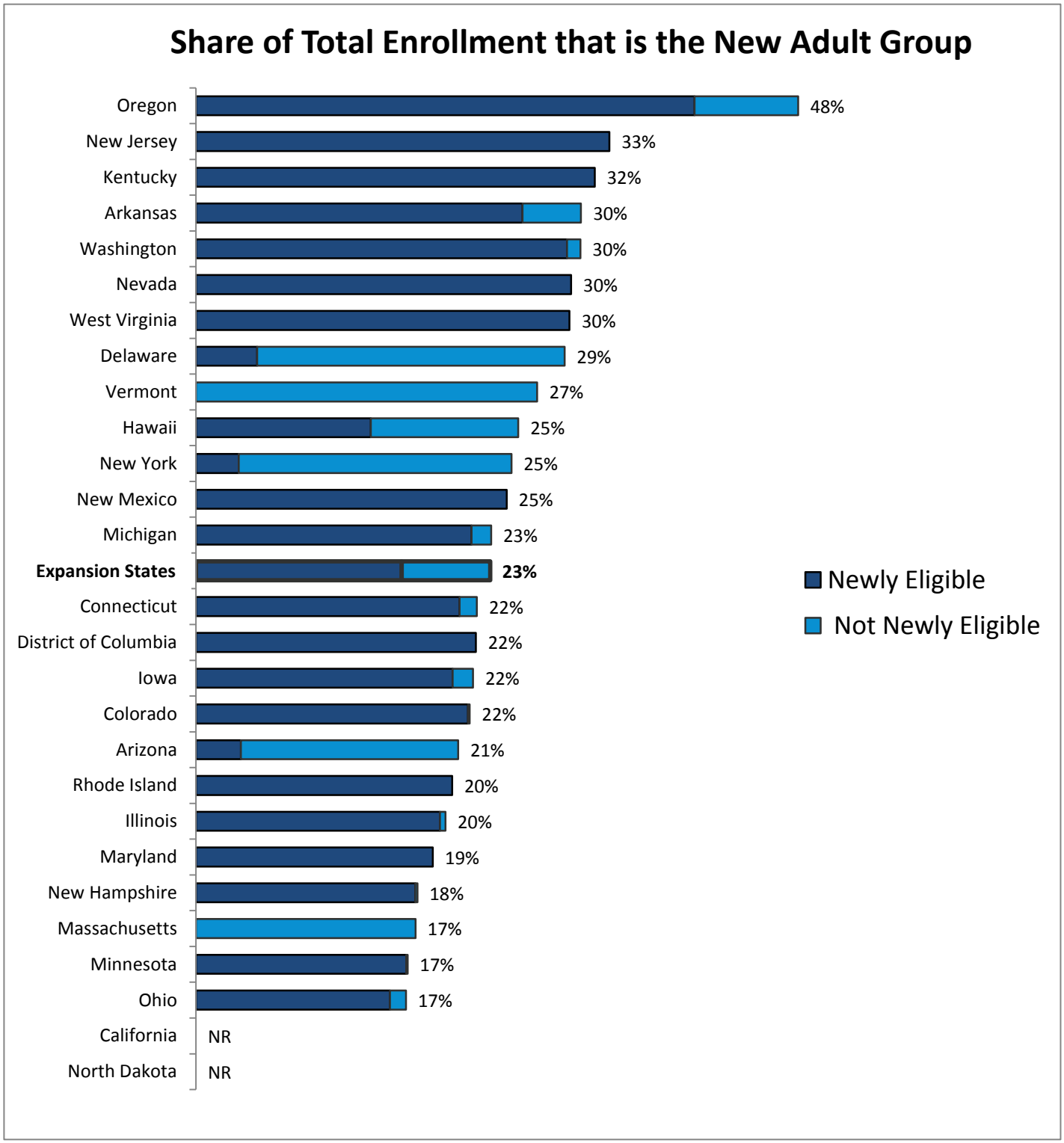


NOTES: Data for January through December 2014. Data are limited to 27 states that implemented the Medicaid expansion as of December 31, 2014. Enrollment data reflect the highest enrollment for each state during this period. Data were not reported for California and North Dakota.
SOURCE: Kaiser Commission on Medicaid and the Uninsured analysis of Medicaid spending and enrollment data collected from the Medicaid Budget and Expenditure System (MBES), Centers for Medicare and Medicaid Services, accessed December 2015. http://medicaid.gov/medicaid-chip-program-information/by-topics/financing-and-reimbursement/expenditure-reports-mbes-cbes.html

The make-up of the new adult group (newly eligible vs. other) differs across expansion states. Across all expansion states, over two-thirds of enrollment in the new adult group were newly eligible (those whose expenditures are eligible for 100% federal match through December 2016.) While newly eligible adults made up the vast majority of new adult enrollment in many of the expansion states, there were a handful that saw the majority of enrollment in the new adult group among those not newly eligible (Arizona, Delaware, New York and Massachusetts.) (Figure 9) These states had expanded coverage to adults prior to the ACA.

Among the expansion states that reported enrollment data, the largest share of new adult enrollment was in New York (19% or nearly 1.5 million adults) followed by Illinois (8%), New Jersey, Washington and Michigan (7% each). These five states reported nearly half (47%) of all enrollment among the new adult group. However, the distribution of enrollment among newly eligible adults (those whose expenditures are eligible for 100% federal match through December 2016) differs slightly. Illinois accounted for the highest share of newly eligible adults (11%) followed by New Jersey (10%), Washington (9%), Michigan (9%) and Ohio (8%). As mentioned earlier, New York had expanded coverage to adults prior to the ACA so nearly 9 out of 10 adults eligible under the new adult group in New York are not newly eligible.

Figure 9: The share of enrollment in the new adult group varies across states.



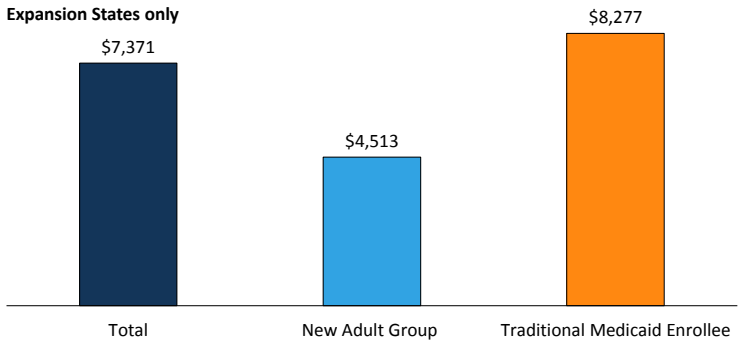
NOTES: Data for January through December 2014. Data are limited to the 27 states that implemented the Medicaid expansion as of December 2014. Data reflect the highest enrollment for each state during this period. Data were not reported for California and North Dakota. All but 2 of these states (MI and NH) implemented the expansion January 2014; MI's expansion became effective April 1, 2014 and NH's expansion became effective August 15, 2014.
SOURCE: Kaiser Commission on Medicaid and the Uninsured analysis of Medicaid spending and enrollment data collected from the Medicaid Budget and Expenditure System (MBES), Centers for Medicare and Medicaid Services, accessed December 2015. http://medicaid.gov/medicaid-chip-program-information/by-topics/financing-and-reimbursement/expenditure-reports-mbes-cbes.html

Spending per enrollee

Because childless adults were historically excluded from the Medicaid program prior to the ACA, there was limited data and experience to draw on for determining what utilization and expenditures for this group would be. While the data are preliminary and missing large states such as California, the MBES data provides a window into what spending per enrollee for the new adult group looks like and how it compares to the rest of the Medicaid population. Spending per enrollee for the new adult group is notably lower than spending per enrollee across all groups in expansion states; average spending per enrollee for the new adult group was $4,513 compared to $7,371 per enrollee (new adult group and traditional Medicaid population). (Figure 10) This is in line with historical data on adult spending per enrollee, which has been roughly 60 percent of total spending per enrollee figures.

Figure 10

Spending per enrollee for the new adult group was much lower than spending per enrollee across all groups in expansion states.



NOTES: Data for January through December 2014. Data reflect only expansion states. Expansion states include 27 states with the Medicaid expansion in effect December 31, 2014. States that adopted the Medicaid expansion after that period (PA, IN, AK, MT) are counted as non-expansion states. Data are not reported for California and North Dakota.
SOURCE: Kaiser Commission on Medicaid and the Uninsured analysis of Medicaid spending and enrollment data collected from the Medicaid Budget and Expenditure System (MBES), Centers for Medicare and Medicaid Services, accessed December 2015. http://medicaid.gov/medicaid-chip-program-information/by-topics/financing-and-reimbursement/expenditure-reports-mbes-cbes.html

Spending per enrollee for those in the new adult group varied widely across states; spending per new adult group enrollee ranged from $8,461 in Rhode Island to $1,706 in New Hampshire (which implemented the Medicaid expansion later). (Appendix Table 4) This level of variation mirrors in large part variation in total spending per enrollee seen across these states as well as patterns in historic spending per enrollee data for adults. There are a number of factors that can lead to this wide dispersion in spending per enrollee figures including differences in health care costs across states and the relative health status of the underlying populations.

Looking Ahead

Data from the MBES released by the CMS provide monthly enrollment and quarterly expenditure data with specific information about enrollment and spending for the new adult eligibility group, also referred to as the "Group VIII." This new MBES data on spending and enrollment provide further insight into the early effects of the Medicaid expansion on Medicaid spending and enrollment. However, the data are preliminary and this is the first time enrollment data have been collected as part of the claiming process. It also is incomplete with enrollment data missing from some states (California and North Dakota.) With additional updates and data from missing states, additional analyses can be conducted to understand differences across expansion states as well as difference across expansion and non-expansion states in terms of spending and enrollment patterns.

Methodology

Data from the Medicaid Budget and Expenditure System (MBES) released by the Centers for Medicare and Medicaid Services (CMS) provides monthly enrollment and quarterly expenditure data with specific information about enrollment and spending for the new adult eligibility group, also referred to as the "Group VIII." States began reporting enrollment data for the quarter beginning January 1, 2014 and more recently began reporting expenditure data for the new adult group on the Form CMS-64.

Spending data made public reflect the first full year that the Medicaid expansion was in effect: the last three quarters of FFY 2014 (January – September 2014) and the first quarter of FFY 2015 (October – December 2014.) During this period, 27 states including DC, had implemented the Medicaid expansion; all but two of these states – Michigan (April 1, 2014) and New Hampshire (August 15, 2014) – implemented the Medicaid expansion January 1, 2014.

Expenditure data reported in this brief were summed across the four quarters. Data reflect all Title XIX expenditures reported by states; data do not include expenditures under Title XXI (CHIP).

Enrollment data reported are based on the maximum enrollment level reported across the four quarters in each state for Title XIX only (enrollment for under Title XXI or CHIP are excluded.) While this measure is used to try to capture the total number of enrollees over the entire period, it is likely an undercount of the number of enrollees ever on the program; more detailed forthcoming data sources on enrollment (such as the T-MSIS) will yield more accurate (and likely higher) enrollment data. Because different states saw higher levels of enrollment among the newly eligible and the not newly eligible in the new adult group (Group VIII) the Group VIII enrollment reported for states reflects the sum of the maximum newly eligible and the maximum of the not newly eligible. Traditional Medicaid figures are calculated taking the maximum total enrollment figure and subtracting the maximum Group VIII enrollment figure. National numbers for total, traditional Medicaid, Group VIII, newly eligible and not newly eligible enrollment all reflect summations of state maximums and therefore will not match data as reported by CMS. While all states have reported expenditure data for the January – December 2014 period, California and North Dakota have not reported enrollment data for that same period; DC, Colorado, Nevada New Jersey and Washington had reported some but not all months.

Spending per enrollee data are calculated taking the sum of expenditure data over the 4 quarters over the maximum enrollment level. Expenditure data from California and North Dakota were excluded from national calculations since these states did not report enrollment data. The maximum enrollment figure is intended to better capture all people touched by the program over the calendar year examined; however this figure is likely low and is expected increase over time as data are updated and missing data from states like California are added.

Appendices

- Appendix A: Comparison to Other Available Data Sources
- Appendix Table 2: Total Medicaid Expenditures, CY 2014
- Appendix Table 3: Preliminary Medicaid Enrollment, CY 2014
- Appendix Table 4: Spending per Enrollee in Expansion States, CY 2014

APPENDIX A: COMPARISON TO OTHER AVAILABLE DATA SOURCES

Spending. States have historically reported expenditure data through the MBES for claiming purposes; this is sometimes referred to as CMS-64 data. However, the expenditure data in this report may differ from other data reported from the MBES due to differences in timing as well as adjustments made to the data. For example, expenditure data from the MBES is commonly reported on a Federal Fiscal Year (FFY) basis (October 1 – September 30) whereas the data in this report reflect the calendar year (January 1 – December 31).

Enrollment Data. Since December 2013, CMS has been providing another source of monthly enrollment data for Medicaid and CHIP as part of its Medicaid and CHIP Performance Indicator Project. There are important differences between the Performance Indicator and MBES enrollment data that limit the ability to make comparisons between the two datasets, as discussed below and highlighted in Appendix Table 1:

- **The data vary in their intended purpose.** The MBES enrollment data are collected as part of the claiming process for federal Medicaid matching funds only, not CHIP. The Performance Indicator data are intended to provide timely insight into Medicaid and CHIP eligibility and enrollment trends to support program management and oversight.

- **There are key differences in who is included in the enrollment data.** The MBES enrollment data include all enrollees whose spending is eligible for Medicaid matching funds (including limited benefit waiver enrollees and Medicare enrollees that receive cost-sharing and premium assistance from Medicaid). In contrast, the Performance Indicator enrollment data only include enrollees that receive full benefit coverage. Moreover, the MBES enrollment data only include enrollment in Medicaid and not CHIP; the claiming process for CHIP, which has different matching rates, is done separately. The Performance Indicator data include enrollment for both Medicaid and CHIP.

- **There are differences in the timing of the data**. The MBES data include individuals enrolled in the state's Medicaid program at any time during the month of the reporting period. In contrast, the Performance Indicator data are a point-in-time count based on the number of individuals enrolled as of the last day of the month. The MBES enrollment data cover the period between January and June 2015 (though only data through December 2014 is used in this analysis), while the most recent monthly Performance Indicator report included data through October 2015.

Appendix Table 1: Differences Between CMS MBES and Performance Indicator Enrollment Data

	MBES Data	Performance Indicator Data
Eligibility Groups included	All Medicaid enrollees, including those receiving limited benefits (e.g., limited benefit waiver enrollees and Medicare enrollees receiving cost-sharing and premium assistance from Medicaid). Does not include CHIP enrollees.	Includes enrollees in Medicaid and CHIP enrollment. Does not include enrollees receiving limited benefits.
Enrollment data period	Total number of enrollees ever enrolled during the month. (Data are reported on a quarterly basis.)	Total number of enrollees as of the last day of the month.
Frequency of reporting	Quarterly	Monthly
Most recent data available as of December 2015	June 2015 (only data through Dec 2014 are used in this analysis)	October 2015
Data purpose	Collected as part of the claiming process for federal Medicaid matching funds.	Collected as part of new Medicaid and CHIP Performance Indicator Project to inform program management and oversight.

Appendix Table 2: Total Medicaid Expenditures, CY 2014				
State	Total	New Adult Group	Newly Eligible	Not Newly Eligible
Alabama	$5,309,736,744	N/A	N/A	N/A
Alaska	$1,618,158,522	N/A	N/A	N/A
Arizona	$9,460,028,885	$1,727,768,395	$145,541,925	$1,582,226,470
Arkansas	$5,226,774,523	$967,920,039	$967,920,039	N/A
California	$64,055,189,072	$12,199,943,279	$12,199,943,279	N/A
Colorado	$6,368,524,285	$992,468,785	$968,850,624	$23,618,161
Connecticut	$7,494,388,273	$1,200,936,868	$1,181,124,042	$19,812,826
Delaware	$1,760,894,949	$379,235,466	$32,930,545	$346,304,921
DC	$2,334,112,770	$297,107,909	$282,271,893	$14,836,016
Florida	$21,336,121,602	N/A	N/A	N/A
Georgia	$9,613,091,392	N/A	N/A	N/A
Hawaii	$1,975,301,415	$373,037,821	$242,011,231	$131,026,590
Idaho	$1,683,668,434	N/A	N/A	N/A
Illinois	$16,084,380,996	$1,085,547,824	$1,072,644,820	$12,903,004
Indiana	$9,317,184,653	N/A	N/A	N/A
Iowa	$4,216,928,813	$556,162,683	$531,449,280	$24,713,403
Kansas	$2,842,501,614	N/A	N/A	N/A
Kentucky	$8,595,156,527	$2,176,007,998	$2,176,007,998	N/A
Louisiana	$7,031,732,700	N/A	N/A	N/A
Maine	$2,497,790,662	N/A	N/A	N/A
Maryland	$9,725,772,438	$1,612,599,592	$1,612,599,592	N/A
Massachusetts	$15,033,457,934	$1,554,743,109	N/A	$1,554,743,109
Michigan	$14,116,055,764	$1,503,736,391	$1,444,562,564	$59,173,827
Minnesota	$10,638,087,779	$1,433,646,514	$1,427,247,012	$6,399,502
Mississippi	$4,973,795,953	N/A	N/A	N/A
Missouri	$9,034,749,004	N/A	N/A	N/A
Montana	$1,105,703,601	N/A	N/A	N/A
Nebraska	$1,831,650,567	N/A	N/A	N/A
Nevada	$2,538,887,096	$557,912,077	$557,912,077	N/A
New Hampshire	$1,437,357,944	$50,174,127	$49,928,108	$246,019
New Jersey	$13,422,100,485	$2,077,884,888	$2,077,884,888	N/A
New Mexico	$4,488,133,924	$1,015,477,316	$1,015,477,316	N/A
New York	$55,839,970,423	$6,717,924,807	$446,736,046	$6,271,188,761
North Carolina	$12,049,566,135	N/A	N/A	N/A
North Dakota	$995,053,014	$128,096,920	$125,595,143	$2,501,777
Ohio	$19,867,991,538	$1,955,996,607	$1,842,525,912	$113,470,695
Oklahoma	$5,045,035,311	N/A	N/A	N/A
Oregon	$7,279,593,596	$2,107,572,240	$2,107,572,240	N/A
Pennsylvania	$22,961,627,929	N/A	N/A	N/A
Rhode Island	$2,522,983,052	$457,942,487	$457,942,487	N/A
South Carolina	$5,646,426,012	N/A	N/A	N/A
South Dakota	$781,309,878	N/A	N/A	N/A
Tennessee	$8,763,278,224	N/A	N/A	N/A
Texas	$33,027,788,301	N/A	N/A	N/A
Utah	$2,110,973,692	N/A	N/A	N/A
Vermont	$1,561,688,259	$211,439,523	N/A	$211,439,523
Virginia	$7,633,684,545	N/A	N/A	N/A
Washington	$11,262,917,875	$3,437,117,412	$3,267,848,402	$169,269,010
West Virginia	$3,500,885,440	$420,573,988	$420,573,988	N/A
Wisconsin	$7,547,033,281	N/A	N/A	N/A
Wyoming	$540,533,820	N/A	N/A	N/A
United States	**$486,105,759,645**	**$47,198,975,065**	**$36,655,101,451**	**$10,543,873,614**

NOTES: Data reflect expenditures for January through December 2014. See Methodology for more details.
SOURCE: KCMU analysis of Medicaid spending and enrollment data collected from the MBES, CMS, accessed December 2015.

Appendix Table 3: Preliminary Medicaid Enrollment, CY 2014				
State	Total	New Adult Group	Newly Eligible	Not Newly Eligible
Alabama	1,050,254	N/A	N/A	N/A
Alaska	121,405	N/A	N/A	N/A
Arizona	1,732,726	359,093	61,709	297,384
Arkansas	871,098	265,032	224,870	40,162
California		Data Not Reported		
Colorado	976,972	211,389	210,013	1,376
Connecticut	851,013	188,969	177,393	11,576
Delaware	205,356	59,841	9,961	49,880
DC	243,852	53,954	53,954	-
Florida	3,954,371	N/A	N/A	N/A
Georgia	1,793,252	N/A	N/A	N/A
Hawaii	333,090	84,838	46,061	38,777
Idaho	290,376	N/A	N/A	N/A
Illinois	2,992,947	590,415	577,455	12,960
Indiana	1,096,804	N/A	N/A	N/A
Iowa	553,661	121,275	112,326	8,949
Kansas	369,784	N/A	N/A	N/A
Kentucky	1,200,615	378,364	378,364	-
Louisiana	1,351,281	N/A	N/A	N/A
Maine	300,720	N/A	N/A	N/A
Maryland	1,160,217	217,282	217,282	-
Massachusetts	1,981,413	343,836	-	343,836
Michigan	2,162,402	504,430	470,828	33,602
Minnesota	1,105,285	185,011	183,824	1,187
Mississippi	736,517	N/A	N/A	N/A
Missouri	840,679	N/A	N/A	N/A
Montana	152,200	N/A	N/A	N/A
Nebraska	237,519	N/A	N/A	N/A
Nevada	556,116	164,906	164,906	-
New Hampshire	167,988	29,406	29,124	282
New Jersey	1,652,548	539,902	539,902	-
New Mexico	753,184	184,942	184,942	-
New York	5,992,264	1,494,419	202,684	1,291,735
North Carolina	1,935,493	N/A	N/A	N/A
North Dakota		Data Not Reported		
Ohio	2,924,123	485,312	448,378	36,934
Oklahoma	765,374	N/A	N/A	N/A
Oregon	1,035,570	492,687	407,990	84,697
Pennsylvania	2,110,761	N/A	N/A	N/A
Rhode Island	267,327	54,126	54,126	-
South Carolina	1,193,222	N/A	N/A	N/A
South Dakota	108,302	N/A	N/A	N/A
Tennessee	1,504,276	N/A	N/A	N/A
Texas	4,330,364	N/A	N/A	N/A
Utah	323,730	N/A	N/A	N/A
Vermont	192,515	51,911	-	51,911
Virginia	931,238	N/A	N/A	N/A
Washington	1,678,876	510,155	492,358	17,797
West Virginia	527,194	155,636	155,636	-
Wisconsin	1,201,672	N/A	N/A	N/A
Wyoming	73,744	N/A	N/A	N/A
United States	**58,891,690**	**7,727,131**	**5,404,086**	**2,323,045**

NOTES: Data reflect preliminary maximum enrollment in calendar year 2014. See Methodology for more details.
SOURCE: KCMU analysis of Medicaid spending and enrollment data collected from the MBES, CMS, accessed December 2015.

Appendix Table 4: Spending per Enrollee in Expansion States, CY 2014		
State	Spending per enrollee for the new adult group (Group VIII)	Spending per enrollee across all groups (Traditional and Group VIII)
Arizona	$4,811	$5,460
Arkansas	$3,652	$6,000
California		
Colorado	$4,695	$6,519
Connecticut	$6,355	$8,806
Delaware	$6,337	$8,575
District of Columbia	$5,507	$9,572
Hawaii	$4,397	$5,930
Illinois	$1,839	$5,374
Iowa	$4,586	$7,616
Kentucky	$5,751	$7,159
Maryland	$7,422	$8,383
Massachusetts	$4,522	$7,587
Michigan	$2,981	$6,528
Minnesota	$7,749	$9,625
Nevada	$3,383	$4,565
New Hampshire	$1,706	$8,556
New Jersey	$3,849	$8,122
New Mexico	$5,491	$5,959
New York	$4,495	$9,319
North Dakota		
Ohio	$4,030	$6,795
Oregon	$4,278	$7,030
Rhode Island	$8,461	$9,438
Vermont	$4,073	$8,112
Washington	$6,737	$6,709
West Virginia	$2,702	$6,641
Expansion State Average	**$4,513**	**$7,371**

NOTES: Data for January through December 2014. Data are limited to the 27 states that had implemented the Medicaid expansion effective December 2014. Data reflect spending per enrollee for each state during this period using expenditures summed across the 4 quarters and the highest level of enrollment reported. Data were not reported for California and North Dakota. All but 2 of these states (MI and NH) implemented the expansion January 2014; MI's expansion became effective April 1, 2014 and NH's expansion became effective August 15, 2014.
SOURCE: Kaiser Commission on Medicaid and the Uninsured analysis of Medicaid spending and enrollment data collected from the Medicaid Budget and Expenditure System (MBES), Centers for Medicare and Medicaid Services, accessed December 2015. http://medicaid.gov/medicaid-chip-program-information/by-topics/financing-and-reimbursement/expenditure-reports-mbes-cbes.html

Endnotes

[1] Additionally, not all states reported enrollment data for all periods. The District of Columbia reported enrollment data for all but the first quarter (January – March 2014). Colorado reported enrollment data for only the first quarter (January – March 2014). Hawaii reported enrollment data for all but the last quarter (October – December 2014). Nevada, New Jersey and Washington reported enrollment data in each quarter, they did not report enrollment data for each month in the 4th quarter of 2014 (data were reported for December only).

[2] Additionally, not all states reported enrollment data for all periods. The District of Columbia reported enrollment data for all but the first quarter (January – March 2014). Colorado reported enrollment data for only the first quarter (January – March 2014). Hawaii reported enrollment data for all but the last quarter (October – December 2014). Nevada, New Jersey and Washington reported enrollment data in each quarter, they did not report enrollment data for each month in the 4th quarter of 2014 (data were reported for December only).

[3] Expansion states that do not have any newly-eligible Medicaid beneficiaries because they already covered people up to 138% FPL or higher (e.g. Massachusetts) also receive a temporary (January 1, 2014 through December 31, 2015) 2.2 percentage point increase in their federal matching rate for all populations.

[4] Robin Rudowitz, "Understanding How States Access the ACA Enhanced Medicaid Match Rates", Kaiser Family Foundation, September 2014. http://kff.org/medicaid/issue-brief/understanding-how-states-access-the-aca-enhanced-medicaid-match-rates/

Title

Increased service use following Medicaid expansion is mostly temporary: evidence from California's low income health program.

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Authors

Lo, N
Roby, DH
Padilla, J
et al.

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Increased Service Use Following Medicaid Expansion Is Mostly Temporary: Evidence from California's Low Income Health Program

Nigel Lo, Dylan H. Roby, Jessica Padilla, Xiao Chen, Erin N. Salce, Nadereh Pourat, Gerald F. Kominski

"Pent-up demand for care appears to decline rapidly after the first year of enrollment and becomes comparable to the demand of those with previous comprehensive coverage."

SUMMARY: The Affordable Care Act (ACA) has already resulted in expanded eligibility for Medicaid in 27 states, including California, as of 2014. One major concern about the Medicaid expansion is that a high level of need among the newly eligible may lead to runaway costs, which could overwhelm state budgets when federal subsidies no longer cover 100 percent of the expansion population's costs in 2017. Although cost increases as a result of the newly eligible are likely, an even more important question is whether these increases will be temporary or permanent. Evidence from California's Low Income Health Program (LIHP) suggests that cost and utilization increases among newly eligible Medicaid beneficiaries will be mostly temporary.

This policy brief presents data showing a significant decline in the use of hospital inpatient care and in emergency room visits after one year of enrollment in LIHP, and a stable, not increasing, rate of outpatient service use. Because LIHP provided health care coverage from 2011 to 2013 in advance of the full Medicaid expansion, our findings suggest that early and significant investments in infrastructure and in improving the process of care delivery can effectively address the pent-up demand for health care services of previously uninsured populations.

California's Medicaid Expansion

As of July 2014, California had enrolled 1.5 million newly eligible individuals in its Medicaid program, Medi-Cal, as a result of the Medicaid expansion authorized by the ACA and adopted by the California Department of Health Care Services.[1] The 1.5 million enrollees included approximately 650,000 individuals who were enrolled in California's Low Income Health Program (LIHP) as of December 2013 and who transitioned into Medicaid on January 1, 2014.[2] LIHP served as a bridge to the Medicaid expansion, providing potential future enrollees with health care coverage ahead of the legislated start date and facilitating their transition into Medicaid, as described in greater detail below.

Previous lack of affordable coverage, receipt of episodic care, and a high prevalence of chronic conditions among those formerly uninsured are major concerns for Medicaid programs in California and across the nation. Newly eligible Medicaid enrollees are expected to have a significant level of unmet need (pent-up demand) and disproportionally higher rates of costly emergency room visits and hospitalizations. In part, these concerns

appear supported by recently published evidence from the Oregon Health Insurance Experiment that suggests higher expenditures among newly enrolled Medicaid beneficiaries during their first year of enrollment.[3] Those findings have been cited as justification for states not to expand their Medicaid programs. Whether increased utilization following Medicaid expansion will be temporary or permanent cannot be answered by the Oregon experiment, however, because no measures were implemented to manage utilization, and the study was limited in both duration and geographic implementation. The question of whether increased utilization and expenditures among newly enrolled Medicaid beneficiaries is temporary or permanent has important implications for the sustainability of national Medicaid expansion. This policy brief addresses the issue directly, using evidence from California's pre–Medicaid expansion programs.

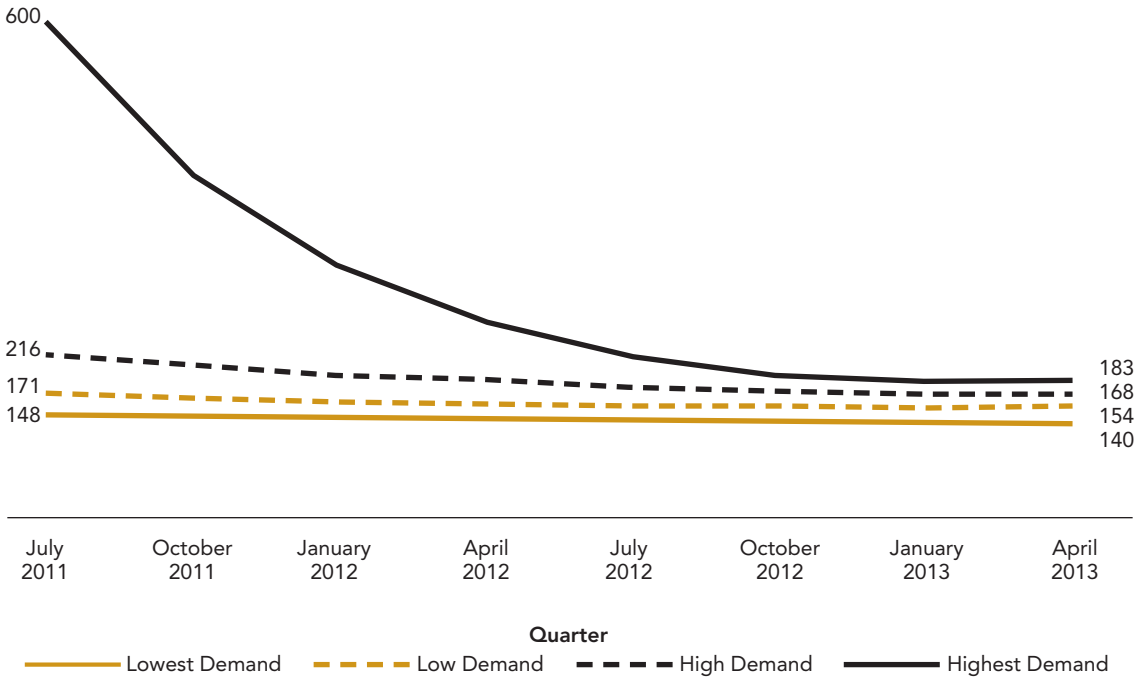
"The question of whether increased utilization and expenditures among newly enrolled Medicaid beneficiaries is temporary or permanent has important implications for the sustainability of national Medicaid expansion."

To assess the issue of both the magnitude and duration of pent-up demand among the newly eligible Medicaid population, we examined enrollment and claims data from two consecutive §1115 Medicaid waiver programs in California—the Health Care Coverage Initiative (HCCI), which ran from September 2007 to October 2010, and LIHP, which ran from July 2011 to December 2013. Both programs were designed to provide health care coverage to low-income uninsured adults (income up to 200 percent of the federal poverty level) who were not eligible for Medi-Cal or other public programs at the time, but who would become eligible for Medi-Cal or subsidies through the Health Benefit Exchange in 2014. The programs were funded and administered by participating counties, which received federal matching funds, relied on networks comprised in part of safety-net providers, had defined benefit packages, and met other requirements.[4,5,6]

The number of participating counties was 10 under HCCI and increased to 53 under LIHP. LIHP, which was authorized after the passage of the ACA, had more enrollees, more varied income eligibility levels, additional benefits, and a larger provider network per county than HCCI. Both programs used county dollars to leverage federal matching funds, doubling the county-level resources available for caring for the uninsured future Medi-Cal and subsidy eligible populations in participating counties.

We examined data from enrollees during the first year of LIHP who would have been eligible for the Medicaid expansion (up to 133 percent of the federal poverty level). We included 8 of the 10 counties (Alameda, Orange, San Diego, San Francisco, San Mateo, Ventura, Contra Costa, and Kern) that participated in both HCCI and LIHP. We focused on these counties because they reported data for two years prior to LIHP enrollment and two years after enrollment. We then divided 182,443 first-year LIHP enrollees in these counties into four distinct groups based on their expected level of pent-up demand: (1) 69,095 who had not used county indigent services prior to enrolling in LIHP (highest); (2) 16,596 who had used county indigent services prior to enrolling in LIHP (high); (3) 12,033 who had been enrolled in HCCI but had not used services while in HCCI (low); and 84,709 who had been enrolled in HCCI and had used services while in HCCI (lowest). We compared the rates (per 1,000 enrollees) of outpatient visits, emergency room visits, and hospitalizations for each group. We controlled for utilization differences related to county of residence, demographics, number of specified chronic medical conditions, and length of enrollment, using regression models.

Rates of Emergency Room Visits per Quarter per 1,000 LIHP Enrollees, California **Exhibit 1**

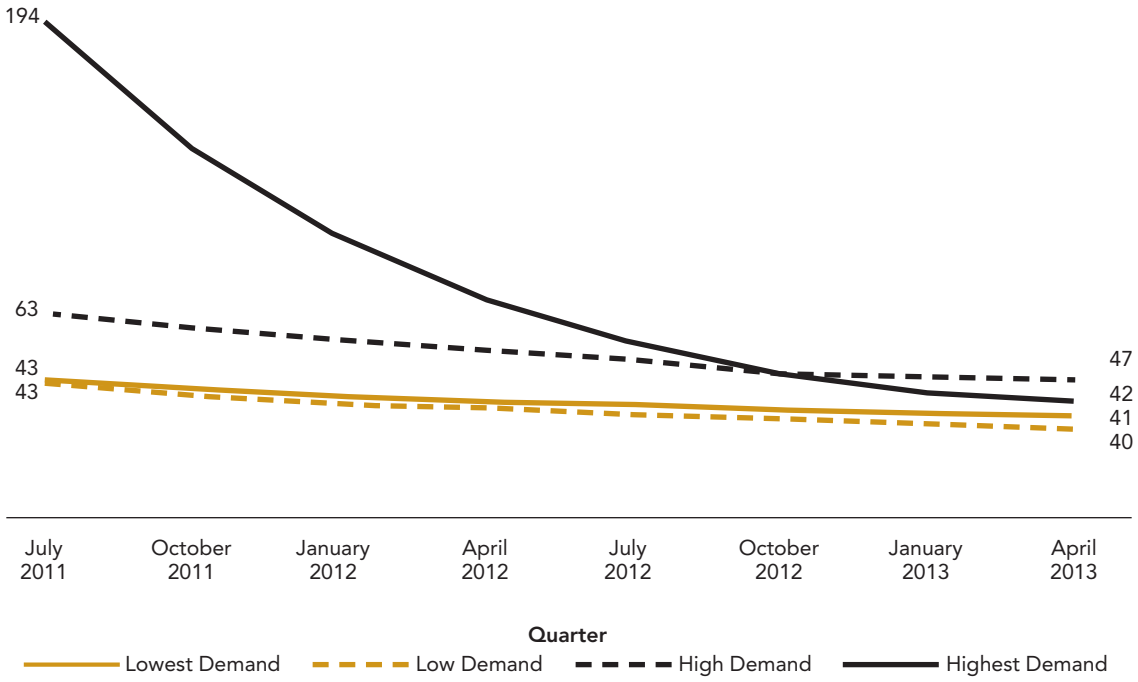


Note: Rates of ER visits are adjusted for county and enrollee characteristics.

Rates of Emergency Room Visits and Hospitalization Declined Among Those with Highest Pent-up Demand

LIHP enrollees with the highest demand (who had not previously used county services) had 600 emergency room visits per 1,000 enrollees in the first quarter of the program. This rate declined rapidly during the first year of the program and remained relatively constant during the second year of LIHP, reaching a low of 183 per 1,000 at the end of the second year (Exhibit 1). Those with high demand also showed a significant but smaller decline in the rate of ER visits, from 216 per 1,000 enrollees in the first quarter to 168 per 1,000 enrollees at the end of the second year. The rate of emergency room visits remained low and did not change significantly for those with low or lowest pent-up demand.

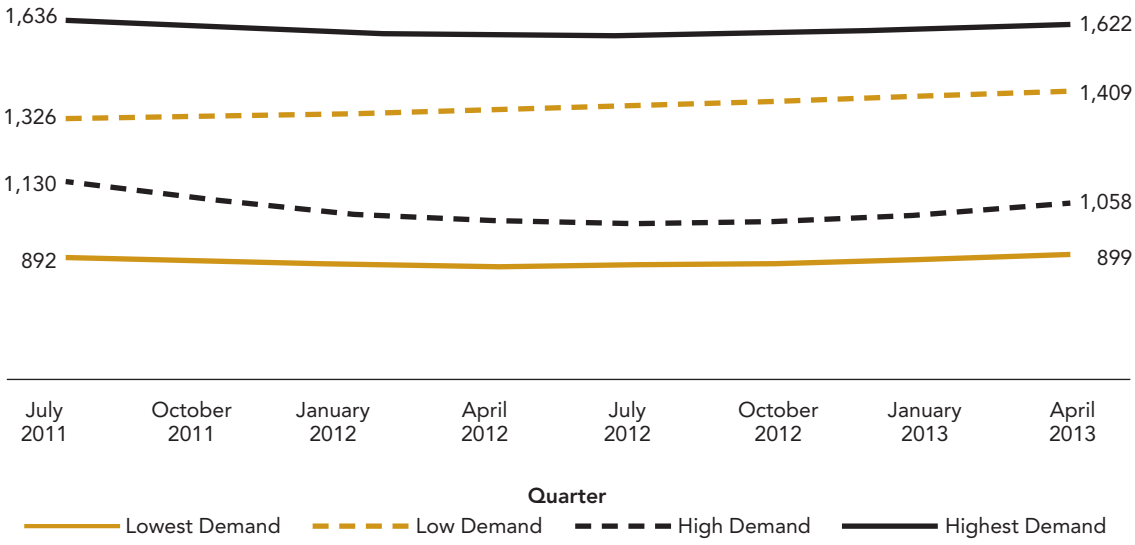
Exhibit 2 **Rates of Hospitalization per Quarter per 1,000 LIHP Enrollees, California**



Note: Rates of hospitalization are adjusted for county and enrollee characteristics.

Similar to ER use, LIHP enrollees with the highest demand had a significant and rapid decline in hospitalization rates, from 194 to 42, from the first to the last quarter studied (Exhibit 2). A slower but significant decline also occurred among those with high demand, from 63 to 47 hospitalizations per 1,000 enrollees. The hospitalization rates for those with low or lowest pent-up demand remained virtually the same during the first two years of the program.

Rates of Outpatient Visits per Quarter per 1,000 LIHP Enrollees, California **Exhibit 3**



Note: Rates of outpatient visits are adjusted for county and enrollee characteristics.

Rates of Outpatient Visits Remained Relatively Constant Among All LIHP Enrollees

The rate of outpatient visits by LIHP enrollees with highest demand was 1,636 per 1,000 enrollees in the first quarter, decreasing only slightly to 1,622 by the end of the second program year (Exhibit 3). The trend among enrollees with high demand and those with the lowest pent-up demand was essentially constant during the two years, and both groups had fewer visits than the group with the highest demand. Those with low pent-up demand (previously enrolled in the HCCI program but had not used services) had a slight increase in visit rates, with 1,326 per 1,000 enrollees in the first quarter and 1,409 by the end of the second year.

"Early and significant investments in infrastructure and in improving the process of care delivery can effectively address the pent-up demand for health care services of previously uninsured populations."

Policy Implications

As of January 1, 2014, 650,000 LIHP enrollees had been transitioned into Medi-Cal in California, accounting for about 34 percent of newly eligible Medi-Cal enrollees in the state. All new Medi-Cal beneficiaries were enrolled in participating managed care plans, but LIHP enrollees were able to retain their primary care providers if those providers participated in the Medi-Cal managed care network(s) available in their county.

The findings reported here have two significant implications for California and the nation. First, although newly eligible Medicaid enrollees have pent-up demand for care, this demand appears to decline rapidly after the first year of enrollment and becomes comparable to the demand of those with previous comprehensive coverage. Second, for populations who were "pre-enrolled" in coverage programs prior to Medicaid expansion in January 2014, much of the pent-up demand for expensive emergency room and hospital care has already been met.

The HCCI and LIHP programs required counties to develop several enhanced care processes that may have been responsible for the decline in emergency room and hospitalization rates reported in this policy brief. These enhanced processes included: (1) mandatory assignment of enrollees to a medical home; (2) care coordination and teamwork training for primary care providers; (3) health risk assessments to stratify enrollees into varying intensities of disease and case management; (4) improved access to specialty and other services required to prevent deterioration of patients with ambulatory care sensitive conditions; and (5) culturally competent self-care to help diverse populations maintain and improve their health.[5,6]

Although our results are not directly comparable to those of the Oregon Health Insurance Experiment,[3] they suggest that the higher costs and utilization among newly enrolled Medicaid beneficiaries is a temporary rather than permanent phenomenon. To the extent that California's experience with the pre-ACA HCCI and LIHP programs is generalizable to other states, policymakers and service providers can expect a reduction in demand for high-cost services after the first year of Medicaid enrollment.

The LIHP program was part of the early implementation of the ACA in California. This early implementation was expected to address the pent-up demand among LIHP enrollees prior to their transition into Medi-Cal, thus reducing the anticipated surge in program expenditures and crowding of emergency rooms. Our findings indicate that these program goals have been achieved.

Methods

We used data only for the first two years of LIHP because data for the entire LIHP program were not available at the time of this study. We used evaluation and management visits to assess outpatient care and excluded other services, such as labs and imaging. We excluded Contra Costa and Kern counties from these outpatient visits due to missing procedure codes or other data limitations.

Author Information

Nigel Lo, MA, is a research analyst at the UCLA Center for Health Policy Research; Dylan H. Roby, PhD, is director of the Health Economics and Evaluation Research Program at the UCLA Center for Health Policy Research and an assistant professor of health policy and management in the UCLA Fielding School of Public Health; Jessica Padilla, MPP, is a project manager and research associate at the UCLA Center for Health Policy Research; Xiao Chen, PhD, is a senior statistician at the UCLA Center for Health Policy Research; Erin N. Salce, MPH, is a project director and research associate at the UCLA Center for Health Policy Research; Nadereh Pourat, PhD, is the director of research at the UCLA Center for Health Policy Research and a professor of health policy and management in the UCLA Fielding School of Public Health; Gerald F. Kominski, PhD, is the director of the UCLA Center for Health Policy Research and a professor of health policy and management in the UCLA Fielding School of Public Health.

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Endnotes

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10960 Wilshire Blvd., Suite 1550
Los Angeles, California 90024

UCLA CENTER FOR HEALTH POLICY RESEARCH

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Editor-in-Chief: Gerald F. Kominski, PhD

Phone: 310-794-0909
Fax: 310-794-2686
Email: chpr@ucla.edu
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Effects of ACA Medicaid Expansions on Health Insurance Coverage and Labor Supply
Robert Kaestner, Bowen Garrett, Anuj Gangopadhyaya, and Caitlyn Fleming
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ABSTRACT

We examined the effect of the expansion of Medicaid eligibility under the Affordable Care Act on health insurance coverage and labor supply of low-educated and low-income adults. We found that the Medicaid expansions were associated with large (e.g., 50 percent) increases in Medicaid coverage and corresponding decreases in the proportion uninsured. There was relatively little change in private insurance coverage, although the expansions tended to decrease such coverage slightly. In terms of labor supply, estimates indicated that the Medicaid expansions had little effect on work effort despite the substantial changes in health insurance coverage. Most estimates suggested that the expansions increased work effort, although not significantly.

Robert Kaestner
School of Public Policy & Department of Economics
University of California, Riverside
4165 Interdisciplinary South
900 University Avenue
Riverside, CA 92521
and NBER
kaestner.robert@gmail.com

Bowen Garrett
Health Policy Center
Urban Institute
2100 M Street NW
Washington, DC 20037
bgarrett@urban.org

Anuj Gangopadhyaya
Department of Economics
University of Illinois at Chicago
Chicago, IL 60607
agango2@uic.edu

Caitlyn Fleming
Department of Economics
University of Illinois at Chicago
Chicago, IL 60607
cflemi7@uic.edu

1. Introduction

One of the key features of the Affordable Care Act (ACA) was the expansion of Medicaid to adults with incomes below 138% of the federal poverty level. Low-income adults were largely ineligible for Medicaid prior to the ACA and this group also had a relatively low rate of health insurance coverage. Therefore, expanding Medicaid to this group was seen as an important way to reduce the number of uninsured persons, which was one of the central goals of the ACA.

While the Medicaid expansions were clearly targeted at expanding health insurance coverage, the income-based eligibility criterion of the expansion may have unintended effects on work effort. There are several reasons why the Medicaid expansions may affect work.[1] First, some people may reduce work effort to lower their income and gain Medicaid eligibility. Second, some people may reduce work effort because Medicaid coverage virtually eliminates out-of-pocket medical expenditures and health insurance premium contributions, and allows a person to work less to generate the same amount of consumption (income effect). Third, some people may increase work effort because they can work and earn more than before the Medicaid expansion and still remain eligible for Medicaid due to the higher Medicaid income eligibility threshold.[2] Finally, the Medicaid expansions may have some, albeit small, positive effect on aggregate economic activity that could increase employment.

The Congressional Budget Office (2014) estimated that the ACA would reduce total hours worked by 1.7 percent, or 2 million fewer full-time equivalent workers. Of this decline in employment, the CBO (2014) estimated that the Medicaid expansions of the ACA would be responsible for a small part of the negative effect on employment.[3] To reach their conclusion about the possible effects of Medicaid, the CBO (2014)

[1] A report by the Congressional Budget Office (2014) describes the intuition underlying the causal links between Medicaid and labor supply, and earlier studies by Blank (1989), Matsudaira and Blank (2013) and Yelowitz (1995) present simple models that generate similar hypotheses. Also, see Bitler and Karoly (2015), Moffitt (2015) and, particularly, Mulligan (2013; 2015) for a description of the ACA labor supply incentives and potential behavioral responses.

[2] Another possibility is that some people will switch jobs from one that provides employer-provided insurance and a relatively low wage to one that does not provide employer-provided insurance and a relatively higher wage, but that still allows for Medicaid coverage. The higher wage of the new job would have substitution and income effects that could change work effort.

[3] See Appendix C of Congressional Budget Office (2014) report, "Labor Market Effects of the Affordable Care Act: Updated Estimates." *The Budget and Economic Outlook: 2014 to 2024*: 117-127. Feb. 2014:

relied on a synthesis of the evidence from a few, recent case studies of the effect of Medicaid expansions on labor supply. Perhaps the most important of these studies was Baicker et al. (2013), which examined the effect of expanding Medicaid to childless adults in Oregon in 2008. The findings from this study are particularly compelling because of the high degree of internal validity resulting from the experimental design that was used. Baicker et al. (2013) reported that gaining Medicaid coverage was associated with a small—1.6 percentage point (3%)—and statistically insignificant decrease in employment and earnings. Another study reviewed by CBO (2014) was DeLeire et al. (2013), which examined an expansion of Medicaid to childless adults in Wisconsin in 2009. A quasi-experimental research design (i.e., regression discontinuity) was used that exploited the capping of enrollment that left eligible people unable to enroll in Medicaid after a certain date. Results from the study indicated that Medicaid enrollment was associated with between a 2% to 18% percent decrease in employment. A third study included in the CBO (2014) review was by Garthwaite et al. (2014). This study examined the rollback of Medicaid eligibility in Tennessee in 2005. For this analysis, a difference-in-differences research design was used with Tennessee as the treated state and other Southern states the control states. Results of the analysis were mixed. Among low-educated, childless adults, the change in Medicaid policy was associated with a 25% increase in employment, but there was no effect for other educational groups.[4]

Besides these important pre-ACA studies, there are a couple of studies of the effect of the ACA Medicaid expansions on labor supply that were produced since the CBO (2014) report.[5] Gooptu et al. (2016) used a sample of low-income (<138% Federal Poverty Level) adults drawn from monthly Current Population

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http://www.cbo.gov/sites/default/files/cbofiles/attachments/45010-breakout-AppendixC.pdf. Also see Congressional Budget Office (2015). "How CBO Estimates the Effects of the Affordable Care Act on the Labor Market." Working Paper 2015-09. December 2015.

[4] Estimates in Garthwaite et al. (2014) are intention-to-treat estimates and are not directly comparable to estimates from the Oregon and Wisconsin studies. Garthwaite et al. (2014) estimated that between 63 and 90 out of every 100 childless adults that lost public health insurance coverage found employment. This is a very large implied effect of Medicaid that differs dramatically from estimates in the Oregon and Wisconsin studies. Estimates in Garthwaite et al. (2014) also suggest employment responses to changes in income (the value of Medicaid) that are 20 to 60 times the size of estimates found in most prior studies. See McClelland and Mok (2012): https://www.cbo.gov/sites/default/files/cbofiles/attachments/10-25-2012-Recent_Research_on_Labor_Supply_Elasticities.pdf

[5] There is also a larger literature on the labor supply effects of the ACA as a whole—not specific to Medicaid. Garrett and Kaestner (2014; 2015) review this literature.

Surveys between January 2005 and March 2015 to examine the effect of Medicaid expansions on three outcomes: transitions from employed to unemployed; transitions from full-time to part-time employment; and job switches (employed in one job to employed in different job).[6] A difference-in-differences research design was used. The authors reported that the ACA Medicaid expansions had no significant effect on these outcomes. In an unpublished paper, Leung and Mas (2016) used data from the American Community Survey from 2010 to 2014 and monthly Current Population Surveys from January 2010 to July 2015 to examine the effect of the ACA Medicaid expansions on employment, hours of work and wages.[7] The research design for the analysis in this study was difference-in-differences. Leung and Mas (2016) reported that the ACA Medicaid expansions had no significant effect on employment, hours of work or wages.

As this brief review of the literature has revealed, previous studies of the effect of Medicaid on labor supply have not produced a consensus conclusion.[8] This is an important gap in knowledge because of the relevance of this issue for both economic theory and public policy. Economic theory predicts that social programs with income-based eligibility will bring forth behavioral responses with respect to work effort. Therefore, measuring the existence and magnitude of a behavioral, labor supply response to the large and recent expansion of Medicaid will provide empirical evidence to assess a fundamental theoretical tenet. Moreover, two of the recent case studies of the effect of Medicaid on labor supply (OR and WI studies) were conducted using a sample of persons always eligible for Medicaid and, therefore, do not allow for one potentially important labor supply response—"jumping on" Medicaid by lowering income to gain eligibility (Mulligan 2013). For public policy, knowing whether there are unintended consequences related to work effort associated with Medicaid is an important component of a cost-benefit analysis of

[6] Note that Gooptu et al. (2016) do not exhaust the possible employment transitions because they do not examine unemployed to employed or part-time to full time. In addition, the study selected the sample based on the income in the previous (baseline) year, which may be a noisy measure of potential income in the following year.
[7] Leung and Mas (2016) also examined the effect of ACA Medicaid expansions on health insurance coverage.
[8] There is also a literature that examined the effect of Medicaid expansions for pregnant women and children in late 1980s and 1990s: Yelowitz (1995); Montgomery and Navin (2000); Ham and Shore-Shepard (2005); Meyer and Rosenbaum (2001); and Decker et al. (2014). These studies also reported mixed results.

the effectiveness of Medicaid. If there are large changes in work effort associated with Medicaid, for example, declines in work along the lines suggested by the Garthwaite et al. (2014), then the net, social benefit of the Medicaid expansions would be substantially lower than otherwise believed.

In sum, the absence of a consensus from the relatively small prior literature related to whether Medicaid affects labor supply and the importance of the issue for theory and policy warrants additional study. In this paper, we examine the effect of the ACA Medicaid expansions on health insurance coverage and labor supply. While the original formulation of the ACA Medicaid expansions was that it would be implemented in all states, a Supreme Court ruling allowed states to opt out of the expansion and approximately half did so.[9] Thus, we exploit the state-variation in expansions resulting from the Supreme Court ruling to assess the effect of Medicaid on insurance coverage and labor supply. We use two research designs: difference-in-differences and synthetic control. Data for the analysis are drawn from the American Community Survey (ACS) from 2010 to 2014, the March Current Population Survey (CPS) from 2010 to 2015, and monthly CPS data from January 2010 to May 2016.

We study both health insurance coverage and labor supply because insurance coverage is itself an important outcome of interest, and because changes in labor supply will be partly reflected by changes in insurance coverage. For example, if people reduce labor supply to become eligible for Medicaid, then we should observe a decrease in employment; an increase in Medicaid coverage; a reduction in uninsured; and possibly a reduction in private insurance if the person replaced their private insurance with Medicaid. Thus, the size of the increase in Medicaid has implications for the magnitude of the potential labor supply response. Similarly, low-income, working persons may gain Medicaid coverage because of the expanded income eligibility. For this group the extra income associated with Medicaid may cause them to work less. Therefore, changes in insurance coverage, particularly Medicaid, provide some evidence of the extent of treatment and the size of the group that may change labor supply in response to the Medicaid expansion, although the association is not necessarily one-for-one.

[9] See http://www.supremecourt.gov/opinions/11pdf/11-393c3a2.pdf

Results of our study indicate that, among low-educated and low-income adults, the ACA Medicaid expansions significantly increased Medicaid coverage by between 23 percent and 54 percent for parents, and by between 51 percent to 70 percent for childless adults. Notably, these increases in Medicaid coverage were associated with significant decreases in the proportion uninsured with relatively little change in private health insurance coverage, although for some groups such as unmarried parents living in states with prior Medicaid expansions, there was substantial switching from private insurance to Medicaid with less significant decreases in the proportion uninsured. These substantial changes in insurance coverage were, in general, associated with few significant changes in labor supply. Estimates of the effect of Medicaid on labor supply were, in general, small and not statistically significant, and most were positive. Overall, there was very little evidence that the Medicaid expansions decreased work effort.

2. ACA Medicaid Expansions

As noted, the Supreme Court decision that allowed states to opt out of the ACA Medicaid expansions resulted in approximately half of the states not expanding Medicaid in 2014 (see Table 1). Moreover, among those that did expand, several states had already expanded Medicaid to adults, for example, parents. Therefore, these states may not have experienced any real change in Medicaid eligibility for some groups. Finally, several states expanded Medicaid in 2015 or later. In short, classifying states as to whether they did or did not experience an effective change in policy is not as simple as assessing whether they expanded Medicaid in 2014 as part of the ACA.

To classify states into those experiencing a change in Medicaid policy ("treated") and those not experiencing a change in Medicaid policy ("control"), we reviewed several sources of information.[10] Table 1 provides a list of states and how we classified them into treated and control groups as of 2014.

[10] Medicaid eligibility rules were determined using Kaiser Family Foundation's Annual 50 State Survey of Eligibility Rules, Enrollment and Renewal Procedures, and Cost-Sharing Practices in Medicaid and CHIP (2009 through 2015), Medicaid.gov demonstrations and waivers database (http://www.medicaid.gov/medicaid-chip-program-information/by-topics/waivers/waivers_faceted.html), Kaiser Family Foundation's state-specific fact sheets, healthinsurance.org Medicaid state-specific fact sheets, and individual state Medicaid websites.

For analyses that use data from 2015 and 2016, we made appropriate modifications that we identify below. As of 2014, states included in the control group are:

States that did not expand Medicaid in 2014 and that had no prior Medicaid expansion between 2010 and 2014: AL, AK, FL, GA, ID, KS, LA, MS, MO, MT, NE, NC, OK, PA, SC, SD, TX, UT, VA, WY (20).

States that did not expand Medicaid in 2014 and that had prior, but limited Medicaid expansions between 2010 and 2014: IN, ME, TN, WI (4).

States that expanded Medicaid in 2014, but that had prior and comprehensive Medicaid expansion similar to ACA for both parents and childless adults between 2010 and 2014: DE, DC, MA, NY, VT (5).

The control group consists of 29 states. Note that we include IN, ME, TN and WI as control states even though they had some prior Medicaid expansions between 2010 and 2014. However, the prior Medicaid expansions in these states were limited (e.g., capped or closed enrollment). One state changed status between 2010 and 2013; Colorado expanded eligibility to childless adults in 2012, but capped the program at 10,000. To assess whether including states with prior expansions, either comprehensive as in MA or limited as in IN, made a difference, we re-estimated all models excluding these states from the analysis and we report the results below. We note here that dropping these states had little effect on estimates. As noted, four states expanded Medicaid in 2015 or 2016: PA (1/15), IN (2/15), AK (9/15), and MT (1/16). Analyses that use 2015 and 2016 data drop these states from the analysis.[11]

As of 2014, the treated states are the following:

States that expanded Medicaid in 2014 and that had no prior Medicaid expansion: AK, KY, MI, NH, NV, NM, ND, OH, WV (9).

States that expanded Medicaid in 2014 and that had a prior, but limited, Medicaid expansion for parents and/or childless adults: AZ, CA, CO, CT, HI, IA, IL, MD, MN, NJ, OR, RI, WA (13).

[11] We dropped these states because we wanted to use a common definition of treatment across the two research designs. The synthetic control method requires a common pre- and post-period, so these late expanders are dropped because we used 2014 as the beginning of the post-period. To be consistent, we also dropped these states from the difference-in-differences analysis.

We note that Michigan expanded Medicaid in April of 2014 and New Hampshire expanded Medicaid in August of 2014. We include both in treated group because Michigan expanded for most of the year and New Hampshire is a small state and the partial year expansion is unlikely to make a difference to estimates. Re-estimating models without these two states included in treatment group had no material effect on estimates. Finally, as already mentioned, states that expanded after 2014 (IN, PA, AK, and MT) are excluded from the analysis when data post 2014 is used.

The fact that some states had prior expansions motivated us to divide the treated states into two groups depending on whether they had a previous expansion. However, if a state had expanded Medicaid fully (comprehensively) to both parents and childless adults (DE, DC, MA, NY, VT), which is the equivalent of the ACA expansion, these states were included in the control group of states. Thus, the second group of states in the treated category consists of states with a full parental expansion of Medicaid and states with limited expansions for parents and/or childless adults. On the one hand, it is reasonable to expect that the effect of the 2014 (ACA) expansion of Medicaid will be smaller in states with previous expansions of Medicaid, although many of these expansions were quite limited. Most were focused on parents. On the other hand, if take-up of Medicaid among eligible persons was relatively low, the individual mandate that required all people to have health insurance and the public outreach (i.e. marketplaces) that became effective in 2014 may cause those always eligible for Medicaid to obtain it and this would suggest smaller differences between the two groups of states that expanded Medicaid in 2014. Empirically, we test whether the effect of Medicaid differed in the two groups of treated states. We also explored whether to divide the second group of treated states into a finer classification based on the type of previous expansion, but tests indicated that these two categories were the only empirically relevant groupings.[12]

3. Empirical Approach

3.a. Data

[12] Specifically, we divided the second group of treated states into those with and without a full Medicaid expansion to parents. We could not reject the hypothesis that these two groups had similar effects on outcomes.

The data used in the analysis come from three sources: the American Community Survey (ACS) from 2010 to 2014; the March Current Population Survey from 2010 to 2015; and monthly files of the Current Population Survey (CPS) from January 2010 to May 2016. From each of these datasets, we selected a sample of non-disabled, adults between the ages of 22 and 64 who have a high school education or less. We limit the sample to relatively low-educated adults because Medicaid is targeted at low-income persons and education is strongly related to income. We recognize that selecting a sample on the basis of income is problematic because Medicaid may affect labor supply and income and therefore, may lead to biased estimates.

We conduct analyses using all persons with a high school education or less and analyses stratified by marital status (married, not married), whether there is a child in the family and age.[13] We stratify the sample by marital status because it is associated with income; unmarried persons have lower incomes and may be more likely to be affected by the Medicaid expansions than married persons. We also conducted analyses for samples divided by whether or not there are children under the age of 18 in the household. Most prior Medicaid expansions were targeted toward low-income parents, so this group may be less affected by the ACA Medicaid expansions, and there may be differences in the effect of Medicaid by whether children are present because of differences in household income and preferences. Stratification by age is motivated by the same considerations with respect to income and also because age is correlated with health, which is an important determinant of health insurance coverage.

Data on earnings from the 2013 American Community Survey show that the low-educated sample we selected is quite disadvantaged. For example, unmarried parents in our sample have mean earnings of approximately $17,000 and unmarried, childless adults have mean earnings of approximately $18,000. However, as a sensitivity analysis, we also select a sample of persons with incomes less than 300% of the federal poverty limit. We chose 300% because we wanted to limit the selection bias associated with selecting the sample using income while simultaneously selecting a group that was likely affected by the

[13] Further stratification by marital status and education was not empirically meaningful—we could not reject the equality of estimates by education group within marital status category.

Medicaid expansions. Because the monthly CPS files do not report income accurately, we do not use the low-income sample in analyses that use these data. Descriptive information in Table 2 reveals that the low-educated and low-income samples are quite similar with respect to the health insurance coverage and labor supply. We discuss this further below.

The ACS collects information on approximately three million people each year covering over 92% of the U.S. population in each year. The survey is conducted on a monthly basis throughout the year and combined into an annual file. The ACS collects information on health insurance coverage at the time of interview, employment at the time of interview, usual hours of work in last year (one year prior to survey), and demographic characteristics. Because the ACS is conducted on a monthly basis, we focus on the health insurance and current employment variables. Information on usual hours of work, which refers to the past year, will span the pre-expansion period, so we do not use this outcome.

The Annual Social and Economic Supplement to the Current Population Survey, i.e., the "March CPS" conducted in March of each year (supplemented with data from February and April since 2002) collects similar information to the ACS including health insurance. The survey is of the civilian, non-institutional population of the United States. We use the March CPS only for its information on health insurance because it is available for March 2015 whereas the ACS data are through 2014 and, as noted, the ACS is conducted continuously throughout the year. One disadvantage of the March CPS is that there was a change in the health insurance question in 2014 (Turner and Boudreaux 2014; Pascale 2015). The redesigned survey was intended to address the problem related to the recall period (current v. past year) that affected past CPS surveys.

The monthly CPS files are similar to the March CPS files except they do not collect information on many social and economic indicators. However, the labor supply variables are available and refer to the survey week. Therefore, we can use the hours of work information in the monthly CPS files. In addition, the monthly CPS data are available through May 2016.

To summarize, the dependent variables and data sources for our analyses are the following:

Health Insurance: Medicaid, private insurance, and uninsured. The information on health insurance is from the ACS and March CPS.[14] The ACS and CPS allow people to report more than one health insurance category and approximately 2% to 3% report having Medicaid and another type of insurance. Labor Supply: employed at time of interview, usual hours worked per week; and worked 30 or more hours per week (full time). The employed at time of interview information is from the ACS and monthly CPS. The usual hours per week and part-time status are from the monthly CPS.

The key independent variables for the analysis are the treatment group indicators listed in the previous section and Table 1. We estimate regression models using alternate definitions of Medicaid expansion states: one model defines treatment states as all those that expanded in 2014 regardless of whether they had a prior expansion, and the second model separates treatment states into two depending whether they had a prior expansion. For the second model, we test whether the coefficients on the treatment states indicators differ. Other independent variables included in the regression include dummy variables for each year of age; dummy variables for race/ethnicity (non-Hispanic white, non-Hispanic black, non-Hispanic other, and Hispanic), dummy variables for marital status (married, never married, and other), dummy variables for education (high school degree and less than high school degree), dummy variables for number of children (0, 1, 2, and 3 or more), and dummy variables for family size (1, 2, 3, 4 and 5 or more).

Descriptive statistics of the variables used in the analysis are presented in Table 2.[15] These statistics are based on data from 2010, the baseline period. The left panel presents means for the samples selected using education. In general, the low-educated samples drawn from the ACS and CPS are quite similar. Approximately one-third are uninsured; 55 percent to 60 percent are covered by private insurance; 11 percent are covered by Medicaid; two-thirds are employed at the time of interview; and

[14] We do not divide private health insurance into employer-sponsored and non-group because of well-known problems of data quality that make the distinction between types of private insurance particularly problematic (Call et al. 2012; Claxton et al. 2014; Pascale 2016). Our focus is also on labor supply and changes in Medicaid and uninsured are most relevant outcomes related to labor supply. However, estimates for models that divide the privately insured into those with and without employer sponsored insurance are available from the authors.
[15] These are unweighted estimates.

approximately 60 percent work full-time (>30 hours). The low-educated sample drawn from the March CPS is slightly younger, less likely to be white, and more likely to have a child under age 18 in the household than the ACS sample, although none of the differences are that marked. The right panel of Table 2 presents means for the samples selected using income. Here too the ACS and CPS samples are very similar, and notably, not too different from the low-educated samples, which confirms that selecting the sample using education is an effective way to identify a group likely affected by the Medicaid expansions. The low-income samples are slightly more likely to be uninsured (e.g., 36 percent) and slightly less likely to work (full time) than the low-educated samples. However, differences are not substantial.

3.b. Difference-in-differences Research Design

The ACA Medicaid expansions provide state by year variation in Medicaid eligibility that can be used to obtain estimates of the effect of Medicaid eligibility on health insurance coverage and labor supply. The expansions represent a source of plausibly exogenous variation in Medicaid eligibility, although clearly states chose whether to expand or not and, therefore, the exogeneity of the expansions needs to be assessed. Accordingly, we use a difference-in-differences (DiD) research design to obtain estimates of the effect of the expansions on health insurance and labor supply. The DiD design is a straightforward approach that is intended to mimic the pre- and post-test with comparison group design of a true experiment.

We have already described the classification of states into treatment and control groups. Given this classification, DiD estimates can be obtained using the following regression model:

$$HEALTHINS_{ijt} = \alpha_0 + \beta_j + \delta_t + \lambda(TREAT_j * Y2014_t) + X_{ijt}\Gamma + e_{ijt}$$

Equation (1) indicates that the health insurance coverage, for example, Medicaid, of person "i" in state "j" and year "t" depends on state fixed effects (β_j), year fixed effects (δ_t), an indicator of whether the state is in treated group and the year is 2014 ($TREAT_j * Y2014_t$), and demographic characteristics (X_{ijt}) such as age that were previously described. In equation (1), the dependent variable is health insurance, but

analogous models will be estimated using labor supply measures. In addition, for data that extend to 2015 or 2016, the interaction between the treated indicator and post-expansion period will include the additional years.

We also estimate a version of equation (1) that allows there to be two treatment groups: states that expanded Medicaid in 2014 and had no prior expansions and states that expanded Medicaid in 2014, but had some form of prior expansion. The model that allows for effects to differ by treatment group type is:

$$HEALTHINS_{ijt} = \alpha_0 + \beta_j + \delta_t + \lambda_1(TREAT\_NOPRIOR_j * Y2014_t) + \lambda_2(TREAT\_PRIOR_j * Y2014_t) + X_{ijt}\Gamma + e_{ijt}$$

In equation (2), there are two treatment indicators and two coefficients measuring the effect of Medicaid expansions in the different types of treatment states. We test whether $\lambda_1 = \lambda_2$ to assess whether the prior expansion of Medicaid resulted in different effects of the 2014 expansion.

The key assumption underlying the validity of the DiD approach is the parallel trends assumption—that in the absence of the ACA Medicaid expansions changes in health insurance and labor supply would be the same in treated and control states. To assess the likely validity of this assumption, we estimate a model, which we refer to as an event history specification, allowing for a complete set of interactions between the indicator of treatment status and years:

$$HEALTHINS_{ijt} = \alpha_0 + \beta_j + \delta_t + \sum_{k=2011}^{2014} \lambda_k (TREAT_j * YEAR_t) + X_{ijt}\Gamma + e_{ijt}$$

The only difference between equations (1) and (3) is that the effect of treatment is allowed to differ for every year instead of just 2014 (2015 and 2016 too when relevant). The parallel trends assumption implies that the coefficients on the interaction terms between treatment and year (λ_k) would be zero in years prior to 2014. We test this hypothesis and report results below, but note here that the evidence from this analysis generally supports the validity of the research design.

3.b. Synthetic Control

A second approach to obtaining estimates of the effect of the Medicaid expansions on labor supply is the synthetic control approach proposed by Abadie et al. (2010). This approach uses a matching

procedure to create a synthetic comparison (control) group that is a weighted average of states that did not expand Medicaid. While technically not a DiD approach, the Abadie et al. (2010) approach is similar because the estimate of the effect of Medicaid is obtained by taking the difference in means between treated states and a weighted average of non-treated states. However, only the post-expansion difference is used to calculate the estimate because the approach assumes that pre-expansion differences between treated and non-treated states are zero. Indeed, the central feature of the Abadie et al. (2010) method is to select a comparison group in such a way as to minimize—reduce toward zero—the pre-expansion differences in means between treated states and the synthetic comparison group.

The key to the Abadie et al. (2010) approach is selecting the weights that are used to construct the synthetic comparison group, or counterfactual outcome. Abadie et al. (2010) suggest choosing weights that minimize differences between the pre-treatment mean outcome and covariates of treated and untreated observations.[16] The unit of observation in this approach is the state. The argument underlying this approach is that if the pre-treatment means of the treated and control states are equal, then the post-treatment difference is likely to represent a valid estimate of the policy. An advantage of the synthetic control approach is that the closeness of the match between the treated and control states can be assessed easily, for example, graphically, and the weight for each potential comparison state is provided.

There are a variety of ways to select weights that are used to construct the synthetic comparison group, for example, by minimizing the difference between each pre-period value of the dependent variable and covariates of treated and untreated states. Alternatives include using the average of pre-period outcomes to match on instead of each pre-period outcome, or to match on the average and only the last (first) pre-period outcome. We chose to match states using each pre-period value of the dependent variable and a select number of covariates (state means of age, proportion in race/ethnic categories and proportion with less than high school degree), but we also report estimates from an alternative approach that uses only the average value of pre-2014 dependent variable, the 2013 value and each pre-2014 value of select

[16] See Abadie et al. (2010) for details.

covariates.[17] Only states with positive weights are used to construct the synthetic control group. Notably, for our preferred method of matching, almost all (e.g., 25) potential control states had positive weights. For the alternative method, the number of states with positive weights was less fluctuating between 5 and 13 depending on the outcome and data set. Despite this difference, estimates from the two approaches were very similar.[18]

Once the weights are selected and the synthetic comparison group constructed, the estimate of the effect of the Medicaid expansion is derived by taking the difference between the mean outcome in the treated states (treated as one unit) and the mean outcome in the synthetic comparison group, which is just a weighted average of outcomes in the non-expanding states. Inferences for this estimate are derived from permutation tests (randomization inference) that consist of re-doing the analysis 1000 times, but each time using a randomly selected group of treatment states. After generating these 1000 "random" estimates, the p-value of the estimate of the effect of Medicaid expansion on labor supply is the fraction of "random" estimates that are larger in absolute value than the actual estimate for the true treated states.

4. Results

4.a. Estimates of the Effect of ACA Medicaid Expansions on Health Insurance Using American Community Survey 2010 to 2014

We begin the discussion of results with the effect of the Medicaid expansions on health insurance coverage, which is classified into three categories: Medicaid, uninsured, and private. Table 3 presents difference-in-differences estimates, which are derived from data from the ACS. The table is organized as follows. There are two panels that present results for parents (children under 18 in family)—the top panel—and childless adults (no children under 18 in family)—the bottom panel. Within each panel, estimates from two samples are shown: the low-educated sample and the low-income (<300 percent of

[17] See Kaul et al. (2015) for an analysis of the potential consequences of different approaches. We also used a third approach—matching on pre-2014 averages of dependent variable and select covariates. Estimates from this third approach were in all but a few cases similar to those from the other two approaches. Overall, the method of matching made little difference.

[18] For analyses that dropped states with prior expansions or because of late expansion dates, the number of potential control states was considerably less as was the number of state with positive weights.

federal poverty) sample. For each of the three health insurance outcomes—Medicaid, uninsured and private—estimates from two model specifications are presented in separate rows (top and bottom row). In one model (top row), we combine all states that expanded Medicaid in 2014 into one treatment group. In the second model (bottom row), we allow the effect of the Medicaid expansions to differ depending on whether the state had a prior expansion of some type. In addition, for the low-educated sample, we present estimates for each outcome and each sample (parents and childless adults) for observations further stratified by marital status.

Estimates in the top panel (parents) and top row of Table 3 indicate that the ACA Medicaid expansions were associated with an increase in Medicaid coverage, a decrease in the proportion uninsured, and a decrease in private insurance coverage. Estimates related to Medicaid and uninsured are always statistically significant. For the full ("All") low-educated sample of parents, the 2014 Medicaid expansions increased Medicaid coverage by 4 percentage points, or 24 percent of the 2010 mean of the proportion of uninsured. The expansion of Medicaid was associated with a 2.7 percentage point decline in uninsured and a 1.1 percentage point decline in private insurance. The decline in private insurance suggests some amount of crowd out of private for public insurance. For the sample of parents as a whole, approximately 25% of the increase in Medicaid may have come from private insurance. Estimates for the low-income sample are very similar to those for the low-educated sample, although slightly larger. The Medicaid expansion of 2014 was associated with a 4.6 percentage point (24 percent) increase in Medicaid; a 2.7 percentage point decrease in uninsured; and a 1.6 percentage point decrease in private insurance. These estimates suggest a slightly higher rate of crowd out (35 percent) of private for public insurance than in the low-educated sample.

Estimates in the bottom row of the top panel reveal that, among married parents, the effect of the 2014 Medicaid expansions did not differ significantly, or meaningfully, by whether a state had a prior Medicaid expansion. However, for not married parents, the effect of the 2014 expansion was noticeably, if not statistically, different by whether the state had a prior Medicaid expansion, which were mainly targeted at parents. Among the low-educated and unmarried group, the Medicaid expansion was associated with a

larger increase in Medicaid (5.6 percentage points v. 3.5 percentage points) and larger decrease in uninsured (4.9 percentage points v. 1.5 percentage points) in states that had no prior expansion than in states with a prior expansion. The substitution of private for public coverage appears to have occurred mostly among the not married, parent sample in states that had previously expanded Medicaid; for this group of parents, the 2014 Medicaid expansion was associated with a 3.5 percentage increase in Medicaid and a 2.4 percentage point decrease in private insurance suggesting a crowd out rate of 69 percent. Estimates in the bottom row of the top panel pertaining to the low-income sample also suggest that the effect of the 2014 expansion was larger in states that had no prior expansion, and that crowd out of private insurance was slightly greater in the prior expansion states.

In the bottom panel of Table 3, estimates of the effect of the 2014 expansions on childless adults are presented. Here too estimates indicate that the 2014 expansions were associated with an increase in Medicaid coverage (53 percent) and decrease in uninsured (11 percent), but in this case, there is little change in private insurance. However, there are substantial differences by marital status within the low-educated sample with effect sizes larger in absolute value for the not married group. Among the low-educated, married childless adults, the 2014 Medicaid expansions were associated with a 2.4 percentage point (63 percent) increase in Medicaid coverage and a 2.2 percentage point (11 percent) decrease in uninsured. For the not married group of childless adults, the 2014 expansion is associated with a 5.2 percentage point (48 percent) increase in Medicaid and a 4.4 percentage point (10 percent) decrease in uninsured. As estimates in the bottom row on the bottom panel indicate, the effect of the 2014 expansions on health insurance coverage of childless adults did not differ significantly by whether the state had a prior expansion, which is consistent with the fact that most prior expansions were targeted at parents. Estimates for the low-income sample are similar, but again, slightly larger than the corresponding estimates for the low-educated sample. Among low-income, childless adults, the 2014 Medicaid expansions were associated with a 6.3 percentage point (66 percent) increase in Medicaid; a 4.8 percentage point (12 percent) decrease in uninsured; and a 1.3 percentage point decrease in private

insurance. As with the low-educated sample, there is little evidence that the effect of the expansion differed by whether a state had a prior expansion.

As previously noted, the validity of the difference-in-differences estimates in Table 3 depends on the parallel trends assumption that in the absence of the Medicaid expansions changes in health insurance coverage would be the same in treated and control states. To assess the likely validity of this assumption, we re-estimated the models that produced the estimates in Table 3, but allowed the treatment indicator to differ by every year instead of just pre- and post-2014. We refer to estimates from these analyses as event history estimates. The parallel trends assumption implies that all pre-2014 interactions between the treatment indicator and the year dummy variables are zero.

Appendix Table 1 presents the event history estimates. While estimates are not all independent, there are 72 different estimates in Appendix Table 1 that are relevant—pertaining to coefficients on the interaction between treatment indicator and pre-2014 dummy variables. Only 7 of the 72 estimates are statistically different from zero. Even when estimates are different from zero, they are much smaller than the estimates associated with the 2014 interaction. Overall, the event history estimates support the validity of the DiD approach. Given this finding, it is reasonable to interpret the estimates in Table 3 as causal effects of the 2014 Medicaid expansions.

We also obtained estimates of the effect of the Medicaid expansions on health insurance coverage using a synthetic control approach. While not a difference-in-differences approach, the synthetic control approach is similar. In this case, the control states are chosen on the basis of a statistical, matching procedure instead of simply using all non-expansion states as controls, as in the difference-in-differences design. Figures 1 through 12 provide graphical evidence of the validity of the synthetic control approach. In all figures, the pre-2014 trend in each measure of health insurance is very similar—almost identical—between the treated states and synthetic control group of states.

In Table 4, we present estimates obtained using the synthetic control approach. For comparison, we also show the analogous difference-in-differences estimates from Table 3 in Table 4. Note that p-values for the synthetic control estimates are provided in brackets in Table 4 because the randomization inference

approach produces only p-values. Overall, synthetic control estimates are quite similar to difference-in-differences estimates. The only difference of note is that estimates from the synthetic control approach suggest less crowd out of private insurance. Despite this small difference, the similarity of the synthetic control and difference-in-differences estimates bolsters the case for interpreting the estimates as causal.[19] We also conducted analyses for samples stratified by age, which is a demographic factor related to income, and therefore likely eligibility, and other determinants of health insurance coverage such as health that could cause a different behavioral response. We report these results in Appendix Table 2 using the low-educated sample.[20] Estimates of the effect of the 2014 Medicaid expansions on health insurance coverage do not vary significantly or meaningfully by age. The expansions had a slightly larger effect on Medicaid coverage and the proportion uninsured among younger (ages 22 to 44), low-educated adults than older (ages 45 to 64), low-educated adults. The one notable difference by age is that there is more evidence that the Medicaid expansions resulted in a substantial amount of crowding out of private for public insurance among unmarried, parents between the ages of 45 and 64. For this group, the Medicaid expansions had virtually no effect on the proportion uninsured—the increase in Medicaid coverage was almost fully (84 percent) offset by a decrease in private coverage.

Finally, using the low-educated sample, we re-estimated all models dropping the nine control states that had prior expansions (DE, DC, MA, NY, VT, IN, ME, TN and WI) and the two treatment states that expanded late (NH and MI). We report both difference-in-differences and synthetic control estimates in Appendix Table 3 along with corresponding estimates from Tables 3 and 4 for comparison.[21] Estimates in Appendix Table 3 are quite similar quantitatively to the corresponding estimates in Tables 3 and 4, and

[19] We also estimated synthetic control models using a different approach to select weights for constructing the control group. Specifically, we used the average value of health insurance between 2010 and 2013 and the 2013 value instead of each individual value. Estimates from this alternative (not reported) were virtually identical to those reported in Table 4.

[20] Estimates by age are available upon request for the low-income sample. These are very similar to those reported for low-educated sample, which is unsurprising given the similarity of estimates between the two samples in Table 3 and 4.

[21] Appendix Figures A1 through A6 show that the synthetic control approach of Appendix Table 3 is valid as illustrated by the closeness of the pre-2014 trends in outcomes between the treated and synthetic control groups.

there are virtually no qualitative differences between estimates in Appendix Table 3 and estimates in Tables 3 and 4.

4.b. Estimates of the Effect of ACA Medicaid Expansions on Health Insurance Using March Current Population Survey 2010 to 2015

In addition to using the ACS, we obtained estimates of the effect of the 2014 Medicaid expansions on health insurance coverage using the March CPS from 2010 to 2015. One possible advantage of the March CPS is that it reports data as of March 2015 whereas the ACS collects information throughout the year and the last year is 2014. Thus, there is a longer post-expansion period in the March CPS than the ACS. The disadvantage of the March CPS is the change in the survey design related to health insurance in 2014. We do not take a position on which is the preferred data source because it is unclear whether one if preferable to the other. To present the evidence in an easily digestible form and one that facilitates comparing estimates from the ACS and March CPS estimates, we calculated the effect of the 2014 Medicaid expansions as the percentage change in health insurance coverage from the 2010 baseline. These results are reported in Table 5 and the full set of underlying estimates obtained using the March CPS are reported in Appendix Table 4.

Overall, estimates of the effect of Medicaid expansions on health insurance coverage from the March CPS are largely consistent with corresponding estimates obtained using the ACS, as the results in Table 5 illustrate. The main difference is that the estimates from the CPS indicate larger increases in Medicaid and larger decreases in uninsured. For example, among low-educated, parents, the 2014 Medicaid expansion was associated with a 6.5 percentage point (43 percent) increase in Medicaid in the CPS. The analogous estimates from the ACS were 4.0 percentage points (24 percent). For uninsured, CPS estimates indicate a 4.0 percentage point (13 percent) decrease where ACS estimates indicated 2.7 percentage point (9 percent) decrease. Estimates from the CPS also show that results are similar whether a low-educated or low-income sample is used. As with the ACS, estimates of the effect of the Medicaid expansions on Medicaid coverage and uninsured tend to be larger for the low-income sample than from the low-educated sample.

We also conducted a similar set of analyses using the March CPS as we did for the ACS: event history analysis assessing validity of the difference-in-differences research design; an analysis that used the synthetic control approach; and an analysis that stratified by age. With respect to the event history analysis (see Appendix Table 5), only 3 of 72 estimates associated with the interaction between the treatment indicator and pre-2014 dummy variables were significant. This provides considerable evidence that the DiD design is valid and results are plausibly interpreted as causal. Appendix Table 6 and Appendix Figures 7 through 18 present synthetic control estimates of the effect of Medicaid on health insurance using the March CPS. As was the case for the ACS, there is strong consistency between the DiD and synthetic control estimates further bolstering the case that our estimates be interpreted as causal. Appendix Figures 7 through 12 also illustrate the close match between the treated and synthetic control states and the likely validity of the synthetic control approach. Finally, Appendix Table 7 shows estimates from samples stratified by age. Given the smaller sample sizes of the March CPS than the ACS, these estimates are less precisely estimated. However, as with the ACS, estimates indicate that the expansions had a slightly larger effect on Medicaid coverage and the proportion uninsured among younger (ages 22 to 44), low-educated adults than older (ages 45 to 64), low-educated adults. Finally, we re-estimated all models dropping the nine states with prior expansions and the two late expanding states. Estimates from this analysis are presented in Appendix Table 8 and are quite similar to those from analyses that include all states.

4.c. Summary of Estimates of the Effect of ACA Medicaid Expansions on Health Insurance

In summary, estimates in Tables 3 through 5 and Appendix Tables 1 through 8 indicate that the 2014 Medicaid expansions significantly increased Medicaid coverage and decreased the proportion of uninsured among low-educated/low-income persons. Table 5 presents a summary of results. The largest effect sizes were found childless adults. For this group, which was arguably the target group of the Medicaid expansions, the proportion of adults enrolled in Medicaid increased by approximately 51 percent to 70 percent depending on the sample and data source. Correspondingly, the proportion of low-educated/low-income, childless adults who were uninsured decreased by approximately 9 percent to 14

percent depending on the sample and data source. For low-educated/low-income parents, the increase in Medicaid resulting from the ACA expansions were approximately half the size as for childless adults, but the decrease in the proportion uninsured was approximately the same (in relative terms). There was limited, and not always consistent evidence of a modest amount of crowding out of private for public insurance coverage. The largest amount of crowd out was found for unmarried, parents in states that had prior Medicaid expansions. Finally, our estimates are consistent with other recent papers that have examined the effect of the Medicaid expansions on health insurance using different data sources, samples and methods (Courtemanche et al. 2016; Frean et al. 2016; Wherry and Miller 2016).

4.d. Estimates of the Effect of ACA Medicaid Expansions on Labor Supply—American Community Survey 2010 to 2014

As documented above, the ACA Medicaid expansions had a significant impact on health insurance coverage, which raises the possibility that people altered their labor supply to take advantage of the new Medicaid benefit. We assess this hypothesis first using data from the ACS and then using data from monthly CPS surveys.

Table 6 presents estimates of the effect of the 2014 Medicaid expansion on whether a person is employed at the time of the interview using data from the ACS. The table is organized in a similar way as previous tables, although we present both difference-in-differences (labeled DD) and synthetic control (labeled SC) estimates in the same table. The top panel of Table 6 shows estimates for parents and the bottom panel shows estimates for childless adults. Within each of these two groups, we show estimates from a sample of low-educated (HS or less) adults and from a sample of low-income (<300 percent of FPL) adults. We also present estimates from a sample stratified by marital status for the low-educated group.

Estimates in Table 6 are remarkably consistent. Almost all (28 out of 32) are small, for example, less than 0.5 percentage points (<1 percent of baseline mean). All but two estimates are statistically insignificant. Most estimates are positive. Overall, estimates in Table 6 suggest that, on average, the Medicaid expansions had virtually no effect on employment as of 2014. If anything, it appears that the Medicaid expansions are associated with an increase in employment, although, as noted, only one estimate (of 32)

is statistically significant. Further, if we use standard errors derived from the difference-in-difference analyses as a reference, for example, a value of 0.003, in most cases, we can reject effect sizes less than approximately -0.005. Thus, estimates rule out decreases in employment of 1 percent or more. Estimates in Table 6 are somewhat larger in relative terms based on the proportion of the sample that experienced a change in Medicaid, or uninsured. Against this benchmark, which is at best suggestive of the size of the potentially treated group and do not include those affected who did not have to switch coverage to benefit[22], estimates in Table 6 can rule out decreases in employment for those who changed coverage of approximately 10 percent to 15 percent (e.g., -0.005/0.05) or greater. We reiterate, however, that most estimates are positive suggesting an increase in employment.

We also assess the validity of the difference-in-differences estimates in Table 6 using the event history approach described earlier. Estimates from this analysis are in Appendix Table 9 and provide substantial support for the validity of the difference-in-differences analysis—only 2 of the 24 interactions between treatment and pre-2014 year indicators are statistically significant. Similarly, Appendix Figures 19 through 24 show that there is a close match between the pre-2014 trends in employment between the treated and synthetic control groups of states, which provides support for the validity of this approach.[23] Moreover, there is substantial agreement between estimates obtained from the two approaches. Finally, in Appendix Table 10, we report DD and SC estimates of the effect of Medicaid expansions on labor supply omitting the nine states with prior expansions and two states with late expansions. Results from these analyses are very similar to those reported in Table 6.

4.e. Estimates of the Effect of ACA Medicaid Expansions on Labor Supply—Monthly Current Population Survey January 2010 to May 2016

The final set of results is for the effect of Medicaid on labor supply using monthly CPS files. These data extend through May 2016, which is nearly 2.5 years after the initial implementation, and allow for the

[22] This includes those on Medicaid prior to expansion who were potentially able to increase labor supply and still remain eligible for Medicaid.

[23] Synthetic control estimates that use the alternative approach to constructing weights that uses the 2010 to 2013 average value of the dependent variable and the 2013 value are very similar to those reported in Table 6.

analysis of more measures of labor supply, specifically, usual hours worked per week and whether a person worked full-time, defined here using a threshold indicating greater than 30 hours per week. For these data, we do not use a sample of low-income persons because income is not well measured in these data. We also omit all states that expanded in 2015/2016 (i.e., AK, MT, IN and PA).

Table 7 presents difference-in-differences estimates of the effect of Medicaid on labor supply using the monthly CPS. The table is divided into two panels depending on whether we are analyzing parents (top panel) or childless adults (bottom panel). Within each panel, we show estimates for three outcomes (employment, usual hours of work, and >30 hours per work) for the full sample, and for samples stratified by marital status.

Estimates in the top panel of Table 7, which pertain to parents, are not statistically significant. Estimates related to married parents are small, negative and not statistically significant. Among unmarried parents, estimates are positive, relatively small (e.g., 2% of mean) and not statistically significant. In addition, there is no evidence that the effect of Medicaid expansions on labor supply of low-educated parents differed by whether a state had a prior expansion.

For the childless adult sample (bottom panel of Table 7), estimates indicate that the Medicaid expansions were associated with an increase in employment and the probability of working more than 30 hours per week. While estimates are only statistically significant for the sample of married, childless adults, the magnitudes of the estimates are very similar for the unmarried sample. Similarly, estimates are very similar for states with and without a prior expansion. In terms of magnitudes, estimates indicate that the Medicaid expansions were associated with a 1.2 percentage point (1.8 percent) increase in the probability of employment and a 1.0 percentage point (1.7 percent) increase in probability of being employed full-time among childless adults.

Evidence in Appendix Table 11, however, raises a note of caution. In this table, we report estimates from the event history specification assessing the validity of the difference-in-differences approach underlying the estimates in Table 7. In this case, and particularly for the sample of unmarried parents and childless adults, we observe a substantial number of significant coefficients on the interactions between the

treatment indicator and the pre-2014, year dummy variables. The significant estimates in Appendix Table 11 are of similar magnitude to the significant estimates in Table 7. Given this evidence, we conclude that the small, significant estimates in Table 7 pertaining to the childless adult sample may not be reliable. Synthetic control estimates, which are presented in Table 8, reinforce the last conclusion. For the childless adult sample, synthetic control estimates of the effect of Medicaid expansions on labor supply are in almost all cases quite small and not statistically significant. In addition, as Figures 13 through 18 suggest, there is a close match (identical) between the treated and synthetic comparison group in the pre-ACA period, which bolsters the credibility of the synthetic control estimates. Therefore, we believe it is reasonable to give greater weight to the synthetic control estimates than the DiD estimates, and this leads us to conclude that the Medicaid expansions had virtually no effect on labor supply of childless adults. Synthetic control estimates in Table 8 for the parent sample (top panel) are small and consistent with the DiD estimates of Table 7 suggesting that for this sample the Medicaid expansions had no significant effect on labor supply.

4.f. Summary of Estimates of the Effect of ACA Medicaid Expansions on Labor Supply

The large majority of estimates of the effect of Medicaid expansions on labor supply shown in Tables 6 through 8 were small (e.g., one percent in relative terms) and statistically insignificant. Most estimates were positive. Moreover, in the few cases when estimates were statistically significant, estimates remained small and corresponding estimates obtained using different methods and/or samples were at odds with these significant estimates. Given this evidence, it appears that the Medicaid expansions did not have a significant effect on labor supply in the two years subsequent to its implementation. Moreover, the small and relatively precise estimates rule out all but the smallest negative effects of the Medicaid expansions on labor supply.

5. Conclusions

The Affordable Care Act (ACA) became law in 2010 when the unemployment rate in the U.S. was just under 10% and at a 30-year high, and the economy was just coming out of the Great Recession. With this backdrop, it is understandable that the potential work disincentives of the ACA garnered

considerable public attention. Specifically, the expansion of Medicaid income eligibility thresholds and the formation of the health insurance marketplaces that provided income-based subsidies created incentives for people to alter their labor supply. Moreover, most of the incentives generated by the ACA were likely to reduce work effort.

In this paper, we examined whether the expansions in Medicaid affected labor supply of low-educated (a high school education or less) and low-income persons, which are groups likely to be affected by the expansions. We first measured the effect of the Medicaid expansions on health insurance coverage to assess the extent of the "treatment" engendered by the expansions. Estimates indicate that the Medicaid expansions increased the proportion of the sample covered by Medicaid and decreased the proportion uninsured by a similar, but slightly lower amount because of some switching between private insurance and Medicaid. There was some variation in effects by demographic groups with larger changes in Medicaid coverage and the proportion uninsured observed for unmarried, childless adults.

Specifically, for samples of parents, estimates indicated that the Medicaid expansions:

increased Medicaid coverage by between 23 percent and 54 percent depending on the data source, time period examined and whether the state had a prior Medicaid expansion;

decreased the proportion uninsured by between 8 percent and 13 percent depending on the data source, time period examined and whether the state had a prior Medicaid expansion;

and decreased private health insurance coverage by between 0 percent and 5 percent.

For samples of childless adults, estimates indicated that the Medicaid expansions:

increased Medicaid coverage by between 54 percent and 70 percent depending on the data source, time period examined and whether the state had a prior Medicaid expansion;

decreased the proportion uninsured by between 9 percent and 15 percent depending on the data source, time period examined and whether the state had a prior Medicaid expansion;

and decreased private health insurance coverage by between 1 percent and 5 percent.

Estimates of the effect of Medicaid on labor supply were, in general, small and not statistically significant. In fact, most estimates of the effect of the Medicaid expansions on labor supply were positive.

Overall, there was very little evidence that the Medicaid expansions decreased work effort. Moreover, confidence intervals associated with estimates rule out modest to large decreases in employment and hours of work in response to the Medicaid expansions. The absence of much of a labor supply response to the expansion of Medicaid is consistent with the broader literature on the income effect of labor supply, which found small elasticities of labor supply with respect to income (McClelland and Mok 2012). Overall, the Medicaid expansions have significantly expanded health insurance coverage and reduced the proportion of people uninsured without significant unintended consequences related to work effort.

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Table 1. Classification of States into Treatment and Control Groups as of 2014

Control Groups			
No Expansion in 2014 No Prior Expansion		No Expansion in 2014 Prior Limited Expansions for Parents and/or Childless Adults	Expansion in 2014 Prior Full Expansions for Parents and Childless Adults
Alabama	Nebraska	Indiana	Delaware
Alaska	North Carolina	Maine	Washington, D.C.
Florida	Oklahoma	Tennessee	Massachusetts
Georgia	Pennsylvania	Wisconsin	New York
Idaho	South Carolina		Vermont
Kansas	South Dakota		
Louisiana	Texas		
Mississippi	Utah		
Missouri	Virginia		
Montana	Wyoming		

Treatment Groups	
Expansion 2014 No Prior Expansion	Expansion 2014 Prior Expansions for Parents and/or Childless Adults
Arkansas	Arizona
Kentucky	California
Michigan	Connecticut
Nevada	Colorado
New Hampshire	Hawaii
New Mexico	Illinois
North Dakota	Iowa
Ohio	Maryland
West Virginia	Minnesota
	New Jersey
	Oregon
	Rhode Island
	Washington

Table 2. Descriptive Statistics for 2010 from American Community Survey and Current Population Survey

	Low-educated Sample (HS or less)			Low-income Sample (<300% FPL)	
	ACS	Monthly CPS	March CPS	ACS	March CPS
Medicaid	0.11	N/A	0.11	0.14	0.13
Uninsured	0.30	N/A	0.32	0.34	0.36
Private Insured	0.60	N/A	0.56	0.52	0.49
- Non-Group Private Insurance	0.08	N/A	0.05	0.10	0.08
- Employer-Sponsored Insurance	0.52	N/A	0.51	0.43	0.42
Employed at Time of Survey	0.69	0.67	0.69	0.65	0.64
Usual Hours Worked per Week	27.3	26.3	27.3	24.3	24.3
	(20.5)	(20.6)	(20.2)	(20.3)	(20.3)
Full-Time	0.61	0.60	0.62	0.54	0.55
Age	43.9	43.2	41.8	40.7	39.3
	(12.0)	(12.02)	(11.6)	(12.2)	(11.5)
Male	0.52	0.51	0.51	0.46	0.45
Non-Hispanic White	0.62	0.62	0.52	0.59	0.51
Non-Hispanic Black	0.11	0.12	0.12	0.13	0.14
Hispanic	0.21	0.21	0.27	0.21	0.26
Other Race	0.06	0.06	0.07	0.08	0.08
Married	0.60	0.58	0.60	0.49	0.51
Divorced or Separated	0.16	0.15	0.14	0.19	0.17
Never Married	0.22	0.24	0.23	0.30	0.30
Widowed	0.02	0.02	0.02	0.02	0.21
Foreign Born	0.22	0.20	0.26	0.26	0.26
U.S. Citizenship	0.86	0.86	0.82	0.86	0.82
High School Educated	0.73	0.76	0.73	0.33	0.36
Has Children under age 18	0.35	0.37	0.46	0.43	0.53
Number of Children	0.92	0.71	0.90	1.08	1.11
	(1.22)	(1.12)	(1.20)	(1.33)	(1.31)
Family Size	3.09	3.32	3.14	3.07	3.15
	(1.80)	(1.75)	(1.70)	(1.92)	(1.82)
Observations	529,509	321,171	39,386	601,629	42,884

Notes: All data are from the 2010 American Community Survey, Current Population Survey March Supplement, and Current Population Survey monthly files. The sample in columns 1-3 is limited to non-disabled adults between ages 22-64 with a high school degree or less. The sample in the columns 4-5 is limited to non-disabled adults between ages 22-64 with family income below 300% of Federal Poverty Level. Standard deviations for continuous variables are presented in parentheses.

Table 3. Difference-in-differences Estimates of Effect of ACA Medicaid Expansions on Health Insurance
American Community Survey 2010-2014

	Low-educated Sample (HS or less)									Low-income Sample (<300% FPL)		
	Medicaid			Uninsured			Private			Medicaid	Uninsured	Private
Panel A: Parents	All	Married	Unmarried	All	Married	Unmarried	All	Married	Unmarried	All	All	All
Expand in 2014	0.040**	0.039**	0.041**	-0.027**	-0.027**	-0.024**	-0.011	-0.009	-0.019**	0.046**	-0.027**	-0.016**
	(0.008)	(0.009)	(0.009)	(0.011)	(0.012)	(0.011)	(0.007)	(0.008)	(0.006)	(0.009)	(0.010)	(0.007)
Expand in 2014, no prior policy	0.045**	0.040**	0.056**	-0.029**	-0.023	-0.049**	-0.011	-0.012	-0.008	0.051**	-0.033**	-0.014
	(0.013)	(0.013)	(0.018)	(0.013)	(0.012)	(0.019)	(0.009)	(0.009)	(0.011)	(0.015)	(0.015)	(0.009)
Expand in 2014, any prior policy	0.039**	0.039**	0.035**	-0.026	-0.029	-0.015	-0.011	-0.007	-0.024**	0.044**	-0.024	-0.017**
	(0.010)	(0.011)	(0.010)	(0.014)	(0.015)	(0.012)	(0.008)	(0.009)	(0.006)	(0.010)	(0.013)	(0.008)
p-value for test of difference between treatment effects	0.712	0.953	0.283	0.845	0.733	0.103	0.972	0.549	0.153	<0.001	0.032	0.083
Observations	857486	655254	202232	857486	655254	202232	857486	655254	202232	1257844	1257844	1257844
Mean of Dep. Var. in 2010	0.168	0.129	0.303	0.288	0.269	0.355	0.560	0.620	0.355	0.190	0.281	0.550
Panel B: Childless Adults												
Expand in 2014	0.039**	0.024**	0.052**	-0.034**	-0.022	-0.044**	-0.003	-0.001	-0.007	0.063**	-0.048**	-0.013
	(0.007)	(0.007)	(0.007)	(0.009)	(0.011)	(0.007)	(0.006)	(0.007)	(0.006)	(0.008)	(0.008)	(0.007)
Expand in 2014, no prior policy	0.035**	0.019**	0.052**	-0.028**	-0.012	-0.046**	-0.006	-0.006	-0.005	0.057**	-0.044**	-0.009
	(0.009)	(0.008)	(0.010)	(0.007)	(0.007)	(0.008)	(0.006)	(0.005)	(0.008)	(0.012)	(0.009)	(0.009)
Expand in 2014, any prior policy	0.040**	0.026**	0.052**	-0.037**	-0.026	-0.043**	-0.002	0.001	-0.007	0.066**	-0.050**	-0.014
	(0.008)	(0.008)	(0.009)	(0.012)	(0.014)	(0.009)	(0.006)	(0.008)	(0.006)	(0.009)	(0.009)	(0.008)
p-value for test of difference between treatment effects	0.637	0.488	0.992	0.484	0.328	0.853	0.536	0.334	0.683	<0.001	<0.001	0.207
Observations	1718309	855016	863293	1718309	855016	863293	1718309	855016	863293	1766166	1766166	1766166
Mean of Dep. Var. in 2010	0.073	0.038	0.108	0.305	0.191	0.421	0.614	0.763	0.462	0.095	0.386	0.506

Notes: Data are from years 2010-2014 of the American Community Survey. Estimates above dashed lines report coefficients on the interaction term between an indicator for whether a state expanded Medicaid and an indicator for whether the year is 2014. Estimates below dashed lines report coefficients on these interaction terms but distinguish between states that had no prior Medicaid policy and those that had any prior policy (except for those that had ACA-like Medicaid expansions prior to 2014). The p-value is for F-tests measuring whether Medicaid expansion effects are statistically different between states that had prior policies and those that did not. The sample in columns 1-9 is limited to non-disabled adults between ages 22-64 with a high school degree or less. The sample in columns 10-12 is limited to non-disabled adults between ages 22-64 with family income below 300% of Federal Poverty Level. Regressions are adjusted using indicators for state, year, age, sex, race, education levels, marital status, foreign-born status, citizenship status, number of children and family size. All standard errors (in parentheses) are clustered on state. (**) indicates significance at the 5 percent level.

Table 4. Synthetic Control Estimates of Effect of ACA Medicaid Expansions on Health Insurance American Community Survey 2010-2014

	Low-educated Sample (HS or less)									Low-income Sample (<300% FPL)		
	Medicaid			Uninsured			Private			Medicaid	Uninsured	Private
Panel A: Parents	All	Married	Unmarried	All	Married	Unmarried	All	Married	Unmarried	All	All	All
Indicator of Expand in 2014	0.046**	0.034**	0.067**	-0.035**	-0.032**	-0.038**	-0.006	-0.007	-0.013	0.044**	-0.035**	-0.011
[p-value]	[<0.001]	[0.003]	[0.004]	[0.004]	[0.003]	[0.021]	[0.417]	[0.367]	[0.235]	[0.003]	[0.007]	[0.123]
Difference-in-differences	0.040**	0.039**	0.041**	-0.027**	-0.027**	-0.024**	-0.011	-0.009	-0.019**	0.046**	-0.027**	-0.016**
Estimates (From Table 3)	(0.008)	(0.009)	(0.009)	(0.011)	(0.012)	(0.011)	(0.007)	(0.008)	(0.006)	(0.009)	(0.010)	(0.007)
Observations	857486	655254	202232	857486	655254	202232	857486	655254	202232	1257844	1257844	1257844
Mean of Dep. Var. in 2010	0.168	0.129	0.303	0.288	0.269	0.355	0.560	0.620	0.355	0.190	0.281	0.550
Panel B: Childless Adults												
Indicator of Expand in 2014	0.044**	0.021**	0.062**	-0.040**	-0.028**	-0.057**	0.002	0.003	-0.002	0.062**	-0.054**	-0.006
[p-value]	[0.001]	[0.006]	[<0.001]	[<0.001]	[0.034]	[<0.001]	[0.771]	[0.681]	[0.750]	[<0.001]	[<0.001]	[0.547]
Difference-in-differences	0.039**	0.024**	0.052**	-0.034**	-0.022	-0.044**	-0.003	-0.001	-0.007	0.063**	-0.048**	-0.013
Estimates (From Table 3)	(0.007)	(0.007)	(0.007)	(0.009)	(0.011)	(0.007)	(0.006)	(0.007)	(0.006)	(0.008)	(0.008)	(0.007)
Observations	1718309	855016	863293	1718309	855016	863293	1718309	855016	863293	1766166	1766166	1766166
Mean of Dep. Var. in 2010	0.073	0.038	0.108	0.305	0.191	0.421	0.614	0.763	0.462	0.095	0.386	0.506

Notes: Data are from years 2010-2014 of the American Community Survey. Estimates report the difference in the dependent variables in 2014 between treatment states and the synthetic control group. The sample in columns 1-9 is limited to non-disabled adults between ages 22-64 with a high school degree or less. The sample in columns 10-12 is limited to non-disabled adults between ages 22-64 with family income below 300% of Federal Poverty Level. P-values of synthetic control estimates [in brackets] are obtained through randomization inference. All standard errors of differences-in-differences estimates (in parentheses) are clustered on state. (**) indicates significance at the 5 percent level.

Table 5. Difference-in-differences Estimates of Effect of ACA Medicaid Expansions on Health Insurance Relative Effects (Percentage Change from 2010) for American Community Survey and March Current Population Survey

	Low-educated Sample (HS or less)						Low-income Sample (<300% FPL)					
	Medicaid		Uninsured		Private		Medicaid		Uninsured		Private	
Panel A: Parents	ACS	CPS	ACS	CPS	ACS	CPS	ACS	CPS	ACS	CPS	ACS	CPS
Indicator of Expand in 2014	24**	43**	-9**	-13**	-2	-2	24**	40**	-10**	-12**	-3**	-4
Mean of Dep. Var. in 2010	0.17	0.15	0.29	0.31	0.56	0.54	0.19	0.17	0.28	0.31	0.55	0.52
Expand in 2014, no prior policy	28**	54**	-10**	-13**	-2	-6	29**	53**	-12**	-13**	-2	-5**
Mean of Dep. Var. in 2010	0.16	0.14	0.29	0.30	0.57	0.56	0.17	0.15	0.28	0.31	0.56	0.54
Expand in 2014, any prior policy	23**	39**	-9	-13	-2	0	23**	35**	-8	-11	-3**	-3
Mean of Dep. Var. in 2010	0.17	0.16	0.30	0.32	0.55	0.53	0.19	0.18	0.29	0.32	0.54	0.52
Observations	857486	94079	857486	94079	857486	94079	1257844	123788	1257844	123788	1257844	123788
Panel B: Childless Adults												
Indicator of Expand in 2014	53**	63**	-11**	-12**	-1	1	66**	70**	-13**	-14**	-2	0
Mean of Dep. Var. in 2010	0.07	0.07	0.31	0.34	0.61	0.58	0.10	0.09	0.39	0.42	0.51	0.46
Expand in 2014, no prior policy	51**	56**	-9**	-11**	-1	1	62**	76**	-12**	-15**	-2	1
Mean of Dep. Var. in 2010	0.07	0.07	0.30	0.33	0.62	0.58	0.09	0.09	0.38	0.41	0.52	0.47
Expand in 2014, any prior policy	54**	64**	-12**	-13**	0	1	67**	65**	-13**	-14**	-3	0
Mean of Dep. Var. in 2010	0.07	0.07	0.31	0.34	0.61	0.57	0.10	0.10	0.39	0.42	0.50	0.46
Observations	1718309	114117	1718309	114117	1718309	114117	1766166	114727	1766166	114727	1766166	114727

Notes: Data are from years 2010-2014 of the American Community Survey and years 2010-2015 of the March CPS. Each value is the effect of the 2014 Medicaid expansion on the outcome expressed in percentage terms (estimate divided by 2010 mean). The sample in columns 1-6 is limited to non-disabled adults between ages 22-64 with a high school degree or less. The sample in columns 7-12 is limited to non-disabled adults between ages 22-64 with family income below 300% of Federal Poverty Level. Estimates used to construct relative effects for ACS are in Table 3 and estimates for March CPS are in Appendix Table 4. (**) indicates significance at the 5 percent level.

Table 6. Difference-in-differences and Synthetic Control Estimates of Effect of ACA Medicaid Expansions on Labor Supply American Community Survey 2010-2014

	Low-educated Sample (HS or less)						Low-income Sample (<300% FPL)	
	Employed at Time of Survey						Employed at Time of Survey	
Panel A: Parents	All		Married		Unmarried		All	All
	DD	SC	DD	SC	DD	SC	DD	SC
Indicator of Expand in 2014	0.005	-0.003	0.003	0.013**	0.011	-0.005	0.004	-0.007
	(0.004)	[0.679]	(0.003)	[0.015]	(0.007)	[0.713]	(0.003)	[0.066]
Expand in 2014, no prior policy	0.002		0.001		0.003		0.002	
	(0.005)		(0.005)		(0.009)		(0.005)	
Expand in 2014, any prior policy	0.006		0.003		0.014		0.005**	
	(0.004)		(0.004)		(0.007)		(0.002)	
p-value for test of difference between treatment effects	0.507		0.731		0.288		0.128	
Observations	857486	857486	655254	655254	202232	202232	1257844	1257844
Mean of Dep. Var. in 2010	0.715	0.715	0.726	0.726	0.676	0.676	0.693	0.693
Panel B: Childless Adults								
Indicator of Expand in 2014	0.003	-0.002	0.003	-0.008	0.002	0.003	0.003	-0.0004
	(0.003)	[0.580]	(0.003)	[0.067]	(0.004)	[0.605]	(0.003)	[0.915]
Expand in 2014, no prior policy	0.002		0.0005		0.004		0.004	
	(0.006)		(0.006)		(0.006)		(0.004)	
Expand in 2014, any prior policy	0.003		0.004		0.002		0.003	
	(0.003)		(0.003)		(0.004)		(0.003)	
p-value for test of difference between treatment effects	0.910		0.525		0.685		0.462	
Observations	1718309	1718309	855016	855016	863293	863293	1766166	1766166
Mean of Dep. Var. in 2010	0.677	0.677	0.688	0.688	0.667	0.667	0.610	0.610

Notes: Data are from years 2010-2014 of the American Community Survey.. Estimates above dashed lines report the coefficient on the interaction term between an indicator for whether a state expands Medicaid and an indicator for whether the year is 2014. Estimates below dashed lines report coefficients on these interaction terms but distinguish between states that had no prior Medicaid policy and those that had any prior policy (except for those that had ACA-level Medicaid expansions prior to 2014). The p-value is for F-tests measuring whether Medicaid expansion effects are statistically different between states that had prior policies and those that did not. The sample used in columns 1-6 is limited to non-disabled adults between ages 22-64 with a high school degree or less. The sample used in columns 7-8 is limited to non-disabled adults between ages 22-64 with family income below 300% of Federal Poverty Level. Regressions are adjusted using indicators for state, year, age, sex, race, education levels, marital status, foreign-born status, citizenship status, number of children and family size. P-values of synthetic control estimates [in brackets] are obtained through randomization inference. All standard errors of differences-in-differences estimates (in parentheses) are clustered on state. (**) indicates significance at the 5 percent level.

Table 7. Difference-in-differences Estimates of Effect of ACA Medicaid Expansions on Labor Supply
Monthly Current Population Survey 2010-(May) 2016

	High School or Less								
	Employed at Time of Survey			Usual Hours Worked per Week			Full-Time		
Panel A: Parents	All	Married	Unmarried	All	Married	Unmarried	All	Married	Unmarried
Indicator of Expand in 2014	0.001	-0.004	0.015	-0.039	-0.202	0.388	0.001	-0.003	0.012
	(0.005)	(0.005)	(0.008)	(0.222)	(0.234)	(0.356)	(0.005)	(0.006)	(0.009)
Expand in 2014, no prior policy	0.002	-0.004	0.016	-0.029	-0.227	0.388	-0.002	-0.007	0.008
	(0.009)	(0.010)	(0.011)	(0.431)	(0.502)	(0.514)	(0.010)	(0.011)	(0.014)
Expand in 2014, any prior policy	0.0002	-0.004	0.014	-0.043	-0.190	0.388	0.003	-0.001	0.013
	(0.004)	(0.005)	(0.008)	(0.200)	(0.208)	(0.370)	(0.005)	(0.006)	(0.009)
p-value for test of difference between treatment effects	0.817	0.980	0.873	0.974	0.941	>0.999	0.648	0.600	0.697
Observations	640572	459425	181147	640572	459425	181147	640572	459425	181147
Mean of Dep. Var. in 2010	0.685	0.706	0.627	27.1	28.3	23.9	0.615	0.639	0.548
Panel B: Childless Adults									
Indicator of Expand in 2014	0.012**	0.014**	0.012	0.426	0.446	0.459	0.010	0.012**	0.009
	(0.005)	(0.006)	(0.007)	(0.239)	(0.267)	(0.302)	(0.005)	(0.006)	(0.007)
Expand in 2014, no prior policy	0.012	0.017	0.007	0.378	0.585	0.215	0.007	0.012	0.003
	(0.009)	(0.008)	(0.011)	(0.377)	(0.352)	(0.478)	(0.008)	(0.007)	(0.011)
Expand in 2014, any prior policy	0.013**	0.012	0.014	0.455	0.358	0.596	0.012**	0.012	0.013
	(0.006)	(0.007)	(0.007)	(0.237)	(0.292)	(0.318)	(0.006)	(0.006)	(0.008)
p-value for test of difference between treatment effects	0.901	0.557	0.560	0.835	0.514	0.453	0.576	0.955	0.439
Observations	1141994	549419	592575	1141994	549419	592575	1141994	549419	592575
Mean of Dep. Var. in 2010	0.652	0.669	0.636	25.8	26.7	24.9	0.587	0.605	0.569

Notes: Data are from years 2010-2016 (May) of the Current Population Survey monthly files. Analysis excludes Alaska, Indiana, Montana and Pennsylvania due to expansions after 2014. Sample is limited to non-disabled adults between ages 22-64 with a high school degree or less. Regressions are adjusted using indicators for state, year, age, sex, race, education levels, marital status, foreign-born status, citizenship status, number of children and family size. The p-value is for F-tests measuring whether Medicaid expansion effects are statistically different between states that had prior policies and those that did not. All standard errors (parentheses) are clustered on state. (**) indicates significance at the 5 percent level.

Table 8. Synthetic Control Estimates of Effect of ACA Medicaid Expansions on Labor Supply
Monthly Current Population Survey 2014-(May) 2016

	Low-educated Sample (HS or less)								
	Employed at Time of Survey			Usual Hours Worked per Week			Full-Time		
Panel A: Parents	All	Married	Unmarried	All	Married	Unmarried	All	Married	Unmarried
Indicator of Expand in 2014	-0.009	-0.011	0.002	-0.121	-0.359	-0.301	-0.002	-0.004	-0.011
[p-value]	[0.285]	[0.206]	[0.885]	[0.728]	[0.335]	[0.621]	[0.853]	[0.618]	[0.489]
Difference-in-differences	0.001	-0.004	0.015	-0.039	-0.202	0.388	0.001	-0.003	0.012
Estimates (From Table 7)	(0.005)	(0.005)	(0.008)	(0.222)	(0.234)	(0.356)	(0.005)	(0.006)	(0.009)
Observations	640572	459425	181147	640572	459425	181147	640572	459425	181147
Mean of Dep. Var. in 2010	0.686	0.713	0.650	27.1	28.3	23.9	0.616	0.640	0.549
Panel B: Childless Adults									
Indicator of Expand in 2014	0.0005	0.001	-0.007	0.282	-0.412	0.081	0.002	-0.002	0.001
[p-value]	[0.963]	[0.924]	[0.562]	[0.547]	[0.404]	[0.886]	[0.859]	[0.856]	[0.940]
Difference-in-differences	0.012**	0.014**	0.012	0.426	0.446	0.459	0.010	0.012**	0.009
Estimates (From Table 7)	(0.005)	(0.006)	(0.007)	(0.239)	(0.267)	(0.302)	(0.005)	(0.006)	(0.007)
Observations	1141994	549419	592575	1141994	549419	592575	1141994	549419	592575
Mean of Dep. Var. in 2010	0.652	0.675	0.648	25.8	26.7	24.9	0.587	0.605	0.569

Notes: Data are from years 2010-2016 (May) of the Current Population Survey monthly files. Analysis excludes Alaska, Indiana, Montana and Pennsylvania due to expansions after 2014. The sample is limited to non-disabled adults between ages 22-64 with a high school degree or less. Regressions are adjusted using indicators for state, year, age, sex, race, education levels, marital status, foreign-born status, citizenship status, number of children and family size. P-values of synthetic control estimates [in brackets] are obtained through randomization inference. All standard errors of differences-in-differences estimates (in parentheses) are clustered on state. (**) indicates significance at the 5 percent level.

Appendix Table 1. Event History Estimates of Effect of ACA Medicaid Expansions on Health Insurance American Community Survey 2010-2014

	Low-educated Sample (HS or less)									Low-income Sample (<300% FPL)		
	Medicaid			Uninsured			Private			Medicaid	Uninsured	Private
Panel A: Parents	All	Married	Unmarried	All	Married	Unmarried	All	Married	Unmarried	All	All	All
Expand x Year 2014	0.040**	0.041**	0.035**	-0.026**	-0.030**	-0.013	-0.011	-0.007	-0.024**	0.048**	-0.027**	-0.017
	(0.010)	(0.011)	(0.010)	(0.012)	(0.014)	(0.012)	(0.009)	(0.009)	(0.008)	(0.010)	(0.012)	(0.009)
Expand x Year 2013	-0.0001	0.003	-0.013	0.004	-0.0002	0.020**	-0.002	-0.001	-0.005	0.004	0.001	-0.003
	(0.006)	(0.006)	(0.007)	(0.005)	(0.005)	(0.009)	(0.004)	(0.004)	(0.007)	(0.006)	(0.005)	(0.004)
Expand x Year 2012	0.001	0.002	-0.002	-0.002	-0.005	0.010	0.001	0.005	-0.010	0.001	-0.001	0.001
	(0.005)	(0.005)	(0.009)	(0.004)	(0.005)	(0.008)	(0.003)	(0.003)	(0.006)	(0.005)	(0.004)	(0.003)
Expand x Year 2011	-0.001	0.002	-0.012	-0.0001	-0.004	0.014	0.0001	0.002	-0.005	0.001	-0.001	-0.001
	(0.004)	(0.004)	(0.007)	(0.004)	(0.005)	(0.008)	(0.003)	(0.004)	(0.005)	(0.004)	(0.003)	(0.003)
p-value test of joint significance of pre-trend	0.870	0.948	0.037	0.374	0.391	0.136	0.765	0.275	0.493	0.779	0.868	0.634
Observations	857486	655254	202232	857486	655254	202232	857486	655254	202232	1257844	1257844	1257844
Mean of Dep. Var. in 2010	0.168	0.129	0.303	0.288	0.269	0.355	0.560	0.620	0.355	0.190	0.281	0.550
Panel B: Childless Adults												
Expand x Year 2014	0.039**	0.024**	0.052**	-0.037**	-0.022	-0.050**	-0.001	-0.001	-0.001	0.064**	-0.054**	-0.008
	(0.008)	(0.007)	(0.009)	(0.010)	(0.012)	(0.008)	(0.006)	(0.008)	(0.006)	(0.009)	(0.009)	(0.008)
Expand x Year 2013	0.002	0.001	0.001	-0.004	0.002	-0.008	0.001	-0.004	0.006	0.004	-0.006	0.002
	(0.003)	(0.002)	(0.005)	(0.004)	(0.004)	(0.006)	(0.003)	(0.004)	(0.004)	(0.004)	(0.005)	(0.003)
Expand x Year 2012	-0.001	-0.001	-0.002	-0.004	-0.002	-0.004	0.004	0.002	0.006	-0.001	-0.006	0.008**
	(0.003)	(0.002)	(0.004)	(0.003)	(0.003)	(0.005)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Expand x Year 2011	0.001	0.0005	0.001	-0.006**	-0.0001	-0.011**	0.005**	-0.0001	0.011**	0.002	-0.009**	0.008**
	(0.001)	(0.002)	(0.002)	(0.003)	(0.003)	(0.004)	(0.002)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)
p-value test of joint significance of pre-trend	0.303	0.420	0.566	0.156	0.505	0.035	0.060	0.212	0.010	0.092	0.007	0.001
Observations	1718309	855016	863293	1718309	855016	863293	1718309	855016	863293	1766166	1766166	1766166
Mean of Dep. Var. in 2010	0.073	0.038	0.108	0.305	0.191	0.421	0.614	0.763	0.462	0.095	0.386	0.506

Notes: Data are from years 2010-2014 of the American Community Survey.. Estimates report the coefficient on the interaction term between an indicator for whether a state expands Medicaid and year indicators. A p-value reports results from F-tests of joint significance from pre-2014 Medicaid expansion interaction terms. Sample used in columns 1-9 is limited to non-disabled adults between ages 22-64 with a high school degree or less. Sample used in columns 10-12 is limited to non-disabled adults between ages 22-64 with family income below 300% of Federal Poverty Level. Regressions are adjusted using indicators for state, year, age, sex, race, education levels, marital status, foreign-born status, citizenship status, number of children and family size. All standard errors (in parentheses) are clustered on state. (**) indicates significance at the 5 percent level.

Appendix Table 2. Difference-in-differences Estimates of Effect of ACA Medicaid Expansions on Health Insurance By Age
American Community Survey 2010-2014

	Low-educated Sample (HS or less)								
	Medicaid			Uninsured			Private		
Panel A: Parents	All	Married	Unmarried	All	Married	Unmarried	All	Married	Unmarried
Age 22 to 44									
Expand in 2014	0.044**	0.044**	0.041**	-0.030**	-0.031**	-0.028**	-0.011	-0.009	-0.016**
	(0.008)	(0.008)	(0.010)	(0.010)	(0.012)	(0.011)	(0.007)	(0.009)	(0.006)
Observations	625684	461899	163785	625684	461899	163785	625684	461899	163785
Mean of Dep. Var. in 2010	0.186	0.141	0.324	0.315	0.297	0.367	0.518	0.582	0.325
Age 45 to 64									
Expand in 2014	0.030**	0.029**	0.037**	-0.018	-0.020	-0.008	-0.012	-0.008	-0.031**
	(0.010)	(0.011)	(0.010)	(0.014)	(0.015)	(0.013)	(0.008)	(0.009)	(0.012)
Observations	231802	193355	38447	231802	193355	38447	231802	193355	38447
Mean of Dep. Var. in 2010	0.118	0.099	0.215	0.214	0.197	0.306	0.680	0.717	0.487
Panel B: Childless Adults									
Age 22 to 44									
Expand in 2014	0.047**	0.036**	0.050**	-0.042**	-0.026**	-0.045**	-0.004	-0.009	-0.004
	(0.007)	(0.006)	(0.007)	(0.007)	(0.010)	(0.007)	(0.005)	(0.007)	(0.006)
Observations	594085	133989	460096	594085	133989	460096	594085	133989	460096
Mean of Dep. Var. in 2010	0.092	0.052	0.104	0.472	0.346	0.511	0.438	0.603	0.386
Age 45 to 64									
Expand in 2014	0.034**	0.022**	0.054**	-0.028**	-0.021	-0.041**	-0.004	0.001	-0.012
	(0.007)	(0.007)	(0.008)	(0.010)	(0.011)	(0.008)	(0.006)	(0.007)	(0.006)
Observations	1124224	721027	403197	1124224	721027	403197	1124224	721027	403197
Mean of Dep. Var. in 2010	0.062	0.035	0.113	0.214	0.159	0.315	0.710	0.795	0.552

Notes: Data are from years 2010-2014 of the American Community Survey. Estimates above dashed lines report the coefficient the interaction term between an indicator for whether a state expands Medicaid and an indicator for whether the year is 2014. Sample is limited to non-disabled adults between ages 22-64 with a high school degree or less. Regressions are adjusted using indicators for state, year, age, sex, race, education levels, marital status, foreign-born status, citizenship status, number of children and family size. All standard errors (in parentheses) are clustered on state. (**) indicates significance at the 5 percent level.

Appendix Table 3. Comparison of Health Insurance Estimates With and Without Eleven States (Nine Prior Full Expansion or Limited Expansion Control States: DE, DC, MA, NY, VT, IN, ME, TN and WI, and Two Late Expansion Treatment States: MI and NH) American Community Survey

	Low-educated Sample (HS or less)									Low-income Sample (<300% FPL)		
	Medicaid			Uninsured			Private			Medicaid	Uninsured	Private
Panel A: Parents	All	Married	Unmarried	All	Married	Unmarried	All	Married	Unmarried	All	All	All
Difference-in-differences	0.043**	0.043**	0.039**	-0.020	-0.020	-0.019	-0.021**	-0.019**	-0.025**	0.049**	-0.020	-0.026**
Estimates	(0.008)	(0.008)	(0.009)	(0.011)	(0.013)	(0.011)	(0.006)	(0.007)	(0.006)	(0.009)	(0.011)	(0.006)
Difference-in-differences	0.040**	0.039**	0.041**	-0.027**	-0.027**	-0.024**	-0.011	-0.009	-0.019**	0.046**	-0.027**	-0.016**
Estimates (From Table 3)	(0.008)	(0.009)	(0.009)	(0.011)	(0.012)	(0.011)	(0.007)	(0.008)	(0.006)	(0.009)	(0.010)	(0.007)
Synthetic Control	0.029	0.025	0.044	-0.040**	-0.031**	-0.020	-0.014	-0.007	-0.021	0.027	-0.062**	-0.021**
[p-value]	[0.073]	[0.085]	[0.079]	[0.002]	[0.023]	[0.247]	[0.068]	[0.407]	[0.085]	[0.097]	[<0.001]	[0.009]
Synthetic Control	0.046**	0.034**	0.067**	-0.035**	-0.032**	-0.038**	-0.006	-0.007	-0.013	0.044**	-0.035**	-0.011
[p-value] (From Table 4)	[<0.001]	[0.003]	[0.004]	[0.004]	[0.003]	[0.021]	[0.417]	[0.367]	[0.235]	[0.003]	[0.007]	[0.123]
Observations	703283	537870	165413	703283	537870	165413	703283	537870	165413	1035622	1035622	1035622
Mean of DV. In 2010	0.153	0.116	0.279	0.312	0.292	0.380	0.550	0.608	0.352	0.172	0.302	0.545
Panel B: Childless Adults												
Difference-in-differences	0.046**	0.030**	0.060**	-0.034**	-0.019	-0.045**	-0.011**	-0.009	-0.014**	0.075**	-0.049**	-0.023**
Estimates	(0.006)	(0.006)	(0.006)	(0.010)	(0.012)	(0.008)	(0.005)	(0.007)	(0.004)	(0.006)	(0.008)	(0.006)
Difference-in-differences	0.039**	0.024**	0.052**	-0.034**	-0.022	-0.044**	-0.003	-0.001	-0.007	0.063**	-0.048**	-0.013
Estimates (From Table 3)	(0.007)	(0.007)	(0.007)	(0.009)	(0.011)	(0.007)	(0.006)	(0.007)	(0.006)	(0.008)	(0.008)	(0.007)
Synthetic Control	0.042**	0.034**	0.065**	-0.041**	-0.028**	-0.060**	-0.006	-0.0002	-0.007	0.076**	-0.055**	-0.013
[p-value]	[0.002]	[0.003]	[0.001]	[<0.001]	[0.057]	[<0.001]	[0.325]	[0.966]	[0.316]	[<0.001]	[<0.001]	[0.127]
Synthetic Control	0.044**	0.021**	0.062**	-0.040**	-0.028**	-0.057**	0.002	0.003	-0.002	0.062**	-0.054**	-0.006
[p-value] (From Table 4)	[0.001]	[0.006]	[<0.001]	[<0.001]	[0.034]	[<0.001]	[0.771]	[0.681]	[0.750]	[<0.001]	[<0.001]	[0.547]
Observations	1375638	679664	695974	1375638	679664	695974	1375638	679664	695974	1435514	1435514	1435514
Mean of DV. In 2010	0.064	0.033	0.096	0.323	0.205	0.441	0.603	0.752	0.453	0.082	0.403	0.500

Notes: Data are from years 2010-2014 of the American Community Survey. Estimates report the difference in dependent variables in 2014 between treatment states and the synthetic control group. Sample used in columns 1-9 is limited to non-disabled adults between ages 22-64 with a high school degree or less. Sample used in columns 10-12 is limited to non-disabled adults between ages 22-64 with family income below 300% of Federal Poverty Level. P-values of synthetic control estimates [in brackets] are obtained through randomization inference. (**) indicates significance at the 5 percent level.

Appendix Table 4. Difference-in-differences Estimates of Effect of ACA Medicaid Expansions on Health Insurance
March Current Population Survey 2010-2015

	Low-educated Sample (HS or less)									Low-income Sample (<300% FPL)		
	Medicaid			Uninsured			Private			Medicaid	Uninsured	Private
Panel A: Parents	All	Married	Unmarried	All	Married	Unmarried	All	Married	Unmarried	All	All	All
Expand in 2014	0.065**	0.075**	0.043**	-0.040**	-0.038**	-0.050**	-0.011	-0.021	0.013	0.068**	-0.037**	-0.019
	(0.015)	(0.017)	(0.020)	(0.017)	(0.018)	(0.024)	(0.013)	(0.015)	(0.019)	(0.014)	(0.017)	(0.012)
Expand in 2014, no prior policy	0.074**	0.074**	0.074	-0.039**	-0.034**	-0.053	-0.031	-0.040**	-0.011	0.82**	-0.040**	-0.028**
	(0.021)	(0.021)	(0.037)	(0.017)	(0.014)	(0.044)	(0.017)	(0.018)	(0.029)	(0.020)	(0.017)	(0.010)
Expand in 2014, any prior policy	0.061**	0.075**	0.028	-0.041	-0.039	-0.049**	-0.002	-0.013	0.025	0.62**	-0.036**	-0.015
	(0.018)	(0.021)	(0.019)	(0.022)	(0.023)	(0.023)	(0.014)	(0.016)	(0.018)	(0.018)	(0.021)	(0.014)
p-value for test of difference between treatment effects	0.603	0.962	0.219	0.945	0.794	0.913	0.148	0.178	0.250	0.385	0.866	0.389
Observations	94079	68065	26014	94079	68065	26014	94079	68065	26014	123788	123788	123788
Mean of Dep. Var. in 2010	0.150	0.118	0.239	0.310	0.272	0.416	0.545	0.617	0.343	0.170	0.311	0.524
Panel B: Childless Adults												
Expand in 2014	0.045**	0.040**	0.049**	-0.041**	-0.033	-0.048**	0.006	0.007	0.004	0.065**	-0.060**	0.002
	(0.008)	(0.013)	(0.009)	(0.015)	(0.021)	(0.014)	(0.012)	(0.017)	(0.012)	(0.009)	(0.015)	(0.011)
Expand in 2014, no prior policy	0.039**	0.026	0.051**	-0.035**	-0.019	-0.053**	0.005	0.007	0.004	0.069**	-0.061**	0.004
	(0.011)	(0.013)	(0.015)	(0.015)	(0.019)	(0.018)	(0.018)	(0.023)	(0.011)	(0.013)	(0.019)	(0.011)
Expand in 2014, any prior policy	0.048**	0.046**	0.048**	-0.044**	-0.041	-0.045**	0.006	0.007	0.004	0.063**	-0.059**	0.001
	(0.009)	(0.014)	(0.009)	(0.020)	(0.026)	(0.018)	(0.016)	(0.020)	(0.015)	(0.012)	(0.020)	(0.014)
p-value for test of difference between treatment effects	0.516	0.163	0.851	0.713	0.459	0.738	0.957	0.990	0.972	0.716	0.965	0.824
Observations	114117	55253	58864	114117	55253	58864	114117	55253	58864	114727	114727	114727
Mean of Dep. Var. in 2010	0.071	0.058	0.084	0.337	0.217	0.451	0.575	0.712	0.445	0.094	0.422	0.460

Notes: Data are from years 2010-2015 of the March Current Population Survey. Estimates above dashed lines report the coefficient on the interaction term between an indicator for whether a state expands Medicaid and an indicator for whether the year is 2014. Estimates below dashed lines also report coefficients on these interaction terms but distinguish between states that had no prior Medicaid policy and those that had any prior policy (except for those that had ACA-level Medicaid expansions prior to 2014). A p-value reports results from F-tests measuring whether Medicaid expansion effects are statistically different between states that had prior policies and those that did not. Sample used in columns 1-9 is limited to non-disabled adults between ages 22-64 with a high school degree or less. Sample used in columns 10-12 is limited to non-disabled adults between ages 22-64 with family income below 300% of Federal Poverty Level. Regressions are adjusted using indicators for state, year, age, sex, race, education levels, marital status, foreign-born status, citizenship status, number of children and family size. All standard errors (in parentheses) are clustered on state. (**) indicates significance at the 5 percent level.

Appendix Table 5. Event History Estimates of Effect of ACA Medicaid Expansions on Health Insurance
March Current Population Survey 2010-2015

	Low-educated Sample (HS or less)									Low-income Sample (<300% FPL)		
	Medicaid			Uninsured			Private			Medicaid	Uninsured	Private
Panel A: Parents	All	Married	Unmarried	All	Married	Unmarried	All	Married	Unmarried	All	All	All
Expand x Survey Year 2015	0.073**	0.088**	0.038	-0.043**	-0.037	-0.066**	-0.015	-0.030	0.029	0.078**	-0.044**	-0.018
	(0.018)	(0.019)	(0.023)	(0.021)	(0.023)	(0.025)	(0.016)	(0.019)	(0.022)	(0.018)	(0.019)	(0.014)
Expand x Survey Year 2014	0.030**	0.029	0.026	-0.007	-.003	-0.020	-0.013	-0.014	0.001	0.038**	-0.015	-0.003
	(0.014)	(0.017)	(0.017)	(0.018)	(0.023)	(0.022)	(0.013)	(0.016)	(0.024)	(0.014)	(0.015)	(0.013)
Expand x Survey Year 2013	0.010	0.020	-0.016	-0.019	-0.014	-0.037	0.007	-0.003	0.040**	0.010	-0.018	0.009
	(0.011)	(0.011)	(0.021)	(0.015)	(0.014)	(0.025)	(0.011)	(0.013)	(0.019)	(0.012)	(0.011)	(0.011)
Expand x Survey Year 2012	0.012	0.020	-0.011	0.007	0.009	0.0004	-0.018	-0.022	0.0002	0.011	-0.003	-0.007
	(0.009)	(0.010)	(0.019)	(0.010)	(0.011)	(0.019)	(0.010)	(0.012)	(0.020)	(0.010)	(0.008)	(0.010)
Expand x Survey Year 2011	-0.0003	0.004	-0.016	0.002	0.011	-0.025	0.002	-0.008	0.035	0.003	-0.003	0.003
	(0.008)	(0.009)	(0.015)	(0.009)	(0.012)	(0.017)	(0.010)	(0.013)	(0.021)	(0.009)	(0.010)	(0.011)
p-value test of joint significance of pre-2014 interactions	0.284	0.267	0.086	0.266	0.068	0.339	0.132	0.394	0.115	0.059	0.519	0.539
Observations	94079	68065	26014	94079	68065	26014	94079	68065	26014	123788	123788	123788
Mean of Dep. Var. in 2010	0.150	0.118	0.239	0.310	0.272	0.416	0.545	0.617	0.343	0.170	0.311	0.524
Panel B: Childless Adults												
Expand x Survey Year 2015	0.045**	0.035**	0.054**	-0.043**	-0.025	-0.060**	0.007	0.002	0.012	0.067**	-0.070**	0.008
	(0.011)	(0.014)	(0.012)	(0.015)	(.021)	(0.014)	(0.013)	(0.019)	(0.013)	(0.011)	(0.018)	(0.014)
Expand x Survey Year 2014	0.004	-0.003	0.011	-0.009	0.003	-0.023	0.006	-0.007	0.022	0.007	-0.019	0.012
	(0.011)	(0.011)	(0.014)	(0.010)	(0.015)	(0.013)	(0.011)	(0.017)	(0.016)	(0.010)	(0.015)	(0.014)
Expand x Survey Year 2013	0.002	-0.007	0.009	0.008	0.015	0.00003	-0.005	-0.005	-0.004	0.001	-0.001	0.001
	(0.008)	(0.009)	(0.011)	(0.011)	(0.014)	(0.014)	(0.010)	(0.013)	(0.014)	(0.008)	(0.014)	(0.012)
Expand x Survey Year 2012	-0.006	-0.010	-0.004	0.009	0.025	-0.007	-0.012	-0.023	-0.0002	-0.002	-0.008	0.002
	(0.006)	(0.009)	(0.008)	(0.012)	(0.013)	(0.016)	(0.011)	(0.012)	(0.016)	(0.007)	(0.013)	(0.001)
Expand x Survey Year 2011	0.004	-0.001	0.008	-0.019	-0.004	-0.034**	0.018	0.009	0.029	0.005	-0.024**	0.017
	(0.005)	(0.007)	(0.008)	(0.010)	(0.010)	(0.014)	(0.010)	(0.014)	(0.015)	(0.006)	(0.011)	(0.011)
p-value test of joint significance of pre-2014 interactions	0.190	0.838	0.111	0.098	0.298	0.026	0.050	0.139	0.038	0.754	0.082	0.335
Observations	114117	55253	58864	114117	55253	58864	114117	55253	58864	114727	114727	114727
Mean of Dep. Var. in 2010	0.071	0.058	0.084	0.337	0.217	0.451	0.575	0.712	0.445	0.094	0.422	0.460

Notes: Data are from years 2010-2015 of the March Current Population Survey. A p-value reports results from F-tests measuring whether Medicaid expansion effects are statistically different from 0 in pre-expansion periods. Sample used in columns 1-9 is limited to non-disabled adults between ages 22-64 with a high school degree or less. Sample used in columns 10-12 is limited to non-disabled adults between ages 22-64 with family income below 300% of Federal Poverty Level. Regressions are adjusted using indicators for state, year, age, sex, race, education levels, marital status, foreign-born status, citizenship status, number of children and family size. All standard errors (in parentheses) are clustered on state. (**) indicates significance at the 5 percent level.

Appendix Table 6. Synthetic Control Estimates of Effect of ACA Medicaid Expansions on Health Insurance
March Current Population Survey 2010-2015

	Low-educated Sample (HS or less)									Low-income Sample (<300% FPL)		
	Medicaid			Uninsured			Private			Medicaid	Uninsured	Private
Panel A: Parents	All	Married	Unmarried	All	Married	Unmarried	All	Married	Unmarried	All	All	All
Indicator of Expand in 2014	0.061**	0.068**	0.049	-0.052**	-0.049	-0.045	0.003	-0.017	0.030	0.043	-0.041**	-0.011
[p-value]	[0.010]	[0.009]	[0.082]	[0.031]	[0.072]	[0.145]	[0.891]	[0.442]	[0.209]	[0.065]	[0.032]	[0.525]
Difference-in-differences	0.065**	0.075**	0.043**	-0.040**	-0.038**	-0.050**	-0.011	-0.021	0.013	0.068**	-0.037**	-0.019
Estimates (From A. Table 4)	(0.015)	(0.017)	(0.020)	(0.017)	(0.018)	(0.024)	(0.013)	(0.015)	(0.019)	(0.014)	(0.017)	(0.012)
Observations	94079	68065	26014	94079	68065	26014	94079	68065	26014	123788	123788	123788
Mean of Dep. Var. in 2010	0.150	0.118	0.239	0.310	0.272	0.416	0.545	0.617	0.343	0.170	0.311	0.524
Panel B: Childless Adults												
Indicator of Expand in 2014	0.043**	0.046**	0.042**	-0.032**	-0.031	-0.051**	0.020	0.002	0.016	0.067**	-0.047**	0.008
[p-value]	[0.003]	[0.035]	[0.010]	[0.043]	[0.074]	[0.007]	[0.202]	[0.915]	[0.290]	[<0.001]	[0.012]	[0.595]
Difference-in-differences	0.045**	0.040**	0.049**	-0.041**	-0.033	-0.048**	0.006	0.007	0.004	0.065**	-0.060**	0.002
Estimates (From A. Table 4)	(0.008)	(0.013)	(0.009)	(0.015)	(0.021)	(0.014)	(0.012)	(0.017)	(0.012)	(0.009)	(0.015)	(0.011)
Observations	114117	55253	58864	114117	55253	58864	114117	55253	58864	114117	114117	114117
Mean of Dep. Var. in 2010	0.071	0.058	0.084	0.337	0.217	0.451	0.575	0.712	0.445	0.094	0.422	0.460

Notes: Data are from years 2010-2015 of the March Current Population Survey. Estimates report the difference in dependent variables in survey year 2015 between treatment states and the synthetic control group. Sample used in columns 1-9 is limited to non-disabled adults between ages 22-64 with a high school degree or less. Sample used in columns 10-12 is limited to non-disabled adults between ages 22-64 with family income below 300% of Federal Poverty Level. P-values of synthetic control estimates [in brackets] are obtained through randomization inference. All standard errors of differences-in-differences estimates (in parentheses) are clustered on state. (**) indicates significance at the 5 percent level.

Appendix Table 7. Difference-in-differences Estimates of Effect of ACA Medicaid Expansions on Health Insurance By Age
March Current Population Survey 2010-2015

	Low-educated Sample (HS or less)								
	Medicaid			Uninsured			Private		
Panel A: Parents	All	Married	Unmarried	All	Married	Unmarried	All	Married	Unmarried
Age 22 to 44									
Expand in 2014	0.069**	0.081**	0.046**	-0.045**	-0.041**	-0.057**	-0.011	-0.024	0.018
	(0.016)	(0.017)	(0.021)	(0.017)	(0.017)	(0.025)	(0.013)	(0.014)	(0.018)
Observations	70818	49563	21255	70818	49563	21255	70818	49563	21255
Mean of Dep. Var. in 2010	0.166	0.130	0.258	0.334	0.260	0.429	0.506	0.582	0.316
Age 45 to 64									
Expand in 2014	0.056**	0.060**	0.036	-0.030	-0.032	-0.023	-0.011	-0.012	-0.007
	(0.016)	(0.019)	(0.032)	(0.023)	(0.026)	(0.031)	(0.025)	(0.025)	(0.043)
Observations	23261	18502	4759	23261	18502	4759	23261	18502	4759
Mean of Dep. Var. in 2010	0.101	0.087	0.156	0.236	0.206	0.357	0.664	0.716	0.461
Panel B: Childless Adults									
Age 22 to 44									
Expand in 2014	0.048**	0.054**	0.045**	-0.046**	-0.040	-0.046**	-0.002	-0.015	-0.0004
	(0.011)	(0.017)	(0.012)	(0.015)	(0.024)	(0.017)	(0.013)	(0.022)	(0.015)
Observations	45489	11214	34275	45489	11214	34275	45489	11214	34275
Mean of Dep. Var. in 2010	0.080	0.072	0.082	0.480	0.349	0.525	0.431	0.577	0.380
Age 45 to 64									
Expand in 2014	0.042**	0.035**	0.055**	-0.036**	-0.030	-0.049**	0.011	0.012	0.008
	(0.011)	(0.014)	(0.012)	(0.018)	(0.023)	(0.017)	(0.017)	(0.019)	(0.020)
Observations	68628	44039	24589	68628	44039	24589	68628	44039	24589
Mean of Dep. Var. in 2010	0.065	0.054	0.086	0.239	0.181	0.345	0.675	0.749	0.539

Notes: Data are from years 2010-2015 of the March Current Population Survey. Estimates above dashed lines report the coefficient on the interaction term between an indicator for whether state expands Medicaid and an indicator for whether the survey year is 2015. Sample is limited to non-disabled adults between ages 22-64 with a high school degree or less. Regressions are adjusted using indicators for state, year, age, sex, race, education levels, marital status, foreign-born status, citizenship status, number of children and family size. All standard errors (in parentheses) are clustered on state. (**) indicates significance at the 5 percent level.

Appendix Table 8. Comparison of Health Insurance Estimates With and Without Eleven States (Nine Prior Full Expansion or Limited Expansion Control States: DE, DC, MA, NY, VT, IN, ME, TN and WI, and Two Late Expansion Treatment States: MI and NH) March Current Population Survey

	Low-educated Sample (HS or less)									Low-income Sample (<300% FPL)		
	Medicaid			Uninsured			Private			Medicaid	Uninsured	Private
Panel A: Parents	All	Married	Unmarried	All	Married	Unmarried	All	Married	Unmarried	All	All	All
Difference-in-differences Estimates	0.054** (0.016)	0.067** (0.018)	0.027 (0.023)	-0.032 (0.020)	-0.027 (0.020)	-0.048 (0.029)	-0.010 (0.015)	-0.027 (0.016)	0.027 (0.020)	0.064** (0.015)	-0.027 (0.018)	-0.024 (0.013)
Difference-in-differences Estimates (From A. Table 4)	0.065** (0.015)	0.075** (0.017)	0.043** (0.020)	-0.040** (0.017)	-0.038** (0.018)	-0.050** (0.024)	-0.011 (0.013)	-0.021 (0.015)	0.013 (0.019)	0.068** (0.014)	-0.037** (0.017)	-0.019 (0.012)
Synthetic Control [p-value]	0.083** [0.005]	0.117** [0.001]	0.057 [0.099]	-0.040 [0.247]	-0.073** [0.039]	-0.149** [<0.001]	-0.016 [0.539]	-0.003 [0.899]	0.062 [0.073]	0.104** [<0.001]	-0.028 [0.238]	-0.042 [0.069]
Synthetic Control [p-value] (From A. Table 6)	0.061** [0.010]	0.068** [0.009]	0.049 [0.082]	-0.052** [0.031]	-0.049 [0.072]	-0.045 [0.145]	0.003 [0.891]	-0.017 [0.442]	0.030 [0.209]	0.043 [0.065]	-0.041** [0.032]	-0.011 [0.525]
Observations	73739	53599	20140	73739	53599	20140	73739	53599	20140	97741	97741	97741
Mean of DV. In 2010	0.130	0.103	0.206	0.340	0.300	0.453	0.532	0.601	0.338	0.145	0.338	0.520
Panel B: Childless Adults												
Difference-in-differences Estimates	0.052** (0.007)	0.049** (0.012)	0.054** (0.008)	-0.037** (0.017)	-0.030 (0.024)	-0.042** (0.015)	-0.001 (0.014)	-0.001 (0.019)	-0.002 (0.014)	0.069** (0.009)	-0.059** (0.016)	0.001 (0.012)
Difference-in-differences Estimates (From A. Table 4)	0.045** (0.008)	0.040** (0.013)	0.049** (0.009)	-0.041** (0.015)	-0.033 (0.021)	-0.048** (0.014)	0.006 (0.012)	0.007 (0.017)	0.004 (0.012)	0.065** (0.009)	-0.060** (0.015)	0.002 (0.011)
Synthetic Control [p-value]	0.061** [<0.001]	0.075** [0.005]	0.072** [<0.001]	-0.056** [0.002]	-0.057** [0.008]	-0.053** [0.045]	-0.006 [0.701]	0.002 [0.898]	0.005 [0.808]	0.078** [0.001]	-0.051 [0.059]	-0.004 [0.805]
Synthetic Control [p-value] (From A. Table 6)	0.043** [0.003]	0.046** [0.035]	0.042** [0.010]	-0.032** [0.043]	-0.031 [0.074]	-0.051** [0.007]	0.020 [0.202]	0.002 [0.915]	0.016 [0.290]	0.067** [<0.001]	-0.047** [0.012]	0.008 [0.595]
Observations	86576	42179	44397	86576	42179	44397	86576	42179	44397	88459	88459	88459
Mean of DV. In 2010	0.062	0.054	0.068	0.359	0.234	0.479	0.562	0.698	0.431	0.079	0.443	0.453

Notes: Data are from years 2010-2015 of the March Current Population Survey. Estimates report the difference in the dependent variables in survey year 2015 between treatment states and the synthetic control group. Sample used in columns 1-9 is limited to non-disabled adults between ages 22-64 with a high school degree or less. Sample used in columns 10-12 is limited to non-disabled adults between ages 22-64 with family income below 300% of Federal Poverty Level. P-values of synthetic control estimates [in brackets] are obtained through randomization inference. (**) indicates significance at the 5 percent level.

Appendix Table 9. Event History Estimates of Effect of ACA Medicaid Expansions on Labor Supply
American Community Survey 2010-2014

	Low-educated Sample (HS or less)			Low-income Sample (<300% FPL)
		Employed at Time of Survey		Employed at Time of Survey
Panel A: Parents	All	Married	Unmarried	All
Expand x Year 2014	0.007	0.005	0.016	0.007
	(0.005)	(0.004)	(0.010)	(0.004)
Expand x Year 2013	0.006	0.006	0.008	0.006
	(0.003)	(0.003)	(0.008)	(0.003)
Expand x Year 2012	0.004	0.004	0.009	0.005
	(0.003)	(0.003)	(0.007)	(0.003)
Expand x Year 2011	-0.001	-0.002	0.005	0.001
	(0.003)	(0.003)	(0.007)	(0.003)
p-value test of joint significance of pre-trend	0.157	0.153	0.664	0.086
Observations	857486	655254	202232	1257844
Mean of Dep. Var. in 2010	0.715	0.726	0.676	0.693
Panel B: Childless Adults				
Expand x Year 2014	0.006	0.007	0.005	0.007
	(0.004)	(0.004)	(0.006)	(0.004)
Expand x Year 2013	0.007**	0.008**	0.007	0.006
	(0.004)	(0.004)	(0.005)	(0.003)
Expand x Year 2012	0.004	0.008**	0.001	0.005
	(0.003)	(0.003)	(0.005)	(0.003)
Expand x Year 2011	0.002	0.001	0.004	0.002
	(0.002)	(0.003)	(0.003)	(0.002)
p-value test of joint significance of pre-trend	0.214	0.002	0.245	0.251
Observations	1718309	855016	863293	1766166
Mean of Dep. Var. in 2010	0.677	0.688	0.667	0.610

Notes: Data are from years 2010-2014 of the American Community Survey. Estimates report the coefficient on the interaction term between an indicator for whether state expands Medicaid and year indicators. A p-value reports results from F-tests of joint significance from pre-2014 Medicaid expansion interaction terms. Sample used in columns 1-3 is limited to non-disabled adults between ages 22-64 with a high school degree or less. Sample used in column 4 is limited to non-disabled adults between ages 22-64 with family income below 300% of Federal Poverty Level. Regressions are adjusted using indicators for state, year, age, sex, race, education levels, marital status, foreign-born status, citizenship status, number of children and family size. All standard errors (in parentheses) are clustered on state. (**) indicates significance at the 5 percent level.

Appendix Table 10. Comparison of Labor Supply Estimates With and Without Eleven States (Nine Prior Full Expansion or Limited Expansion Control States: DE, DC, MA, NY, VT, IN, ME, TN and WI, and Two Late Expansion Treatment States: MI and NH) American Community Survey

	Low-educated Sample (HS or less)			Low-income Sample (<300% FPL)
		Employed at Time of Survey		Employed at Time of Survey
Panel A: Parents	All	Married	Unmarried	All
Difference-in-differences Estimates	0.005 (0.004)	0.002 (0.004)	0.014 (0.008)	0.005 (0.003)
Difference-in-differences Estimates (From Table 6)	0.005 (0.004)	0.003 (0.003)	0.011 (0.007)	0.004 (0.003)
Synthetic Control: Expand in 2014 [p-value]	0.003 [0.532]	-0.001 [0.786]	0.001 [0.957]	0.008** [0.049]
Synthetic Control: Expand in 2014 [p-value] (From Table 6)	-0.003 [0.679]	0.013** [0.015]	-0.005 [0.713]	-0.007 [0.066]
Observations	703283	537870	165413	1035622
Mean of Dep. Var. in 2010	0.713	0.723	0.677	0.692
Panel B: Childless Adults				
Difference-in-differences Estimates	0.001 (0.003)	0.002 (0.003)	-0.001 (0.004)	0.002 (0.003)
Difference-in-differences Estimates (From Table 6)	0.003 (0.003)	0.003 (0.003)	0.002 (0.004)	0.003 (0.003)
Synthetic Control: Expand in 2014 [p-value]	-0.003 [0.470]	-0.007 [0.165]	-0.004 [0.384]	-0.008 [0.082]
Synthetic Control: Expand in 2014 [p-value] (From Table 6)	-0.002 [0.580]	-0.008 [0.067]	0.003 [0.605]	-0.0004 [0.915]
Observations	1375638	679664	695974	1435514
Mean of Dep. Var. in 2010	0.676	0.686	0.667	0.612

Notes: Data are from years 2010-2014 of the American Community Survey. Estimates report the difference in dependent variables in 2014 between treatment states and the synthetic control group. Sample used in columns 1-3 is limited to non-disabled adults between ages 22-64 with a high school degree or less. Sample used in column 4 is limited to non-disabled adults between ages 22-64 with

family income below 300% of Federal Poverty Level. P-values of synthetic control estimates [in brackets] are obtained through randomization inference. All standard errors of differences-in-differences estimates (in parentheses) are clustered on state. (**) indicates significance at the 5 percent level.

Appendix Table 11. Event History Estimates of Effect of ACA Medicaid Expansions on Labor Supply
Monthly Current Population Survey 2010-(May) 2016

	Low-educated Sample (HS or less)								
	Employed at Time of Survey			Usual Hours Worked per Week			Full-Time		
Panel A: Parents	All	Married	Unmarried	All	Married	Unmarried	All	Married	Unmarried
Expand x Year 2016	-0.010	-0.013	-0.002	-0.270	-0.446	0.174	-0.006	-0.012	0.008
	(0.009)	(0.009)	(0.016)	(0.418)	(0.441)	(0.656)	(0.009)	(0.009)	(0.017)
Expand x Year 2015	0.004	-0.005	0.029**	0.103	-0.338	1.267**	0.008	-0.002	0.034**
	(0.007)	(0.008)	(0.013)	(0.342)	(0.368)	(0.580)	(0.007)	(0.008)	(0.014)
Expand x Year 2014	0.006	-0.006	0.042**	0.189	-0.260	1.414**	0.006	-0.007	0.042**
	(0.006)	(0.008)	(0.012)	(0.288)	(0.322)	(0.489)	(0.006)	(0.007)	(0.011)
Expand x Year 2013	0.006	0.001	0.021	0.256	-0.013	1.013	0.009	0.002	0.028**
	(0.007)	(0.009)	(0.011)	(0.320)	(0.371)	(0.510)	(0.007)	(0.008)	(0.013)
Expand x Year 2012	0.007	0.001	0.023	0.469	0.101	1.389**	0.012	0.001	0.040**
	(0.008)	(0.009)	(0.013)	(0.381)	(0.412)	(0.566)	(0.008)	(0.009)	(0.014)
Expand x Year 2011	-0.001	-0.008	0.018	0.051	-0.325	0.982**	0.001	-0.010	0.027**
	(0.006)	(0.007)	(0.011)	(0.292)	(0.317)	(0.431)	(0.007)	(0.007)	(0.011)
p-value test of joint significance of pre-2014 interactions	0.425	0.300	0.247	0.239	0.232	0.091	0.130	0.144	0.052
Observations	640572	459425	181147	640572	459425	181147	640572	459425	181147
Mean of Dep. Var. in 2010	0.685	0.706	0.627	27.1	28.3	23.9	0.615	0.639	0.548
Panel B: Childless Adults									
Expand x Year 2016	0.010	0.006	0.016	0.311	0.169	0.529	0.010	0.006	0.015
	(0.008)	(0.010)	(0.011)	(0.396)	(0.484)	(0.503)	(0.009)	(0.010)	(0.012)
Expand x Year 2015	0.011	0.012	0.014	0.295	0.239	0.504	0.009	0.008	0.014
	(0.008)	(0.008)	(0.011)	(0.350)	(0.381)	(0.454)	(0.008)	(0.008)	(0.011)
Expand x Year 2014	0.002	-0.010	0.016	-0.025	-0.401	0.469	0.001	-0.007	0.012
	(0.007)	(0.008)	(0.010)	(0.309)	(0.358)	(0.427)	(0.007)	(0.008)	(0.010)
Expand x Year 2013	-0.007	-0.017**	0.007	-0.360	-0.707**	0.134	-0.004	-0.014	0.008
	(0.006)	(0.008)	(0.009)	(0.254)	(0.337)	(0.370)	(0.006)	(0.007)	(0.009)
Expand x Year 2012	-0.012**	-0.024**	0.002	-0.509**	-0.892**	-0.042	-0.008	-0.019**	0.005
	(0.005)	(0.006)	(0.008)	(0.252)	(0.323)	(0.364)	(0.005)	(0.007)	(0.009)
Expand x Year 2011	-0.007	-0.018**	0.005	-0.363	-0.734**	0.033	-0.007	-0.017**	0.004
	(0.004)	(0.005)	(0.007)	(0.191)	(0.254)	(0.301)	(0.005)	(0.006)	(0.007)
p-value test of joint significance of pre-2014 interactions	0.182	0.001	0.766	0.204	0.028	0.939	0.422	0.017	0.828
Observations	1141994	549419	592575	1141994	549419	592575	1141994	549419	592575
Mean of Dep. Var. in 2010	0.652	0.669	0.636	25.8	26.7	24.9	0.587	0.605	0.569

Notes: Data are from years 2010-2016 (May) of the Current Population Survey monthly files. A p-value reports results from F-tests measuring whether Medicaid expansion effects are statistically different from 0 in pre-expansion periods. Analysis excludes Alaska, Indiana, Montana and Pennsylvania due to expansions after 2014. Sample limited to non-disabled adults between ages 22-64 with a high school degree or less. Regressions are adjusted using indicators for state, year, age, sex, race, education levels, marital status, foreign-born status, citizenship status, number of children and family size. All standard errors (in parentheses) are clustered on state. (**) indicates significance at the 5 percent level.

Appendix Table 12. Comparison of Health Insurance Estimates With and Without Eleven States (Nine Prior Full Expansion or Limited Expansion Control States: DE, DC, MA, NY, VT, IN, ME, TN and WI, and Two Late Expansion Treatment States: MI and NH)
Monthly Current Population Survey

	Low-educated Sample (HS or less)								
	Medicaid			Uninsured			Private		
Panel A: Parents	All	Married	Unmarried	All	Married	Unmarried	All	Married	Unmarried
Difference-in-differences	0.001	-0.005	0.020**	-0.018	-0.227	0.562	0.002	-0.002	0.014
Estimates	(0.004)	(0.005)	(0.008)	(0.213)	(0.225)	(0.359)	(0.005)	(0.006)	(0.009)
Difference-in-differences	0.001	-0.004	0.015	-0.039	-0.202	0.388	0.001	-0.003	0.012
Estimates (From Table 7)	(0.005)	(0.005)	(0.008)	(0.222)	(0.234)	(0.356)	(0.005)	(0.006)	(0.009)
Synthetic Control	-0.0003	-0.013	0.011	0.245	-0.626**	-0.238	-0.004	-0.009	-0.014
[p-value]	[0.958]	[0.078]	[0.505]	[0.459]	[0.048]	[0.763]	[0.694]	[0.299]	[0.436]
Synthetic Control	-0.009	-0.011	0.002	-0.121	-0.359	-0.301	-0.002	-0.004	-0.011
[p-value] (From Table 8)	[0.285]	[0.206]	[0.885]	[0.728]	[0.335]	[0.621]	[0.853]	[0.618]	[0.489]
Observations	527338	381446	145892	527338	381446	145892	527338	381446	145892
Mean of DV. In 2010	0.693	0.709	0.653	27.7	28.8	25.0	0.628	0.649	0.573
Panel B: Childless Adults									
Difference-in-differences	0.013**	0.012	0.014	0.413	0.379	0.486	0.011	0.012	0.011
Estimates	(0.006)	(0.007)	(0.007)	(0.259)	(0.279)	(0.330)	(0.006)	(0.006)	(0.008)
Difference-in-differences	0.012**	0.014**	0.012	0.426	0.446	0.459	0.010	0.012**	0.009
Estimates (From Table 7)	(0.005)	(0.006)	(0.007)	(0.239)	(0.267)	(0.302)	(0.005)	(0.006)	(0.007)
Synthetic Control	0.002	-0.001	-0.013	0.072	-1.01**	0.023	0.001	0.010	-0.002
[p-value]	[0.861]	[0.942]	[0.280]	[0.882]	[0.030]	[0.957]	[0.932]	[0.298]	[0.814]
Synthetic Control	0.0005	0.001	-0.007	0.282	-0.412	0.081	0.002	-0.002	0.001
[p-value] (From Table 8)	[0.963]	[0.924]	[0.562]	[0.547]	[0.404]	[0.886]	[0.859]	[0.856]	[0.940]
Observations	901679	435294	466385	901679	435294	466385	901679	435294	466385
Mean of DV. In 2010	0.661	0.673	0.650	26.3	27.2	25.6	0.597	0.613	0.583

Notes: Data are from years 2010-2016 of the (May) Current Population Survey monthly files. Analysis excludes Alaska, Indiana, Montana and Pennsylvania due to expansions after 2014. Sample limited to non-disabled adults between ages 22-64 with a high school degree or less. Regressions are adjusted using indicators for state, year, age, sex, race, education levels, marital status, foreign-born status, citizenship status, number of children and family size. P-values of synthetic control estimates [in brackets] are obtained through randomization inference. All standard errors of differences-in-differences estimates (in parentheses) are clustered on state. (**) indicates significance at the 5 percent level.

Figure 1. Medicaid, Low-educated Parents (ACS)

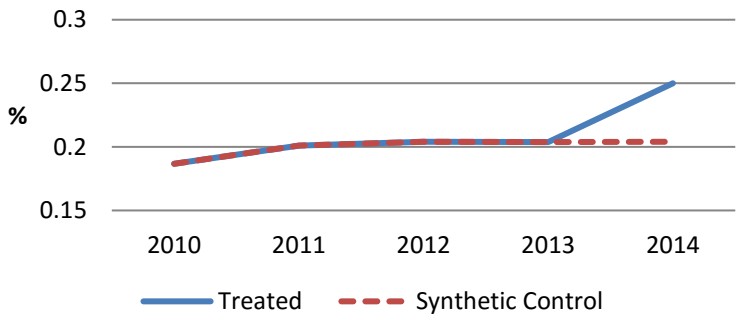


Figure 2. Uninsured, Low-educated Parents (ACS)

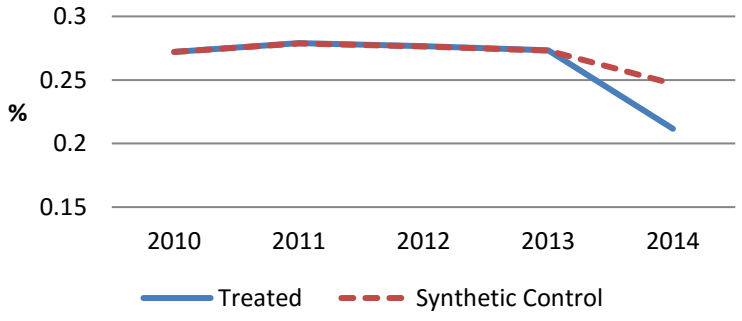


Figure 3. Private Insured, Low-educated Parents (ACS)

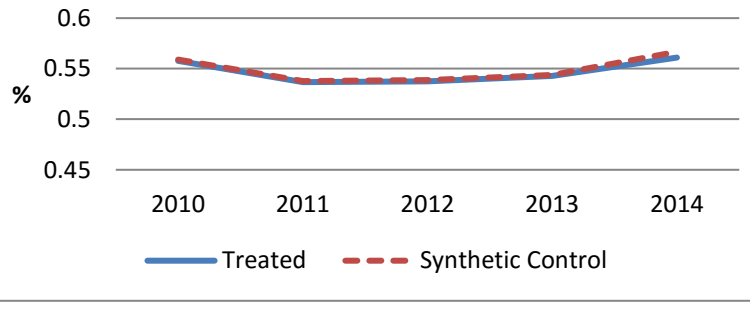


Figure 4. Medicaid, Low-educated Childless Adults (ACS)

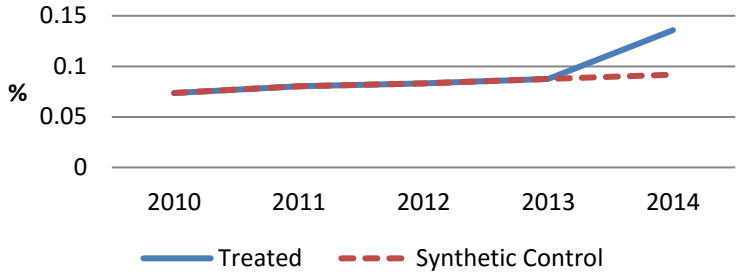


Figure 5. Uninsured, Low-educated Childless Adults (ACS)

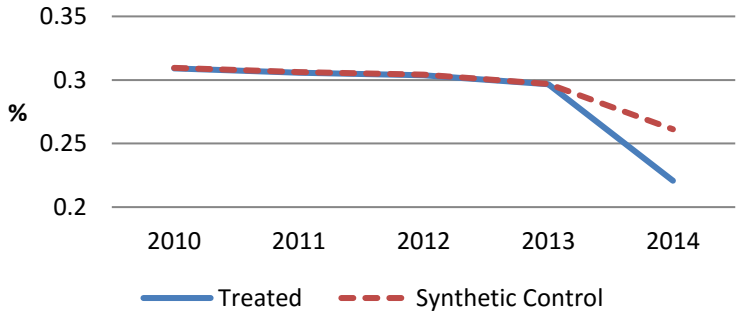


Figure 6. Private Insured, Low-educated Childless Adults (ACS)

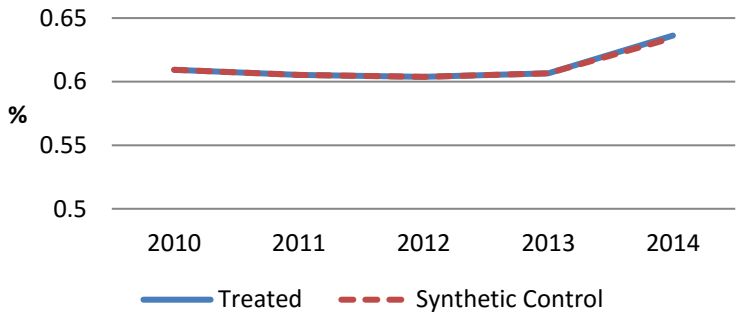


Figure 7. Medicaid, Low-income Parents (ACS)

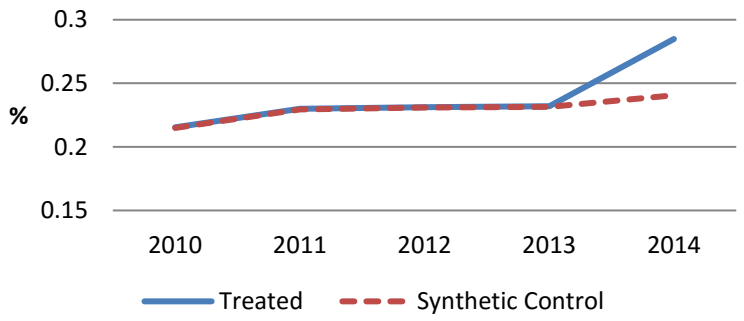


Figure 8. Uninsured, Low-income Parents (ACS)

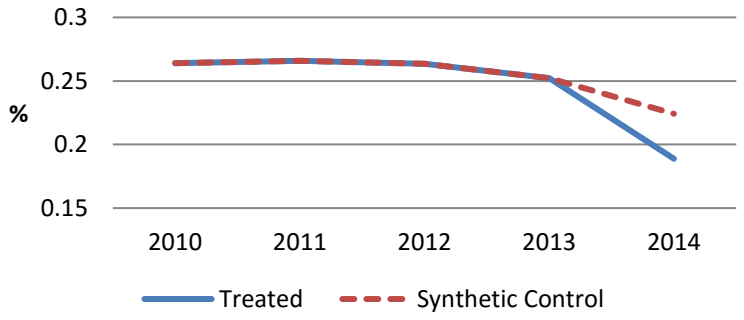


Figure 9. Private Insured, Low-income Parents (ACS)

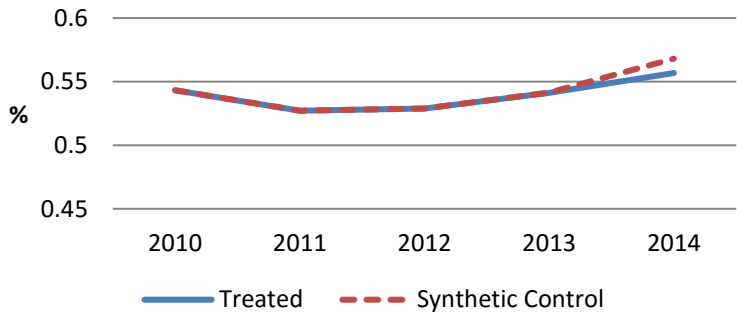


Figure 10. Medicaid, Low-income Childless Adults (ACS)

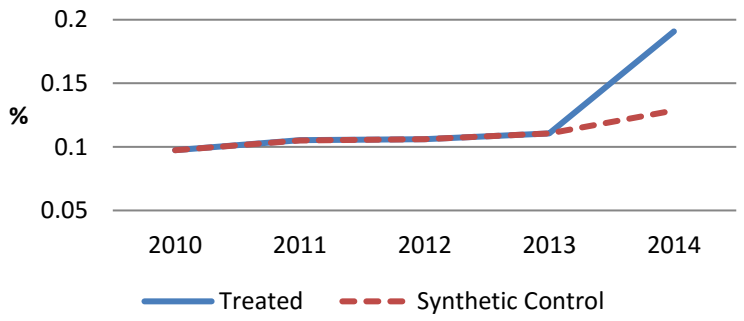


Figure 11. Uninsured, Low-income Childless Adults (ACS)

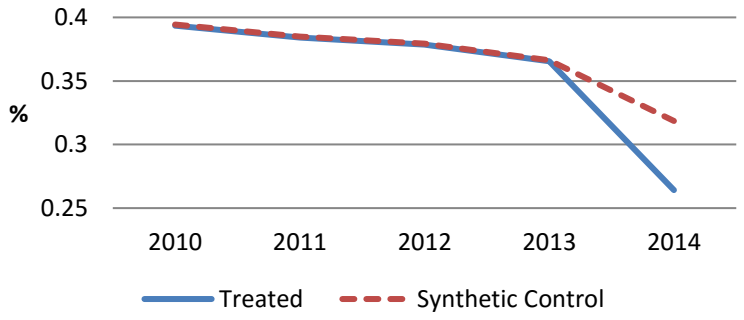


Figure 12. Private Insured, Low-income Childless Adults (ACS)

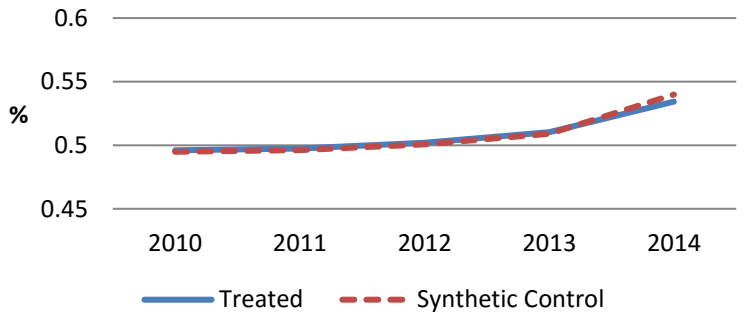


Figure 13. Employed, Low-educated Parents (Monthly CPS)

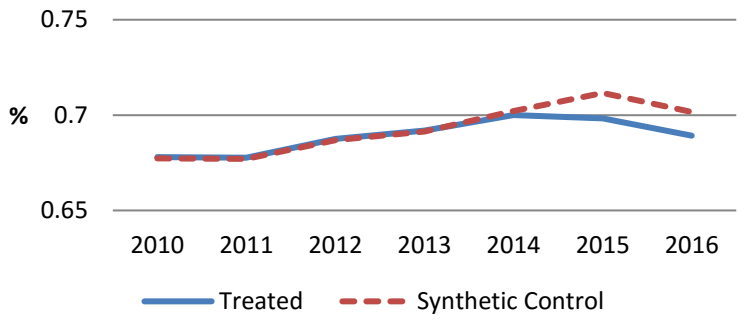


Figure 14. Usual Hours Worked per Week, Low-educated Parents (Monthly CPS)

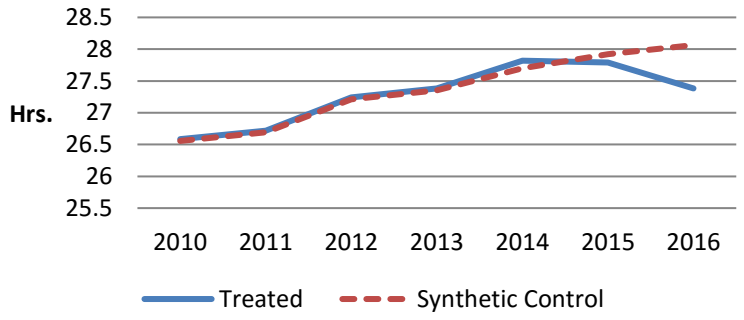


Figure 15. Full-Time, Low-educated Parents (Monthly CPS)

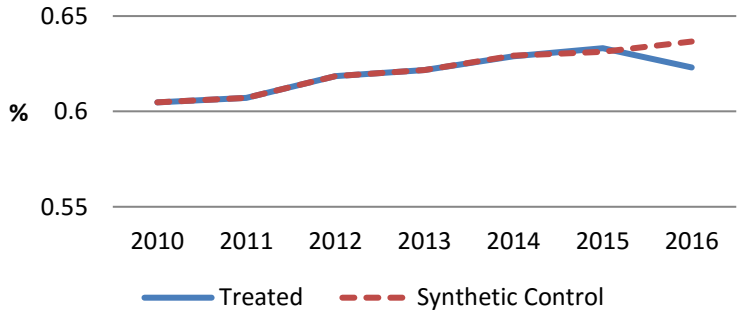


Figure 16. Employed, Low-educated Childless Adults (Monthly CPS)

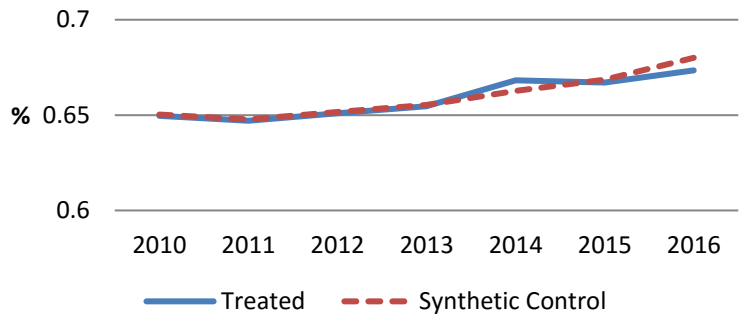


Figure 17. Usual Hours Worked per Week, Low-educated Childless Adults (Monthly CPS)

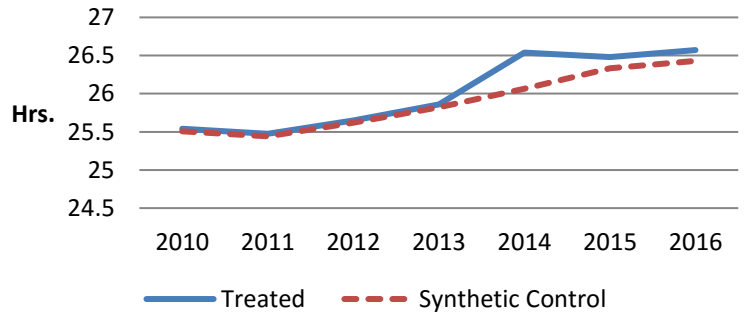


Figure 18. Full-Time, Low-educated Childless Adults (Monthly CPS)

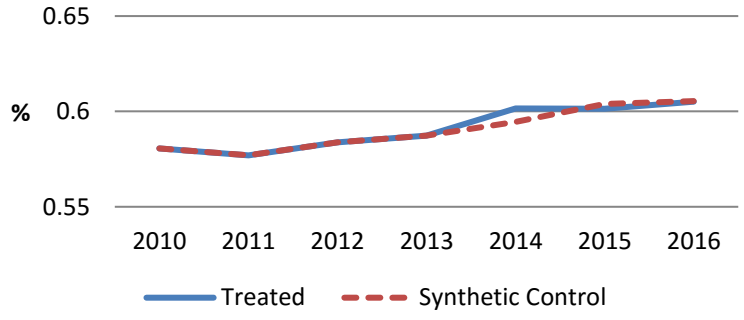


Figure A1. Medicaid, Low-educated Parents (ACS, Excluding 11 States)

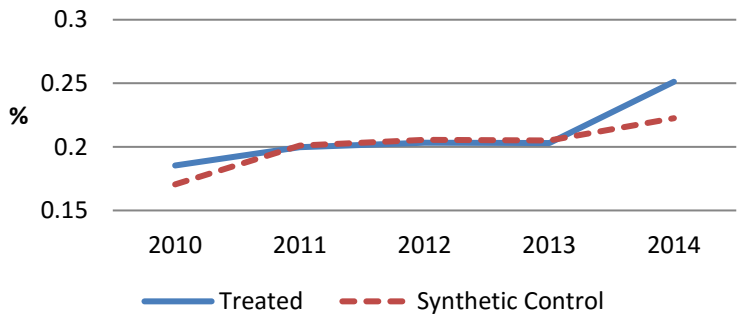


Figure A2. Uninsured, Low-educated Parents (ACS, Excluding 11 States)

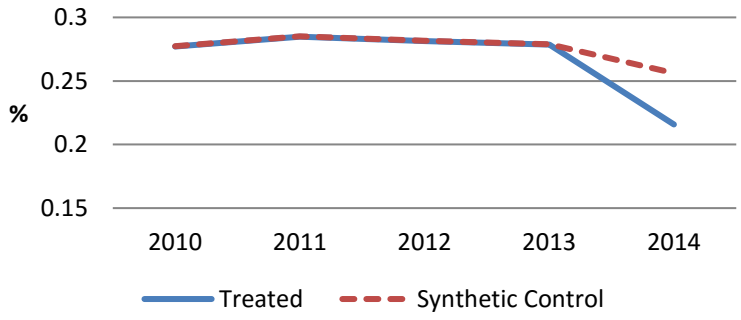


Figure A3. Private Insured, Low-educated Parents (ACS, Excluding 11 States)

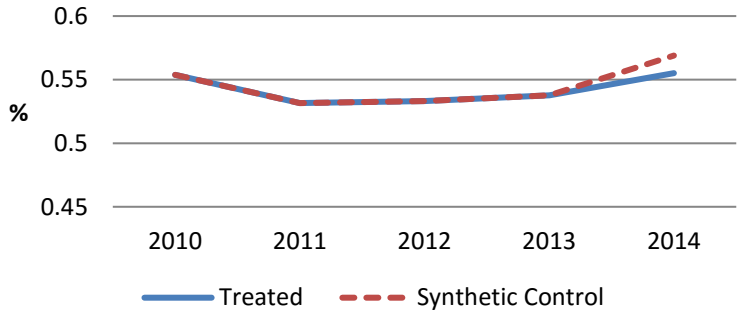


Figure A4. Medicaid, Low-educated Childless Adults (ACS, Excluding 11 States)

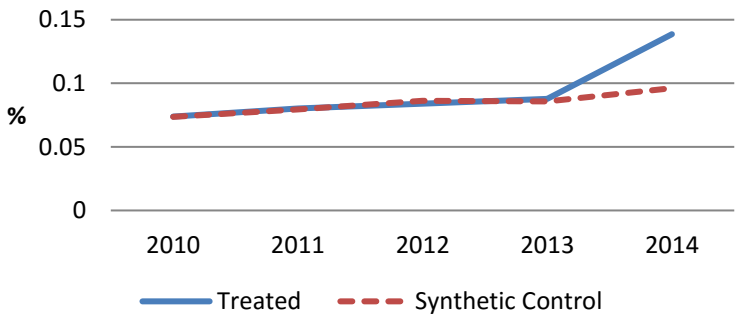


Figure A5. Uninsured, Low-educated Childless Adults (ACS, Excluding 11 States)

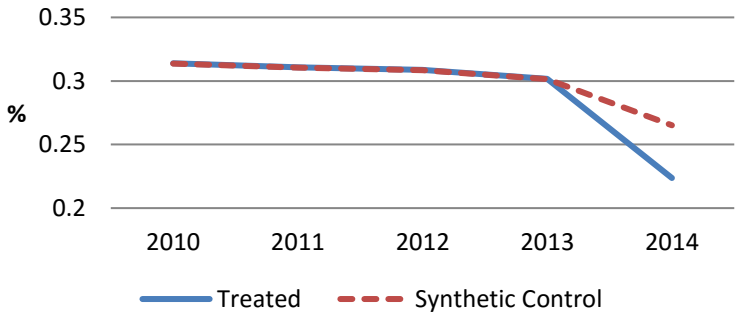


Figure A6. Private Insured, Low-educated Childless Adults (ACS, Excluding 11 States)

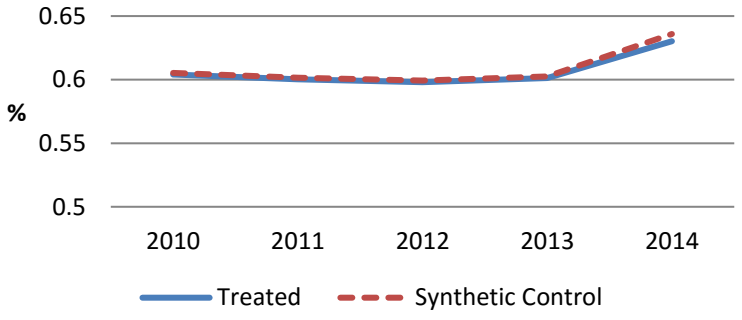


Figure A7. Medicaid, Low-educated Parents (March CPS)

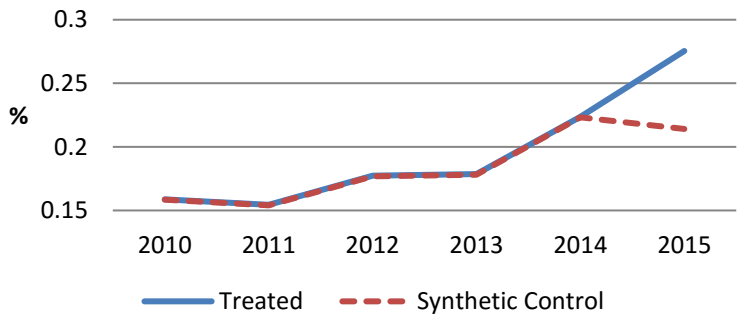


Figure A8. Uninsured, Low-educated Parents (March CPS)

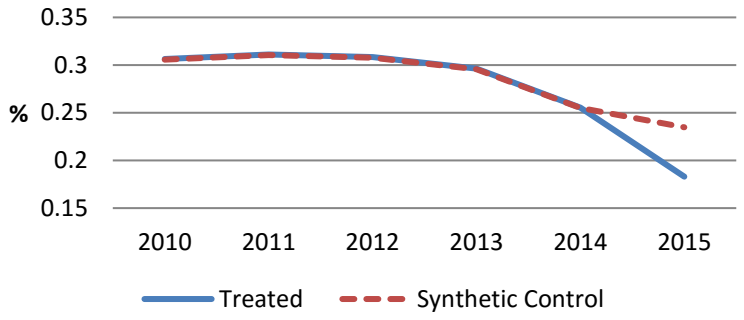


Figure A9. Private Insured, Low-educated Parents (March CPS)

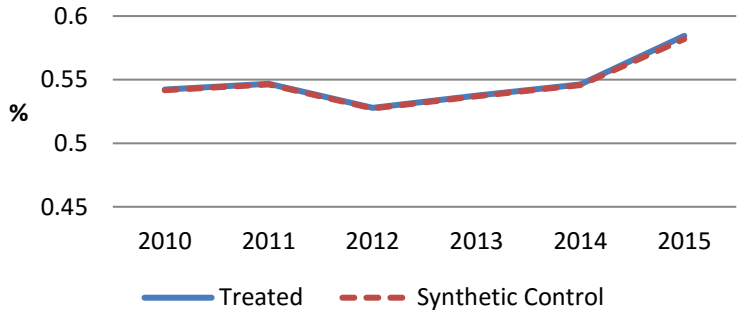


Figure A10. Medicaid, Low-educated Childless Adults (March CPS)

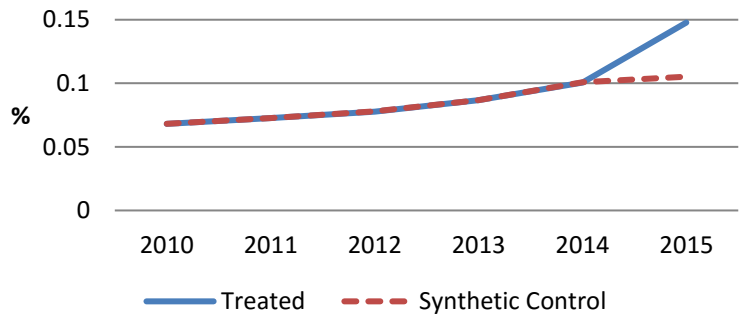


Figure A11. Uninsured, Low-educated Childless Adults (March CPS)

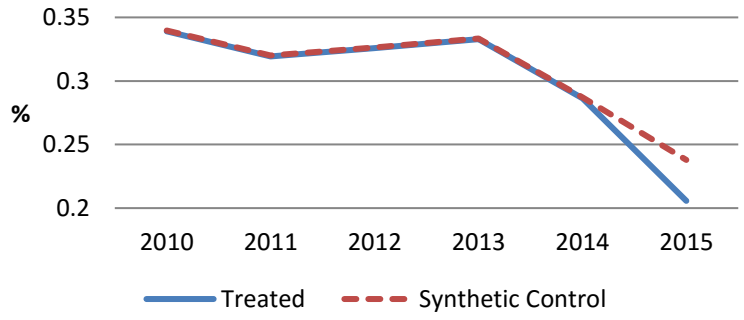


Figure A12. Private Insured, Low-educated Childless Adults (March CPS)

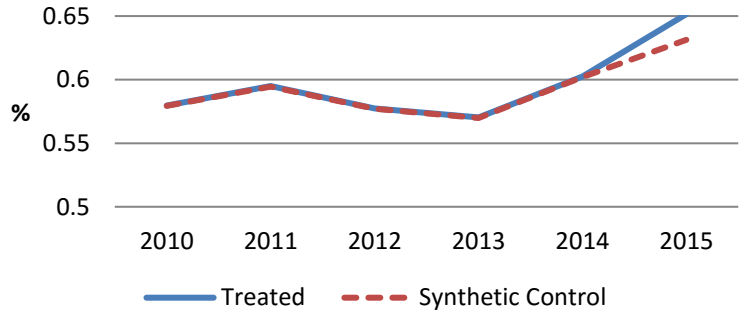


Figure A13. Medicaid, Low-income Parents (March CPS)

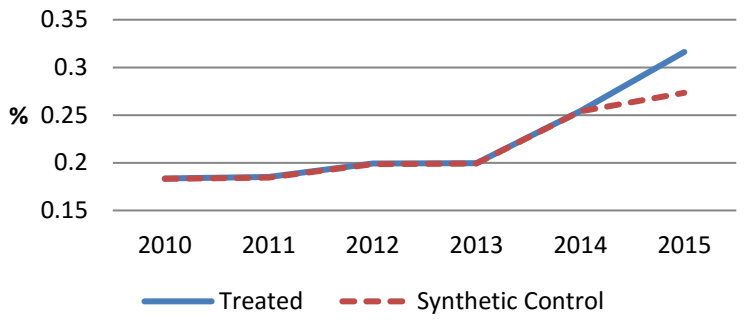


Figure A14. Uninsured, Low-income Parents (March CPS)

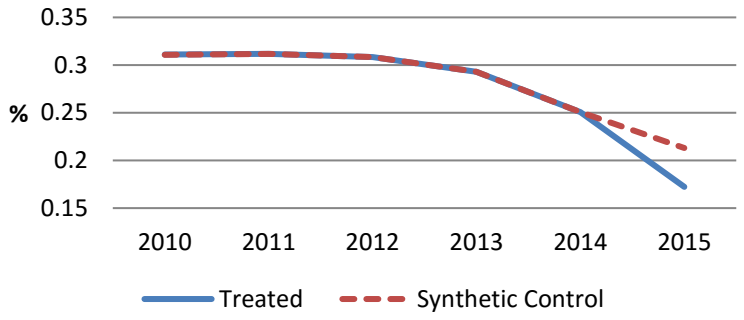


Figure A15. Private Insured, Low-income Parents (March CPS)

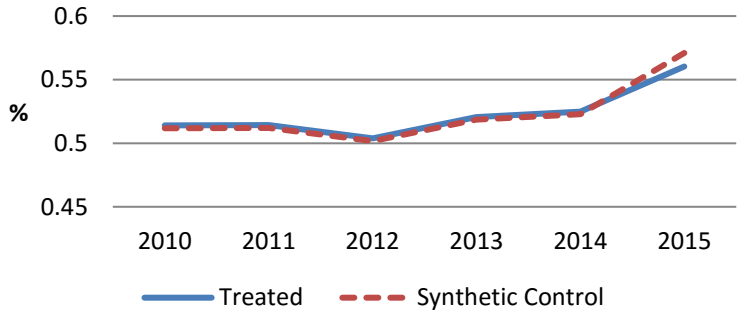


Figure A16. Medicaid, Low-income Childless Adults (March CPS)

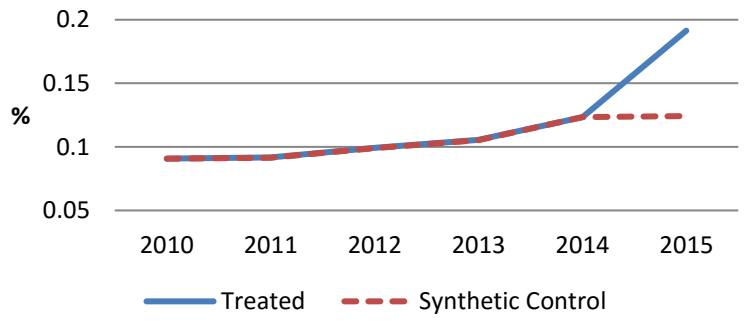


Figure A17. Uninsured, Low-income Childless Adults (March CPS)

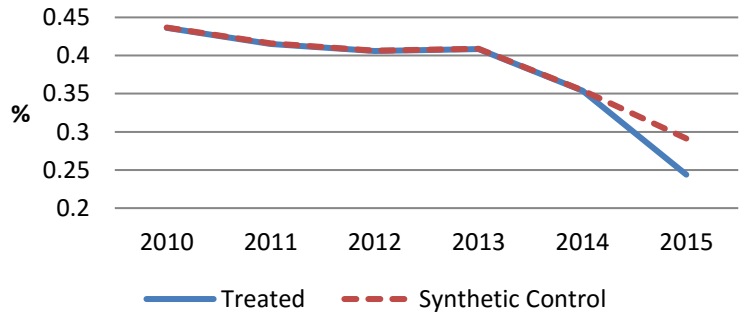


Figure A18. Private Insured, Low-income Childless Adults (March CPS)

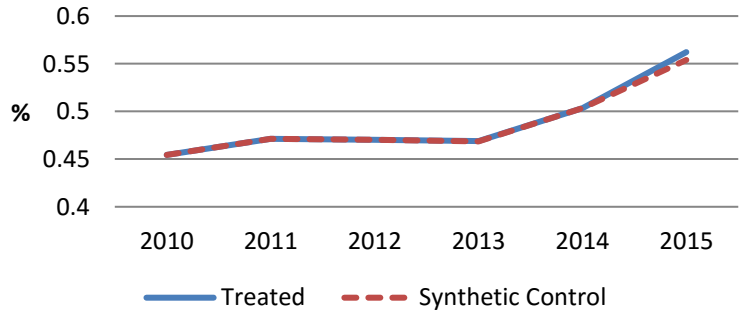


Figure A19. Employed, Low-educated Parents (ACS)

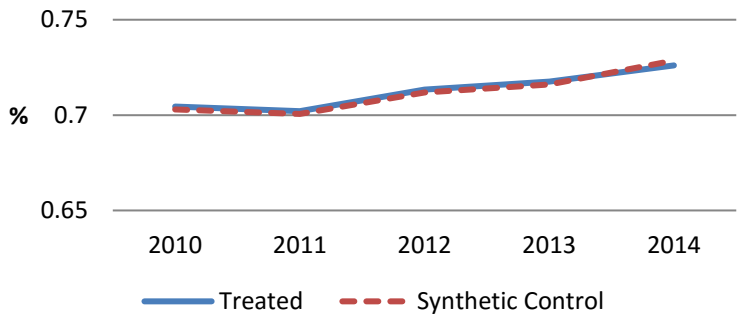


Figure A20. Employed, Low-educated Childless Adults (ACS)

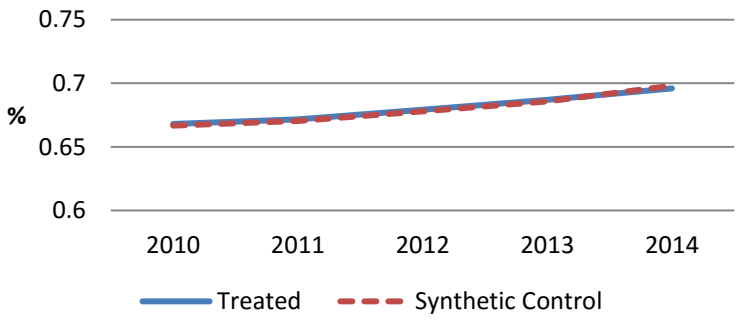


Figure A21. Employed, Low-income Parents (ACS)

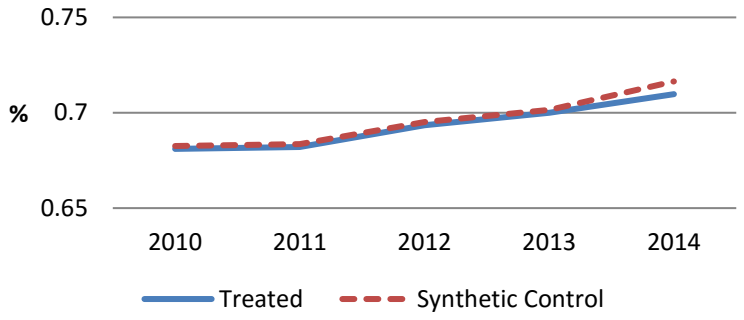


Figure A22. Employed, Low-income Childless Adults (ACS)

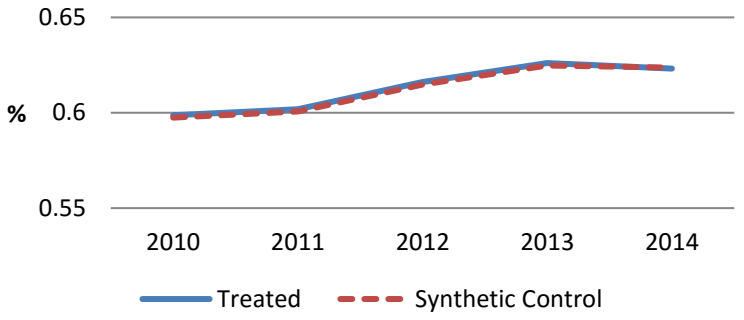


Figure A23. Employed, Low-educated Parents (ACS, Excluding 11 States)

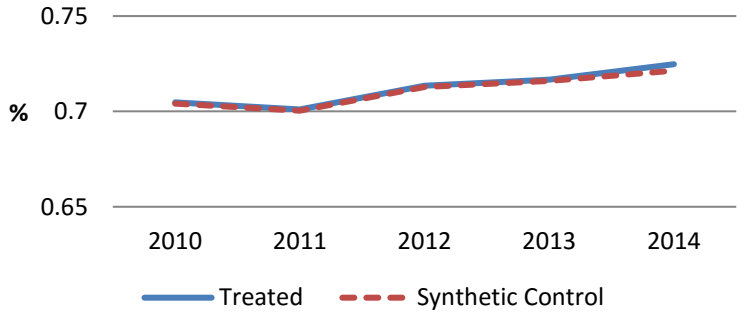
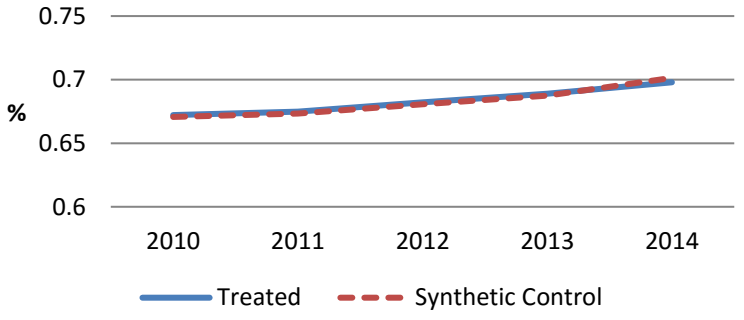


Figure A24. Employed, Low-educated Childless Adults (ACS, Excluding 11 States)



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EMPLOYMENT EFFECTS OF THE ACA MEDICAID EXPANSIONS

Pauline Leung
Alexandre Mas

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Employment Effects of the ACA Medicaid Expansions
Pauline Leung and Alexandre Mas
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ABSTRACT

We examine whether the recent expansions in Medicaid from the Affordable Care Act reduced "employment lock" among childless adults who were previously ineligible for public coverage. We compare employment in states that chose to expand Medicaid versus those that chose not to expand, before and after implementation. We find that although the expansion increased Medicaid coverage by 3.0 percentage points among childless adults, there was no significant impact on employment.

Pauline Leung
107 Martha Van Rensselaer Hall
Cornell University
Ithaca, NY 14853
pl532@cornell.edu

Alexandre Mas
Industrial Relations Section
Firestone Library
Princeton University
Princeton, NJ 08544
and NBER
amas@princeton.edu

1 Introduction

In 2010, the United States passed the Patient Protection and Affordable Care Act (ACA), a landmark legislation that overhauled the nation's existing healthcare system. A central debate around the implementation of this act has been its effects on employment. Prior to the ACA, Americans primarily obtained health insurance coverage through their employers, as individually purchased plans were often prohibitively expensive, and public insurance was limited only to certain segments of the population. As a result of this system of employer-sponsored coverage, some have predicted that many individuals sought employment purely to gain coverage. Several provisions of the new law, however, may loosen this "employment lock" by providing alternative affordable coverage options.

One of the ways that the original law made health insurance accessible to low-income populations was through a mandated expansion in the public means-tested Medicaid program to all those with incomes below 138 percent of the federal poverty line, starting in 2014. However, a 2012 Supreme Court ruling made the expansion optional and left the decision up to the individual states. As of this writing, only 32 states have elected to expand Medicaid. Since the program previously covered mostly families with children, the expansions had the greatest impact on non-elderly low-income adults who do not have children under the age of 18 (hereafter, "childless adults"). In states that did not expand Medicaid, most childless adults under the federal poverty line are left without coverage; they are ineligible for Medicaid and are also excluded from receiving the ACA's refundable tax credits toward the purchase of private insurance, which are available to workers above the poverty level.

In this paper, we ask whether the availability of Medicaid reduced "employment lock" among childless adults. Although the long-term impacts of the Medicaid expansion, and health reform more generally, will not be known for a few more years, one effect that should be apparent even at this early stage is whether or not the introduction of public insurance allowed those who were locked into jobs for insurance reasons to exit the labor force.[1] In fact, as detailed below, several studies have demonstrated that the expansions may have potentially large and immediate impacts on the labor market. To study this, we utilize state-level differences in Medicaid availability due to the Supreme Court's ruling. We compare the sources of health insurance coverage and employment rates of states that expanded Medicaid relative to those that did not,

[1] Although we focus on the impacts of Medicaid on the decision of whether or not to work ("employment lock") rather than on "job lock" due to a lack of data on job changes, there is evidence that the health reform may also lead to a reduction in job lock more generally (Heim and Lurie, 2014).

before and after the policy was in place, in a differences-in-differences strategy. In contrast to previous findings and predictions, we do not find any evidence of a reduction in employment lock in response to the expansions of Medicaid.

The best existing evidence on employment lock among the population most affected by the Medicaid expansions – low-income childless adults – come from two quasi-experimental studies and one experimental study of specific state programs that provide Medicaid or similar coverage to childless adults. The first of these is Garthwaite et al. (2014), who examine the employment effects of a large disenrollment in Tennessee's Medicaid program for the "uninsured and uninsurable" in 2005. Using a differences-in-differences strategy, they estimate that Medicaid enrollment was associated with an over 50 percentage point drop in employment. Dague et al. (2014) study a 2009 enrollment freeze in a Wisconsin public insurance program and find smaller, but economically and statistically significant negative employment effects. They use both regression discontinuity design and matched differences-in-differences strategies, and find that the employment drop from Medicaid coverage ranges from two to ten percentage points. Finally, Baicker et al. (2014) find that when Oregon randomly selected childless adults to be eligible for Medicaid coverage, there were no effects on employment. One explanation for the disparate results across states, supplied by both Baicker et al. (2014) and Dague et al. (2014), is that Tennessee's program covered relatively higher income individuals, who are more likely to be able to find jobs with health benefits. Another explanation is that worse labor market conditions may affect the ability of individuals to adjust to health insurance losses or gains through employment. Finally, it is also possible that the groups affected in each of the three states differed in terms of how much they valued health insurance, and therefore how likely they were to be "locked" into employment in the absence of Medicaid. In particular, since Oregon's Medicaid program was only open to those who did not recently have health insurance, those ultimately affected by the lottery would not have been a group that was highly dependent on health insurance. On the other hand, as a result of earlier recertification procedures, the Tennessee disenrollees were likely a population that had greater than average taste for coverage. In contemporaneous studies, Gooptu et al. (2016) and Kaestner et al. (2015) find limited employment effects from the ACA Medicaid expansion.

Our study is also related to the literature on how public insurance expansions crowd out private insurance, since the primary source of private coverage is employer-sponsored coverage. The seminal paper on this topic, Cutler and Gruber (1996), finds that when Medicaid eligibility was expanded for children in the late 1980s to early 1990s, reductions in private coverage offset 49 percent of the increase in Medicaid cover-

age. Furthermore, they find that this private coverage is entirely employer-sponsored coverage, rather than non-group private insurance. Later studies that have reexamined the same Medicaid expansions and subsequent policies for slightly higher income children generally find smaller crowdout effects, though estimates cover a wide range (Shore-Sheppard, 2008, Card and Shore-Sheppard, 2004, LoSasso and Buchmueller, 2004, Gruber and Simon, 2008, Ham and Shore-Sheppard, 2005b). There has been considerably less work examining the crowdout effects of expanding eligibility to adults, since there was very limited coverage for adults prior to the ACA. Hamersma and Kim (2013), Busch and Duchovny (2005), and Aizer and Grogger (2003) find little to no crowdout of private coverage when examining the effects of parental Medicaid expansions.

Finally, we distinguish our study from an earlier literature on the the labor supply effects of Medicaid for single mothers, which mainly focuses on the effects of the decoupling of Medicaid from cash assistance in the 1980s and early 1990s (Yelowitz, 1995, Ham and Shore-Sheppard, 2005a, and Meyer and Rosenbaum, 2001). The key question in these studies is whether raising the income threshold for Medicaid (from a lower cash assistance income threshold) increased labor force participation among potential cash assistance recipients (i.e., single mothers) and abstracts away from the potential effect of Medicaid reducing employment lock.[2] In contrast, we focus on a population that, prior to the expansion, was not eligible for Medicaid or comparable public coverage at any income level. Our estimates therefore should be unaffected by the potentially offsetting impact of relaxing income constraints.

The remainder of this paper is organized as follows. Section 2 gives a brief overview of the major provisions of the ACA and the Medicaid expansions, as well as some background on the insurance landscape prior to the reform. Sections 3 and 4 describe our data, sample, and empirical strategy. We present our results in Section 5. Section 6 concludes.

2 Background on the Affordable Care Act and Medicaid

The Patient Protection and Affordable Care Act (ACA) was passed in 2010 with the goal of providing near universal health insurance coverage in the United States. Prior to the reform, publicly provided health insurance was generally available only to certain segments of the non-elderly population. State Medicaid programs covered low-income families (mostly children), pregnant women, the blind, and the disabled. Pri-

[2] An exception is Hamersma and Kim (2009), who explicitly examine the effects of parental Medicaid expansions on job mobility, finding that Medicaid reduces job lock among unmarried women.

vate insurance was primarily obtained through employment, though not all employees were offered this coverage. Those who did not meet the criteria to qualify for public coverage, and who did not have access to employer-sponsored plans often faced high coverage costs in the private individual market. The health reform sought to bring affordable coverage to these uninsured individuals through a combination of individual and employer mandates, the introduction of premium subsidies and reduced cost plans, the establishment of health insurance exchanges where individuals can shop for coverage, and the expansion of public programs. Many of these provisions went into effect beginning in 2014, including the individual mandate, establishment of the exchanges, and the expansion of Medicaid programs. Indeed, as shown in Figure 1, our data show an increase of about 10 million in the number of people insured from 2013 to 2014.

Originally, the ACA targeted the uninsured at the lower end of the income distribution by requiring states that accept federal funding for Medicaid (currently, all states and the District of Columbia) to expand coverage to all individuals below 138 percent of the federal poverty line. Given that children at that income level were already covered in all states, either by existing Medicaid programs or the Children's Health Insurance Program (CHIP), this expansion mainly affected adults, and in particular, those without dependent children ("childless adults"). Those with incomes above 138 percent of the poverty line (up to 400 percent) would be eligible for premium subsidies in the form of a refundable tax credit when purchasing private insurance. Furthermore, those between 138-250 percent of poverty are eligible for plans with lower deductibles and co-payments.

In 2012, the Supreme Court ruled that requiring states to expand Medicaid was unconstitutional in National Federation of Independent Business (NFIB) v. Sebelius. Instead, states may *choose* to expand Medicaid, which was completely funded by the federal government starting in 2014, but will drop gradually to 90 percent funding after 2019. Following the ruling, only about half of the states took up the expansion in January 2014, and a handful more expanded later in 2014 and 2015. In states that did not expand Medicaid, premium subsidies were available for those between 100 to 400 percent of poverty, but many adults below poverty were left without affordable coverage options.

Prior to 2014, state Medicaid programs generally provided no coverage to the non-disabled, non-elderly adult population, with several exceptions. The only group of healthy adults that states were required to cover were very low-income parents of dependent children (typically with incomes well below poverty) and those who were transitioning out of cash welfare programs. If states wanted to expand eligibility outside of mandatory coverage groups, they had to receive approval for a "demonstration" waiver. Some states used

these waivers to offer coverage to childless adults, but since the programs were required to be budget neutral to the federal government, the programs were generally limited in scope.[3] According to surveys of state officials conducted by the Kaiser Family Foundation and the Georgetown University, as of 2013, eight states and the District of Columbia provided childless adults below certain income limits with Medicaid-equivalent coverage (i.e., the same comprehensive benefits at no cost) (Heberlein et al., 2013a). An additional 13 states provided a more limited package of benefits to low-income childless adults, though more than half of these programs were closed to new enrollment.[4]

Therefore, when the ACA Medicaid expansions were implemented in 2014, it simultaneously granted coverage to previously ineligible adults, while relaxing income limits for some who were already enrolled. Since we are interested in isolating the labor supply effects of providing public health insurance ("employment lock" effects) from the potentially confounding effects of raising eligibility limits for existing enrollees, our ideal sample includes only individuals who were not enrolled in Medicaid prior 2014. Since we do not observe prior coverage in our data, our analysis will be limited to childless adults living in states that did not have any Medicaid-equivalent coverage prior to 2014.[5] We keep the states with more limited benefits in our analysis, since it is unclear how accessible these programs were and whether they can be viewed as substitutes for employer-sponsored coverage. However, we probe the robustness of our results to the exclusion of these states below.

To summarize, the upper panel of Table 1 lists the states without any Medicaid-equivalent coverage for childless adults in 2013 that constitutes our main analysis sample, as well as their expansion status and date. We also denote which states in this group had limited benefits to childless adults. The lower panel lists the states that provided some childless adults with Medicaid-equivalent coverage and are therefore excluded from our analysis.

[3]The ACA also allowed states to begin covering childless adults beginning in April 2010, but the federal funding for this new coverage group was limited to the state's "regular" matching rate until 2014.

[4]This number excludes states that provided coverage contingent on employment or other non-income requirement.

[5]Focusing only on those who were previously ineligible for Medicaid also has the advantange of reducing any confounding "woodwork" or "welcome mat" effects, which occurs when previously eligible individuals begin to take up Medicaid ("come out of the woodwork") following the reform due to increased outreach and advertising (Sommers and Epstein, 2011 and Frean et al., 2016). To the extent that expansion states have larger "woodwork" effects, this may confound the interpretation of our employment estimates.

3 Data

Our analysis utilizes data from the annual American Community Survey (ACS) and the monthly Current Population Survey (CPS). Both surveys are nationally representative and contain labor market, health insurance, and demographic information. The ACS surveys a cross-sectional one-percent sample of U.S. households every year. The CPS surveys about 60,000 households per month, interviewing them for four consecutive months, followed by a break of eight months, and finally another four months. The ACS data we use cover 2010-2014, and the CPS data cover 2010 through July 2015.

We draw our health insurance information from the ACS. Although the CPS also contains health insurance information in its annual March supplement, a redesign of the health insurance questions coinciding exactly with the timing of the Medicaid expansions renders it unusable for our purposes (Pascale, 2015). The specific health insurance variables from the ACS that we use are indicators for being covered by the following types of insurance at the time of the survey: private insurance, private insurance through a employer-sponsored group plan, private insurance that is directly purchased, and public insurance (Medicaid or another government program for the low-income or disabled).

For labor market information, we use both ACS and CPS data. The ACS has the advantage of a larger sample size, but the CPS contains more nuanced questions on labor force participation, as well as a slightly longer time horizon post expansion. For both data sets, our main outcome variable is an indicator for being "at work" in the survey reference week. For intensive margin measures of employment, we use the question in the CPS that asks the worker for the number of actual hours worked in the reference week. Usual weekly earnings are reported in the CPS for those who are employed and interviewed in their fourth and eighth month in the survey. We measure wages by dividing weekly earnings by the number of usual hours worked per week.

As mentioned above, prior to the expansion, all states covered low-income parents to some degree, and several states also had programs that provided childless adults with Medicaid-equivalent coverage. To the extent that adults who were enrolled in Medicaid prior to the expansion were limiting their labor supply to stay under income thresholds, any evidence of employment lock would be confounded by workers who increase their labor supply in response to the relaxed income limits in expansion states. We therefore focus only on childless adults and restrict the sample to the 42 states in which there was no Medicaid-equivalent coverage for childless adults in 2013. Later in the analysis, we probe the robustness of our results to includ-

ing only states without *any* public insurance for childless adults. We consider an individual childless if they do not share a household with a child under 18. This definition of childless is likely to identify a subset of the actual population of adults who are excluded from public insurance coverage pre-ACA, as households with children may contain several families where only a subset of the adults qualify as parents or caregivers according to state program rules. To avoid potential interactions with military, aged, and dependent health coverage, we restrict our sample to non-institutionalized, civilian adults, ages 27-64.

Table 2 presents descriptive statistics for childless adults in the expansion states and non-expansion states in our sample. Expansion states have higher rates of coverage, mostly coming from employer-sponsored coverage, though higher rates of Medicaid coverage also contribute to the disparity. In terms of employment rates, however, the two sets of states look fairly similar, with employment in expansion states only slightly higher. In terms of demographic differences, the non-expansion states tend to be on average less educated, more likely to be non-white, and have a higher rate of poverty.

Since individuals with incomes above the federal poverty line (up to 400 percent of the poverty line) would be eligible for premium subsidies beginning in 2014 regardless of whether they live in a state that expanded Medicaid, the expansion will mostly impact those who are below the poverty line. We therefore also focus on a subsample of childless adults who are below the poverty line. Since a poverty measure is not readily available in the basic monthly CPS, we use the categorical variable on the total household income, in conjunction with the number of household members, as a proxy. We define an individual as below poverty if the upper threshold of their household income category is below the official poverty level of the interview year, assuming the number of household members is the family size. As expected, this understates the poverty rate: it is consistently about one percentage point below poverty rates obtained using the ACS. However, the fraction of individuals below poverty using this measure tracks changes in the ACS's poverty rates fairly well over time (not shown).

Finally, for robustness, we estimate the effects of the Medicaid expansion in a few other subsamples that utilize additional information available in the CPS. In one subsample, we take advantage of the short panel structure of the CPS and identify individuals who were employed when surveyed in the previous year. In linking the respondents over time, we follow Madrian and Lefgren (1999) and match by household and person identifiers, and invalidating matches that do not have consistent sex, race, and age information. Using this method, we are able to match about 77 percent of respondents who were in their fifth through eighth month in the survey. In another subsample, we use self-reported health status information, which fall into

five mutually exclusive categories: excellent, very good, good, fair, and poor, from the Annual Social and Economic Supplement of the CPS (the "March CPS").

4 Empirical Strategy

To identify the effects of an expansion in Medicaid coverage, we compare employment in states that did and did not expand Medicaid, before and after adoption of the policy. Specifically, we estimate differences-in differences (DD) specifications of the following form:

$$y_{st} = \beta Exp_{st} + \alpha_s + \gamma_t + \varepsilon_{st} \tag{1}$$

where y_{st} are measures of insurance coverage and employment in state s and time t (where t is a month in CPS samples, and a year in ACS samples), α_s are a set of state fixed effects, and γ_t includes a set of year fixed effects. When we have monthly data (i.e., in the CPS), γ_t also includes a set of calendar month fixed effects to control for seasonal fluctuations in insurance or employment that are common in all states. Exp_{st} is an indicator for whether state s covers childless adults under Medicaid in time t. In the ACS data, which is available yearly through 2014, states will have at most one period in which Exp_{st} is equal to 1.[6] In the monthly CPS analysis, for which we have data through July 2015, Exp_{st} will equal to 1 starting the month the expansion is implemented. The coefficient of interest is β, which captures the effect of expanding Medicaid.

We estimate the model on on data aggregated to state-year (ACS) or state-month (CPS) averages, and weight each aggregate by the number of observations in each state-year or state-month cell. In the absence of individually varying covariates, the weighted aggregate regression is identical to estimating using the individual level data, up to a degrees-of-freedom adjustment.[7] We choose to aggegate the data in this way to highlight the fact that the effective unit of observation in the context of our quasi-experiment is the state-year/month. In other words, if we observe more individuals in the states and years we already have in our existing sample, we are not gaining any more variation in the regressor of interest, and the aggregate analysis reflects this fact. However, more individual observations do reduce the variance of the estimated insurance

[6] States that expanded in the middle of 2014 and in 2015 (MI, NH, PA, IN) are considered not expanded in the ACS analyses.

[7] In our base specification, we do not include any controls other than state and time fixed effects, though our results are robust to controlling for the demographic composition of states (i.e., age, gender, race, education, and marital status), shown in Appendix Tables 3 and 4.

coverage or employment rates for each cell. Thus, the weighting can be viewed as a heteroskedasticity correction: Since state-year/month cells with more individuals have may have smaller error term variances, weighting by the cell sizes may improve precision.[8] All standard errors are clustered at the state level.

The identifying assumption is that the employment in expansion states and non-expansion states would have trended similarly the absence of the Medicaid expansion. One way this would be violated is if only states with strong or weak labor markets, and whose employment was on an upward or downward trajectory prior to 2014, choose to take up the expansion. To gauge whether there were pre-existing trends in the expansion states we replace Exp_{st} in equation (1) with a set of "event time" dummies:

$$y_{st} = \sum_{k=-3}^{1} \delta_k D_{st}^k + \alpha_s + \gamma_t + \varepsilon_{st} \tag{2}$$

where D_{st}^k is equal to 1 if in time t, state s is in its kth year of its Medicaid expansion, and 0 otherwise. If the outcome in the above equation is employment, the coefficients δ_k for $k < 0$ show whether, in the periods leading up to the expansion, the expansion states had significantly different employment rates relative to the control group.

In order to determine whether individuals reduced labor supply in response to the Medicaid availability from equation (1), there must not have been any offsetting differential increases in labor demand in expansion states relative to non-expansion states. One provision of the ACA that is predicted to have impacts on labor demand is the employer penalty, which penalizes large employers for not offering employer-sponsored coverage beginning in 2015. Although all states are subject to this penalty, one way in which the penalty may interact with the Medicaid expansion to impact labor demand is if the penalty is smaller in expansion states. This is possible because the penalty is applied to an employer only if an employee claims a premium tax credit, which may be less likely in states that expand Medicaid. To test this indirectly, we examine the effects of the expansion on wages, which should increase if there were an offsetting increase in demand.

We note that in addition to the Medicaid expansions, the ACA established premium subsidies and health insurance marketplaces in all states, which also had the potential to reduce employment lock. Our identification strategy, which compares states by expansion status, will therefore be unable to estimate the effect of the health reform on employment lock more generally. Rather, we will only detect employment effects

[8] Indeed, a modified Breusch-Pagan test that regresses OLS residuals on the inverse of cell sizes confirms the presence of heteroskedasticity when the outcome is employment in our main ACS and CPS samples (Solon et al., 2015). In addition, we report the estimates without weighting in Appendix Tables 3 and 4.

for a relatively low-income population whose incomes are not high enough to qualify for subsidies to purchase health insurance on the new exchanges. We therefore also estimate our models on low-income and "Medicaid-likely" subsamples described below in Section 5.

Finally, it is also possible that because the premium subsidies are only available to those between 100 to 400 percent of the federal poverty line, workers in non-expansion states may increase their labor supply in order to obtain subsidized private coverage. This effect works in same direction as the the employment lock effects (i.e., non-expansion states would have relatively higher employment), biasing our results upward in absolute value. For this reason, in some specifications, we estimate equation (1) on a sample of workers who were previously employed.

5 Results

We begin by graphically examining insurance and employment trends in our sample of childless adults in expansion states and non-expansion states. In Figures 2 and 3, we only include states that expanded in January 2014 (17 states) and states that have not expanded (21 states), though our estimates will also include the handful of states that expanded later than January 2014. Figure 2a shows that, as expected, Medicaid coverage sharply increased in expansion states after 2014, while the increase was much milder in non-expansion states. In Figure 2b, we plot overall coverage rates. In 2014, when several major provisions of the ACA came into effect, including the individual mandate and the opening of the health insurance exchanges, insurance rates in both expansion and non-expansion states increased, though the increase was larger in expansion states. The magnitude of this difference is smaller than the difference in Medicaid coverage, suggesting that individuals who were ineligible for Medicaid in non-expansion states were differentially more likely to obtain private insurance via employment or through the newly established exchanges. When we plot the annual employment rates in expansion and non-expansion states in Figure 3, however, there is no evidence that employment in expansion states is lower than in non-expansion states.[9] If anything, in states that expanded Medicaid, employment may have increased.

In Table 3, we present our DD estimates of the effect of the Medicaid expansions on health coverage

[9]The differences in employment rates and trends between the ACS and CPS data are likely due to the smaller sample sizes in the CPS. In Appendix Figure 1, we compare the employment-to-population ratio (16+ year-old) estimated from the CPS and ACS in expansion and non-expansion states to those obtained using the Current Employment Statistics (CES). Though we are unable to compare the employment rates in our main sample (childless adults) to the employment rates in the CES, the trends in the CES most closely match the ACS for the overall adult population. Note that the CES does not contain farm employment.

rates. Consistent with Figures 2 and 3, the first two columns of Panel A show that there was a significant difference in the fraction of childless adults insured and insured by Medicaid of 1.6 and 3.0 percentage points, respectively, between expansion states and non-expansion states after the policy was in place. Column 3 confirms that a relative decrease in private insurance contributed to the smaller overall increase in insurance coverage than implied by the increase in Medicaid coverage. In columns 4 and 5 we examine whether this crowdout is coming from employer-sponsored group coverage. The point estimates indicate that the 3.0 percentage point increase in Medicaid coverage in expansion states is crowded out by a 0.9 percentage point reduction in private direct purchase insurance, and 0.3 percentage point reduction in employer-sponsored coverage, though the latter is statistically insignificant.

The total "crowdout" implied by our estimates is 42 percent, with about 11 percent coming from employer-sponsored insurance and 31 percent from direct purchase insurance. These estimates are within the range of estimates of crowdout during the Medicaid and CHIP expansions to low-income children (Cutler and Gruber, 1996, LoSasso and Buchmueller, 2004 and Gruber and Simon, 2008). However, we note that it is somewhat misleading to relate previous measures of crowdout to the current setting, as many changes in health policy and overall insurance coverage coincide with this particular Medicaid expansion. In past work, the interpretation has been that expansions of public insurance led to some dropping of employer-sponsored coverage among already insured individuals or dependents. Due to the individual mandate, as well as other provisions in the ACA, the fraction insured increased sharply in 2014 for both expansion and non-expansion states. The expansion in Medicaid was "crowded out" in the sense that, in the absence of Medicaid coverage, some of the uninsured would have obtained coverage by purchasing insurance directly, perhaps through the newly established state exchanges, where they can select from a menu of affordable coverage options.

Turning to our employment results in the first two columns of Table 4, we find a statistically insignificant difference in employment rates in expansion states following the policy change. The point estimates from the CPS data indicate that there may even have been a positive employment effect in expansion states. In columns 3 and 4, we examine whether there were potential intensive margin responses to Medicaid coverage. If employer-sponsored coverage is only available to full-time employees, we may expect the Medicaid expansion to allow workers who previously worked full-time only to obtain health insurance to switch to a better-matched part-time job. We do not find evidence that individuals are reducing their hours worked following the Medicaid expansion: Part-time employment (those working fewer than 20 hours a week) remained unchanged and full-time employment (those working 30 or more hours a week) may even

have increased. Finally, since the employment lock effect is only relevant for the employed, we estimate employment effects among those who were employed in the prior year, using the CPS's short longitudinal structure. Column 5 shows that the expansion did not affect employment outflows.

In panels B and C of Tables 3 and 4, we present the analogous results for two subsamples of childless adults who are more likely to be impacted by the Medicaid expansion. As mentioned above, since subsidies for directly purchasing insurance are available for those above poverty in all states, employment lock among higher income groups is expected to be reduced regardless of expansion status and would not be detected by our DD strategy. We therefore examine the effects among those with incomes below the poverty line. Panel B of Table 3 shows that, relative to all childless adults, the Medicaid expansion had a much larger impact on the the overall insured rate among childless adults below poverty, increasing the rate of Medicaid coverage by 11.1 percentage points and overall coverage by 7.9 percentage points. There is evidence of some crowd out of both private employer-sponsored and direct purchase coverage of 1.0 and 2.0 percentage points, respectively. When we examine the effects of the expansion on employment in Table 4, we again find that there are no statistically significant effects on employment rates, nor any adjustment in labor supply along the intensive margin.[10]

We note that restricting the sample to only those below poverty is problematic if the composition of this groups differs in expansion and non-expansion states. In particular, workers may reduce labor supply in order to qualify for Medicaid, resulting in an increased poverty rate in expansion states.[11] In Panel C of Tables 3 and 4 we therefore also show an alternative subsample containing a subset of childless adults who are more likely to be enrolled in Medicaid as predicted by fixed demographic characteristics. To do this, we estimate a linear probability model of Medicaid enrollment, with household size, educational attainment, age categories, sex, marital status, and race as predictors.[12] We use the coefficients from this model to predict the probability of being on Medicaid in both the ACS and CPS childless adult samples. The "Medicaid likely" subsample shown in the bottom panels of Tables 3 and 4 are those who are above the median in terms of their predicted Medicaid probabilities. Columns 1 and 2 of Table 3 show that the first stage estimates of the Medicaid expansion on overall coverage (2.6 percentage points) and Medicaid

[10] Although we are able to estimate and report the results on continued employment and wages in the last two columns, we note that the estimates, especially in the below-poverty sample, suffer from small cell sizes.

[11] We also estimate equation (1) with y_{st} as the fraction of the population below poverty in state s at time t, and present the estimate of β in Appendix Table 1. The statistically insignificant negative coefficient indicates that increased rates of poverty in response to the Medicaid expansion is unlikely confound our findings.

[12] Specifically, we use indicators for each household size (7 dummies), detailed education categories (14 dummies), five-year age groups (8 dummies), sex, marital status (5 dummies), and race (2 dummies).

coverage (4.6 percentage points) are stronger in this subsample relative to all childless adults, as expected. However, the (insignificant) employment effects are of roughly similar magnitudes (Table 4).

Using the estimates from column 2 of Table 3 and column 1 of Table 4, a 95 percent confidence interval indicates that the implied "treatment effect on the treated" (TOT) of Medicaid on employment is no more negative than 15 percentage points (from "Medicaid-likely" subsample). To put these numbers in context, we compare our estimates with three recent studies on the impact of Medicaid on the labor supply of childless adults. As mentioned in the introduction, the most compelling evidence we have so far on the potential for the public insurance expansions in the ACA to reduce employment lock comes from states that have recently stopped or started enrollment in public insurance programs for childless adults. Garthwaite et al. (2014) examine a large disenrollment in Tennessee's childless adult program in 2005 and find that 63 percent of those who lost Medicaid increased their labor supply, though the 95 percent confidence interval ranges from about five percent to well over 100 percent.[13] Dague et al. (2014) find much smaller but still significant and precisely estimated employment effects ranging from 2.4 to 10.6 percentage points after an enrollment freeze in Wisconsin's childless adult program in 2009. Finally, Baicker et al. (2014)'s estimate from the Oregon Health Experiment, where wait-listed childless adults were randomly invited to enroll in the program, is that Medicaid reduced employment by 1.6 percentage points (statistically insignificant). Our point estimates are closest to Baicker et al. (2014)'s small and insignificant point estimates, though our estimates do not rule out the moderately sized effects that were found in Dague et al. (2014).

One possible explanation for the widely disparate findings in the state-specific case studies is that they may be studying very different subpopulations. Employment lock would be most relevant for those who highly value health insurance (i.e., those who are or who have dependents in poor health), and/or who have relatively low labor force attachment. The population studied in Garthwaite et al. (2014) are exactly those with higher than average taste for health insurance (due to earlier recertification reforms), while the population studied in Baicker et al. (2014) are those who have gone without coverage for at least six months, and may have lower than average taste for coverage. To see whether these differences across populations may explain the different results, we estimate our models on subgroups of childless adults who are likely to have larger employment responses to Medicaid coverage. First, we estimate the effects of the expansion on those who tend to have lower labor market attachment: females, those age 50 or older, and high school

[13]These numbers use only the confidence interval on the reduced form effect on employment, and does not account for the estimation of the first stage.

dropouts. Then, as a proxy for health insurance preferences, we also estimate the employment effects among those with a self-reported health of poor, fair, or good (available in the March CPS only). The first two panels of Table 5 show that the Medicaid expansions had similar effects on insurance coverage and employment among females and older individuals as in the overall childless adult population. Among high school dropouts, the expansions had a larger impact on Medicaid coverage, and there is also less evidence of private insurance crowdout. Correspondingly, there is no evidence of employment effects. Finally, in the last panel, we find no statistically significant employment effects among those with self-reported health ranging from poor to good (about 38 percent of respondents).

A potential explanation for the zero to positive employment response is that expansion states experienced a relative increase in labor demand. As mentioned above, since the ACA mandated that employers with over 50 full-time equivalent employees are required to provide group coverage and were penalized for every worker who claims a premium tax credit (excluding the first 30), it is possible that employers in states that expanded Medicaid anticipate lower labor costs because they are less likely to be penalized for lack of coverage.[14] We test for a possible increase in labor demand by examining the wage response in expansion states, which should be positive if there were simultaneous increases in labor demand and decreases in labor supply. In the last column of Table 4, we report the DD coefficient when we estimate equation (1) with the average log wages as outcomes. We find no significant effects of the Medicaid expansion on wages.

As mentioned above, the validity of the differences-in-differences strategy for identifying a causal effect of expanding Medicaid depends crucially on the idea that labor market trends were comparable in states that expanded relative to those that did not. One particular concern is that states that expected upward growth in employment are more likely to take up the Medicaid expansion, masking any employment lock effects. We check to see whether expansion states were on a different employment trajectory prior to the expansion by estimating equation (2) and plotting the estimates of δ_k in Appendix Figure 2. The statistically insignificant estimates of the δ_k coefficients for $k \leq 0$ and lack of visual pre-trends indicate that there were no systematic differences between expansion states and non-expansion states in the periods leading up to the policy change.

In Appendix Table 2, we probe the robustness of our results to the exclusion of certain states. First, as we mention in Section 2, 13 states provided low-income childless adults with limited benefit plans prior to 2014. Of these 13 states, 11 subsequently chose to expand coverage in 2014, as shown in Table 1. To

[14] Note that the employer mandate does not come into effect until the beginning of 2015.

the extent that the enrollees in these limited plans were previously constrained to work fewer hours due to the low income thresholds, it is possible that the Medicaid expansions led to increased labor supply, confounding the effects of employment lock. The upper panel of Appendix Table 2 shows the estimates of our main DD specifications using excluding these 13 states. A second concern is that while most expansion states implemented the policy at the beginning of 2014, a handful of states expanded later in the year and in 2015. In states that expanded later, it is possible that the timing of the policy was determined by factors related to the state's economy and labor market. Therefore, in the lower panel of Appendix Table 2, we include only the states that expanded in January of 2014 and non-expansion states.[15] The results from both of these alternative sample restrictions mirror the results from Table 4.

6 Conclusion

In this study, we examine whether the recent expansions in Medicaid reduced "employment lock" among childless adults who were previously ineligible for public coverage. To do this, we use a differences-in-differences strategy that compares employment in states that chose to expand Medicaid versus those that chose not to expand, before and after implementation. We find that although the expansion increased Medicaid coverage by 3.0 percentage points among childless adults, there was no significant impact on the employment. Our estimates rule out the large employment lock effects of Garthwaite et al. (2014) and are similar to that of Baicker et al. (2014).

We close with several potential explanations for the different estimates across studies. First, as noted by both Baicker et al. (2014) and Dague et al. (2014), the population studied by Garthwaite et al. (2014) is a higher income population than those most affected by the Medicaid expansions in the ACA. It is possible that the types of jobs that individuals living below poverty are able to obtain are less likely to come with health benefits. Another explanation is that the considerable policy uncertainty surrounding the ACA's Medicaid expansion may have dampened or delayed employment responses: If workers "locked" into employment for insurance reasons perceive the Medicaid expansions to be temporary due to constitutional or implementation challenges, they may be reluctant to leave their jobs and employer-sponsored insurance coverage. As the dust settles, however, it is possible that we will begin to see the predicted impacts on the labor market.

[15] This excludes PA, NH, IN AK, and MI. We also exclude WI because while it did allow childless adults in Medicaid starting in 2014, it is not considered technically expanded because the program is limited to those under 100 percent FPL and will not be accepting the enhanced federal funding for childless adult coverage.

Therefore, while our early estimates suggest that the labor market impacts of the Medicaid expansions are smaller than anticipated, medium- and long- term impacts remain an important avenue for future research.

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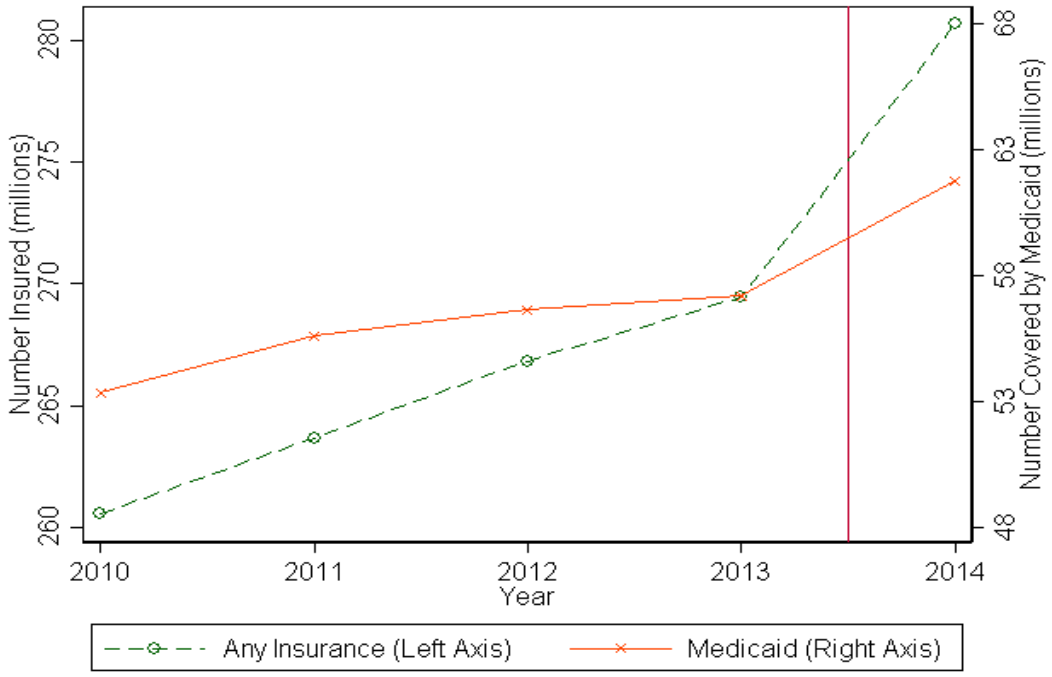
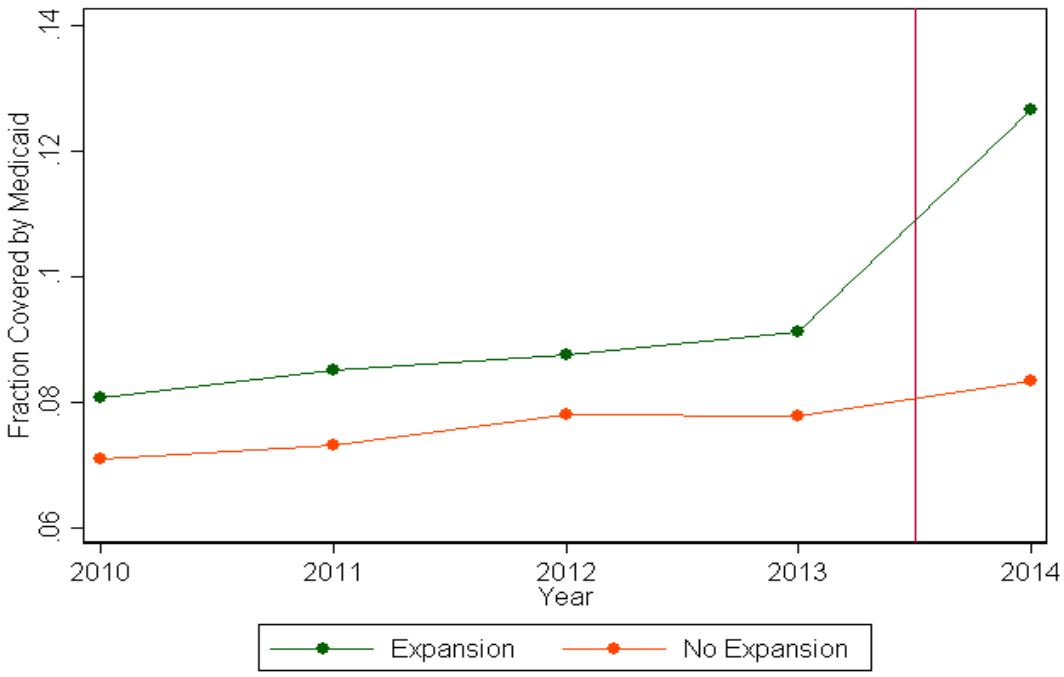
Figure 1: Number of Individuals with Health Insurance and Medicaid, 2010-2014



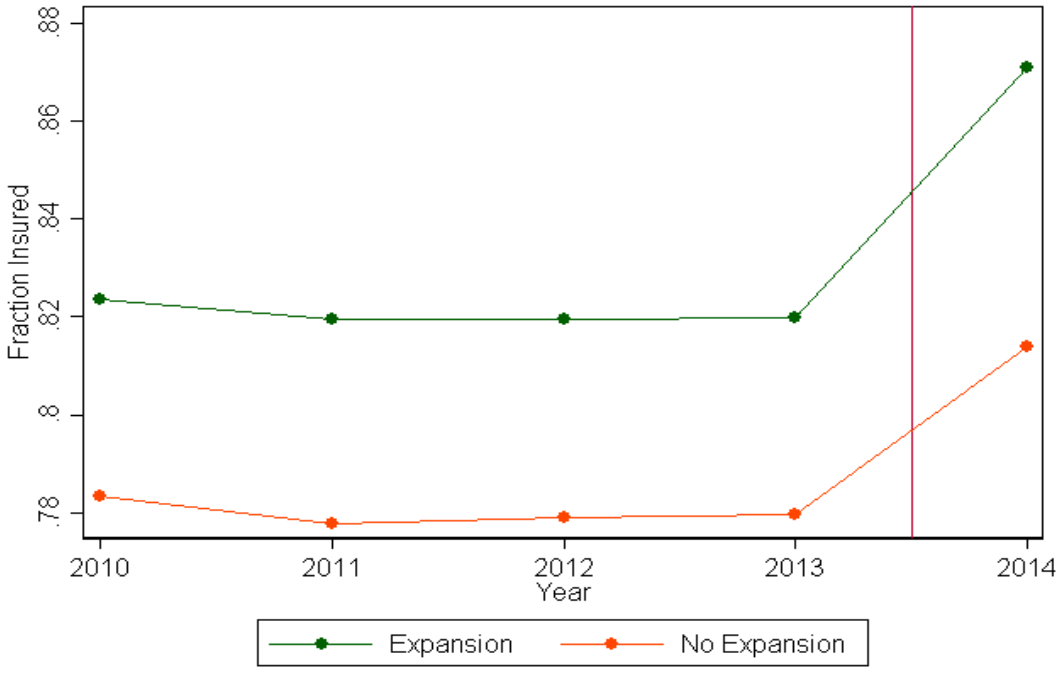
Notes: Author calculations using data from the American Community Survey.

Figure 2: Health Insurance Trends Among Childless Adults, Expansion vs. Non-expansion States

A. Medicaid Coverage



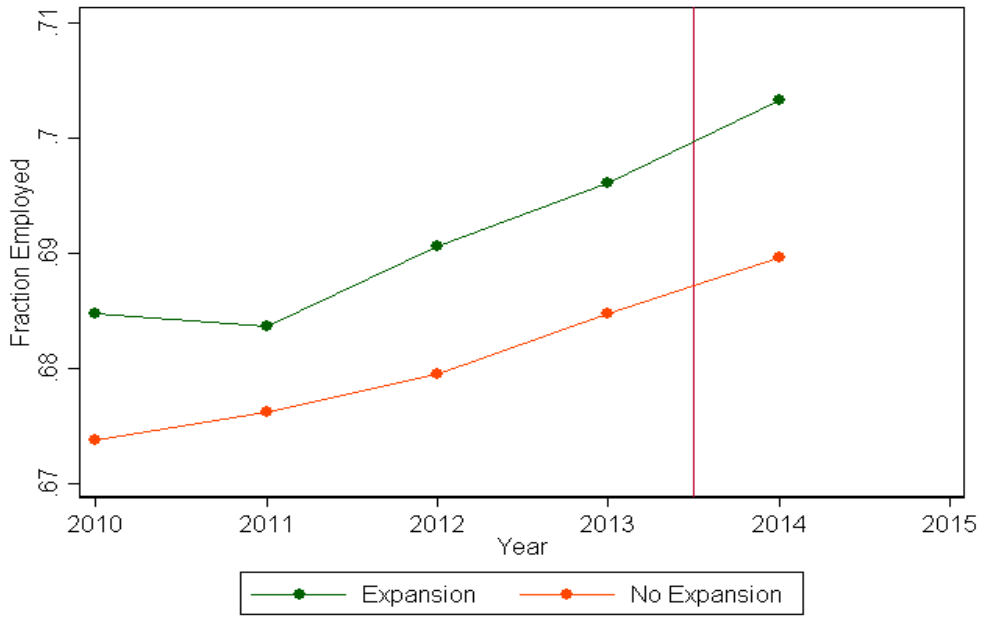
B. Overall Health Insurance Coverage



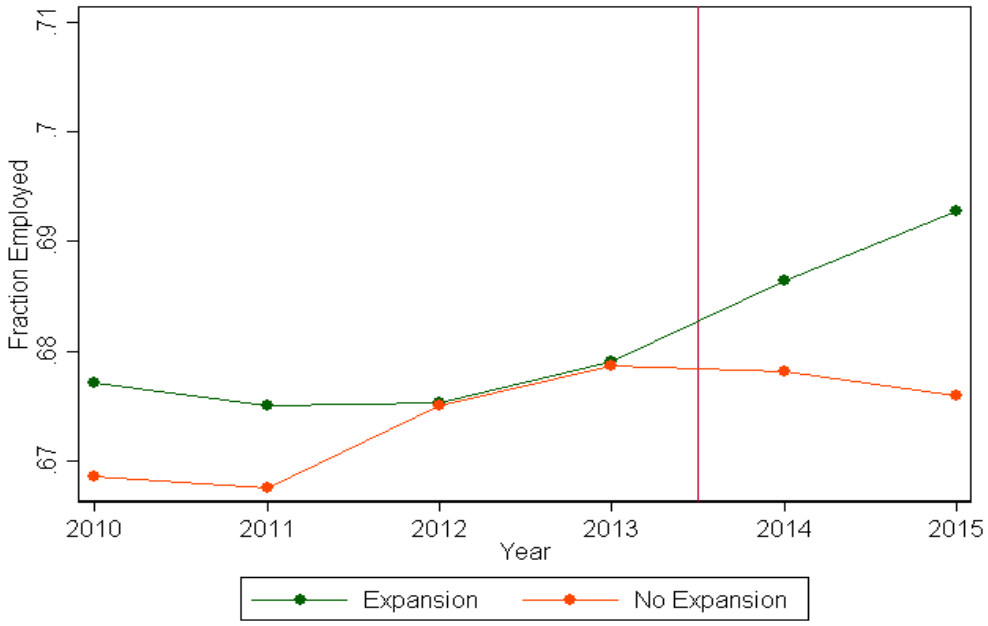
Notes: Sample includes childless adults in states with no prior Medicaid-equivalent coverage for childless adults, and that either expanded in January 2014 (17 states) or did not expand (21 states). Data is from the American Community Survey.

Figure 3: Employment Trends Among Childless Adults, Expansion vs. Non-expnsion States

A. American Community Survey



B. Current Population Survey



Notes: Sample includes childless adults in states with no prior Medicaid-equivalent coverage for childless adults, and that either expanded in January 2014 (17 states) or did not expand (21 states). Data is from the American Community Survey (panel A) or the Current Population Survey (panel B).

Table 1: State Expansion Status

A. Childless Adults Ineligible in 2013

Expansion States	Date Expanded	Non-Expansion States
AR	1/1/2014	AK**
CA†	1/1/2014	AL
IL	1/1/2014	FL
IA†	1/1/2014	GA
KY	1/1/2014	ID
MD†	1/1/2014	KS
MA†	1/1/2014	LA**
NV	1/1/2014	ME†
NJ†	1/1/2014	MO
NM†	1/1/2014	MS
ND	1/1/2014	MT**
OH	1/1/2014	NE
OR†	1/1/2014	NC
RI	1/1/2014	OK
WA†	1/1/2014	SC
WI*†	1/1/2014	SD
WV	1/1/2014	TN
MI†^	4/1/2014	TX
NH^	8/1/2014	UT†
PA^	1/1/2015	VA
IN†^	2/1/2015	WY

B. Childless Adults Eligible in 2013

AZ
CO
CT
DE
DC
HI
MN
NY
VT

Source: The Henry J. Kaiser Family Foundation

Notes: *WI did not take up federal funding for the newly covered group, but created a program that covers childless adults up to 100% FPL
**AK expanded Medicaid 9/2015, MT 1/2016, LA 7/2016
† Limited benefits to childless adult group in 2013
^ Considered not expanded in the ACS sample

Table 2: Descriptive Statistics

	Expansion States	No Expansion States
ACS 2010-2014		
Insured	83.6%	78.7%
Insured Through Employer	63.5%	58.4%
Insured, Own Purchase	10.9%	11.2%
Medicaid	9.5%	7.7%
CPS 2010-2015		
Employed	67.6%	67.4%
Employed, >=30 Hrs	58.7%	59.6%
Below Poverty	8.6%	10.4%
Female	49.1%	49.1%
HS Grad	91.6%	89.7%
Non-white	18.1%	22.1%
Average Age	48.7	48.7
Number of States	21	21

Notes: Sample for both ACS and CPS data are non-institutionalized civilians, ages 27-64, and childless (see text for details). Each number is calculated using CPS or ACS person-level weights.

Table 3: Effects of Medicaid Expansion on Health Insurance

	Insured (1)	Medicaid / Other Govt (2)	Privately Insured (3)	Private, Thr. Employer (4)	Private, Own Purchase (5)
A. Childless Adults					
Expansion x Post	0.016	0.030	-0.014	-0.003	-0.009
	(0.005)	(0.004)	(0.004)	(0.003)	(0.003)
	[2.96]	[8.07]	[-3.32]	[-1.25]	[-2.85]
Mean of Dep Var	0.842	0.086	0.738	0.628	0.124
B. Childless Adults Under the Poverty Line					
Expansion x Post	0.079	0.111	-0.030	-0.010	-0.020
	(0.011)	(0.012)	(0.005)	(0.004)	(0.004)
	[7.02]	[9.29]	[-5.63]	[-2.45]	[-5.36]
Mean of Dep Var	0.619	0.354	0.230	0.125	0.105
C. Medicaid-Likely Childless Adults					
Expansion x Post	0.026	0.046	-0.019	-0.008	-0.011
	(0.006)	(0.005)	(0.005)	(0.004)	(0.003)
	[4.25]	[9.48]	[-3.73]	[-2.05]	[-3.32]
Mean of Dep Var	0.764	0.149	0.591	0.490	0.113

Notes: Data is from ACS 2010-2014. Sample includes states in which childless adults were not eligible for Medicaid in 2013 (42 States). Observations are state-year averages (N=210). Regressions include year and state fixed effects and are weighted by cell sizes. Standard errors are clustered by state and in parentheses. t-stats are in brackets.

Table 4: Effects of Medicaid Expansion on Labor Market Outcomes

	Employed - ACS (1)	Employed - CPS (2)	Employed, <20 Hrs (3)	Employed, >=30 Hrs (4)	Still Employed (5)	Log Wage (6)
A. Childless Adults						
Expansion x Post	0.000	0.005	-0.001	0.006	-0.001	-0.006
	(0.002)	(0.003)	(0.001)	(0.003)	(0.003)	(0.007)
	[0.25]	[1.48]	[-0.98]	[1.99]	[-0.25]	[-0.88]
Mean of Dep Var	0.682	0.678	0.038	0.590	0.900	2.914
B. Childless Adults Under the Poverty Line						
Expansion x Post	0.002	0.009	-0.003	0.005	0.006	0.038
	(0.004)	(0.011)	(0.005)	(0.008)	(0.020)	(0.035)
	[0.48]	[0.77]	[-0.58]	[0.60]	[0.31]	[1.09]
Mean of Dep Var	0.246	0.318	0.056	0.208	0.731	2.420
C. Medicaid-Likely Childless Adults						
Expansion x Post	-0.002	0.007	-0.001	0.007	-0.003	-0.009
	(0.002)	(0.004)	(0.001)	(0.004)	(0.005)	(0.010)
	[-0.96]	[1.81]	[-0.61]	[1.91]	[-0.54]	[-0.91]
Mean of Dep Var	0.609	0.617	0.037	0.530	0.889	2.770

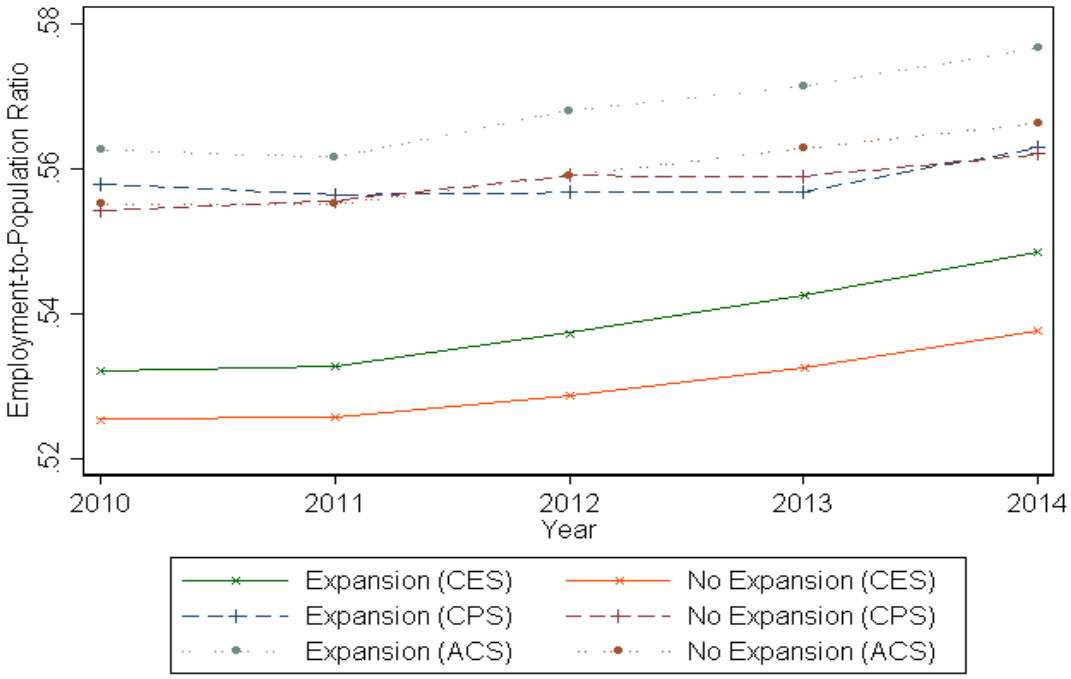
Notes: Data is from ACS 2010-2014, CPS 2010-July 2015. Sample includes all states in which childless adults were not eligible for Medicaid in 2013 (42 States). Observations are state-year averages for ACS (N=210) and state-month averages for CPS (N=2814). Regressions include year and state fixed effects, month-in-year effect (CPS only) and are weighted by cell sizes. Standard errors are clustered by state and in parentheses. t-stats are in brackets.

Table 5: Effects of Medicaid Expansions in Subgroups of Childless Adults

	Insured (1)	Medicaid (2)	Employed (CPS) (3)
A. Females			
Expansion x Post	0.016	0.032	0.003
	(0.005)	(0.004)	0.005
	[3.17]	[7.78]	[0.71]
Mean of Dep Var	0.860	0.089	0.644
B. Age 50 or Older			
Expansion x Post	0.013	0.027	0.004
	(0.005)	(0.004)	(0.005)
	[2.41]	[6.60]	[0.94]
Mean of Dep Var	0.880	0.085	0.627
C. High School Dropouts			
Expansion x Post	0.049	0.055	0.017
	(0.009)	(0.008)	(0.008)
	[5.45]	[7.23]	[2.13]
Mean of Dep Var	0.692	0.262	0.462
D. In Poor Health (Health Rated Poor - Good)			
Expansion x Post	-	-	-0.008
			(0.008)
			[-0.93]
Mean of Dep Var			0.540

Notes: Health insurance data is from ACS 2010-2014. Labor market data are from basic CPS 2010-July 2015 (Panels A-C) and March CPS 2010-2015 (Panel D). Sample includes all states in which childless adults were not eligible for Medicaid in 2013 (42 States). Observations are state-year averages for ACS (N=210), and state-month averages for CPS (N=2814 - basic, N=252 - March). Regressions include year and state fixed effects, month-in-year effect (basic CPS only) and are weighted by cell sizes. Standard errors are clustered by state and in parentheses. t-stats are in brackets.

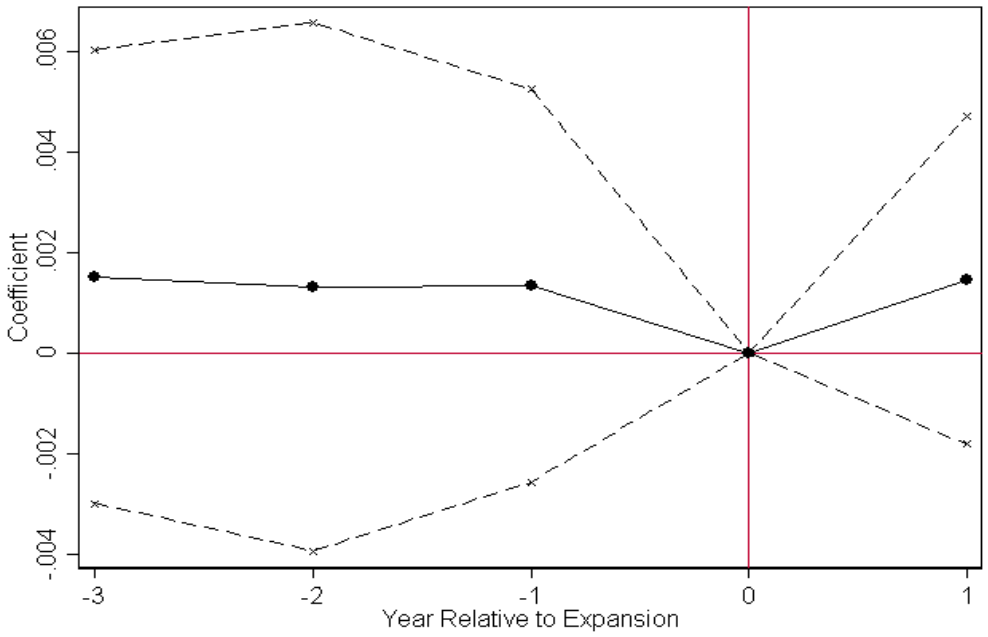
Appendix Figure 1: Comparison of Employment-to-Population Ratio Estimates Across Datasets



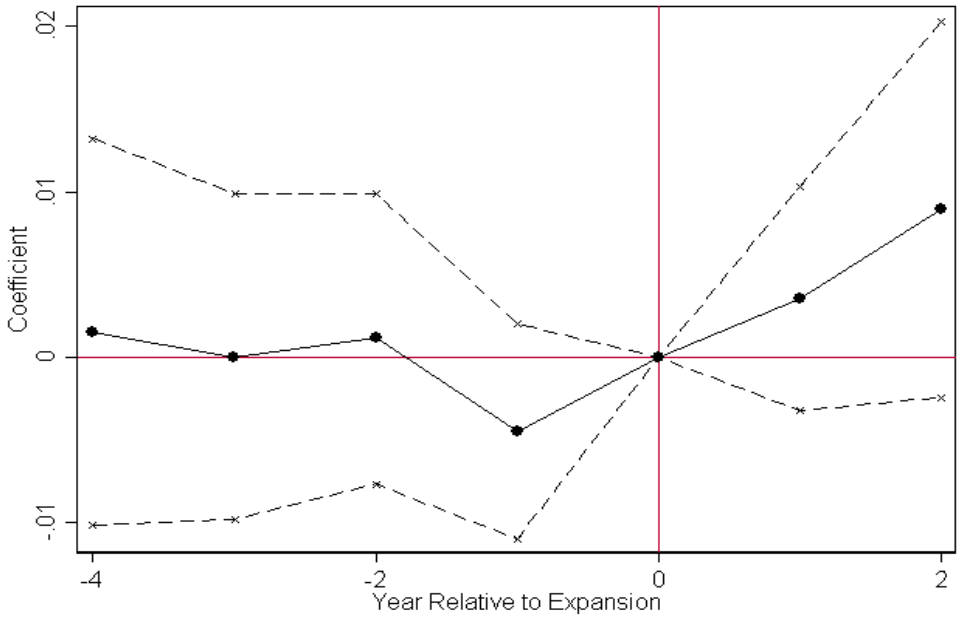
Notes: This plot shows the employment-to-population ratio in expansion and non-expansion states using CES, CPS, and ACS. The denominator for each series in the 16 and over population. Expansion status is defined as in Figure 1.

Appendix Figure 2: Event Study Estimates on Employment

A. American Community Survey



B. Current Population Survey



Notes: These figures plot the estimates of δ in equation (2) for k=-3 to k=1, where the the dependent variable is employment rate in the ACS (upper figure) or CPS (lower figure). Sample is as in Table 4.

Appendix Table 1: Effect of Medicaid Expansion on Fraction Below Poverty

	Fraction Below Poverty - ACS	Fraction Below Poverty - CPS
Childless Adults		
Expansion x Post	0.001	-0.004
	(0.001)	(0.003)
	[0.58]	[-1.12]
Mean of Dep Var	0.109	0.094

Notes: Data is from ACS 2010-2014, CPS 2010-July 2015. Sample includes all states in which childless adults were not eligible for Medicaid in 2013 (42 States). Observations are state-year averages for ACS (N=210) and state-month averages for CPS (N=2814). Regressions include year and state fixed effects, month-in-year effect (CPS only) and are weighted by cell sizes. Standard errors are clustered by state and in parentheses. t-stats are in brackets.

Appendix Table 2: Robustness to Inclusion of Different States

	Insured	Medicaid / Other Govt	Employed (CPS)
A. Excluding Limited Plan States			
Expansion x Post	0.021	0.035	0.003
	(0.004)	(0.005)	(0.004)
	[4.88]	[7.05]	[0.78]
Mean of Dep Var	0.833	0.081	0.674
B. Including Only 2014 Expansion States			
Expansion x Post	0.016	0.033	0.005
	(0.005)	(0.003)	(0.004)
	[2.99]	[10.09]	[1.41]
Mean of Dep Var	0.841	0.841	0.677

Notes: Data is from ACS 2010-2014, CPS 2010-July 2015. Panel A includes all states in which childless adults were not eligible for any coverage (Medicaid-equivalent or limited) in 2013 (29 States). Panel B includes all states in which childless adults were not eligible for Medicaid in 2013, excluding MI, NH, PA, IN (36 States). Observations are state-year averages for ACS and state-month averages for CPS. Regressions include year and state fixed effects, month-in-year effect (CPS only) and are weighted by cell sizes. Standard errors are clustered by state and in parentheses. t-stats are in brackets.

Appendix Table 3: Effects of Medicaid Expansion on Health Insurance

	Insured			Medicaid / Other Govt			Private, Thr. Employer			Private, Own Purchase		
A. Childless Adults												
Expansion x Post	0.018	0.019	0.017	0.031	0.031	0.030	-0.003	-0.002	-0.003	-0.009	-0.009	-0.008
	(0.005)	(0.004)	(0.005)	(0.004)	(0.004)	(0.004)	(0.003)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)
	[3.94]	[4.57]	[3.60]	[7.44]	[7.29]	[7.48]	[-1.22]	[-0.81]	[-1.08]	[-3.23]	[-3.13]	[-2.93]
Mean of Dep Var	0.842	0.842	0.842	0.086	0.086	0.086	0.628	0.628	0.628	0.124	0.124	0.124
B. Childless Adults Under the Poverty Line												
Expansion x Post	0.085	0.091	0.083	0.108	0.107	0.112	-0.010	-0.007	-0.009	-0.013	-0.009	-0.017
	(0.015)	(0.014)	(0.010)	(0.014)	(0.014)	(0.010)	(0.004)	(0.004)	(0.003)	(0.005)	(0.005)	(0.003)
	[5.75]	[6.66]	[8.64]	[7.55]	[7.88]	[10.86]	[-2.33]	[-1.67]	[-2.64]	[-2.76]	[-1.88]	[-5.93]
Mean of Dep Var	0.619	0.619	0.619	0.354	0.354	0.354	0.125	0.125	0.125	0.105	0.105	0.105
C. Medicaid Likely Childless Adults												
Expansion x Post	0.029	0.032	0.029	0.048	0.048	0.047	-0.008	-0.007	-0.006	-0.009	-0.009	-0.010
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.005)	(0.005)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
	[4.58]	[5.61]	[5.06]	[7.80]	[7.88]	[9.65]	[-1.71]	[-2.10]	[-1.86]	[-3.01]	[-2.95]	[-3.53]
Mean of Dep Var	0.764	0.764	0.764	0.149	0.149	0.149	0.490	0.490	0.490	0.113	0.113	0.113
Weighting	No	No	Yes	No	No	Yes	No	No	Yes	No	No	Yes
Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes

Notes: Data is from ACS 2010-2014. Sample includes states in which childless adults were not eligible for Medicaid in 2013 (42 States). Observations are state-year averages (N=210). Regressions include year and state fixed effects. Controls include: Percent of childless adults that are female, married, married and female, in 5-year age categories (8 groups), nonwhite, have less than a high school diploma, and have a bachelor's degree. Standard errors are clustered by state and in parentheses. t-stats are in brackets.

Appendix Table 4: Effects of Medicaid Expansion on Employment

	Employed - ACS			Employed - CPS			Employed, >=30 Hrs Worked		
A. Childless Adults									
Expansion x Post	-0.001	-0.004	-0.001	0.003	0.003	0.005	0.004	0.004	0.007
	(0.003)	(0.003)	(0.002)	(0.004)	(0.004)	(0.003)	(0.004)	(0.004)	(0.003)
	[-0.41]	[-1.23]	[-0.51]	[0.82]	[0.91]	[1.48]	[0.99]	[1.26]	[2.26]
Mean of Dep Var	0.682	0.682	0.682	0.678	0.678	0.678	0.590	0.590	0.590
B. Childless Adults Under the Poverty Line									
Expansion x Post	0.001	-0.001	0.000	0.010	0.002	0.001	0.003	-0.004	-0.001
	(0.007)	(0.007)	(0.003)	(0.013)	(0.012)	(0.010)	(0.009)	(0.008)	(0.007)
	[0.14]	[-0.20]	[0.05]	[0.81]	[0.18]	[0.10]	[0.33]	[-0.53]	[-0.19]
Mean of Dep Var	0.246	0.246	0.246	0.318	0.318	0.318	0.208	0.208	0.208
C. Medicaid Likely Childless Adults									
Expansion x Post	-0.006	-0.005	-0.001	0.006	0.006	0.007	0.005	0.005	0.007
	(0.004)	(0.004)	(0.002)	(0.005)	(0.005)	(0.004)	(0.005)	(0.005)	(0.003)
	[-1.32]	[-1.37]	[-0.55]	[1.31]	[1.31]	[1.93]	[1.13]	[1.12]	[2.06]
Mean of Dep Var	0.609	0.609	0.609	0.617	0.617	0.617	0.530	0.530	0.530
Weighting	No	No	Yes	No	No	Yes	No	No	Yes
Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes

Notes: Data is from ACS 2010-2014, CPS 2010-July 2015. Sample includes all states in which childless adults were not eligible for Medicaid in 2013 (42 States). Observations are state-year averages for ACS (N=210) and state-month averages for CPS (N=2814). Regressions include year and state fixed effects, month-in-year effect (CPS only). Controls include: Percent of childless adults that are female, married, married and female, in 5-year age categories (8 groups), nonwhite, have less than a high school diploma, and have a bachelor's degree. Standard errors are clustered by state and in parentheses. t-stats are in brackets.

Tab 5

Economic Analysis

Financial Impact Estimating Conference: Required Economic Analysis

Office of Economic and Demographic Research

June 28, 2019

CS/CS/HB 5: Ballot Measures

This is the first FIEC called since the passage of CS/CS/HB 5 which—among other things—made a number of changes to the FIEC's traditional process. Most importantly, the bill made the following adjustments:

- Specifies a 75-day timeframe instead of 45 days from start to finish.
- Expands the maximum length of the financial impact statement from 75 words to 150 words.
- Requires an additional analysis of the estimated economic impact on the state and local economy. This requirement broadens the analysis from the more limited review of public sector impacts previously considered.
- Requires an additional analysis of the overall impact to the state budget.

"… the Financial Impact Estimating Conference shall complete an analysis and financial impact statement to be placed on the ballot of the estimated increase or decrease in any revenues or costs to state or local governments, estimated economic impact on the state and local economy, and the overall impact to the state budget resulting from the proposed initiative."

Economic Analysis

- A comprehensive policy analysis technique that evaluates the direct, indirect and induced economic impacts of a policy change, where:
  - Direct economic effects – are the changes in expenditures made by the industry(ies) directly impacted by a change in policy. Most analyses by the various estimating conferences focus on direct effects, which are generally static, immediate and "first round" effects.
  - Indirect economic effects – are the changes in expenditures made by industries that supply goods/services to the directly impacted industry(ies).
  - Induced economic effects – are most commonly measured as the changes in expenditures by households whose income is changed by the direct and indirect activity; however other examples exist.
- In this case, the goal is to predict and quantify the probable path of economic responses over time to the change brought about by the petition initiative.
  - Projections are relative to a forecast of the expected path of the economy absent the change caused by the petition; this is referred to as the economic baseline.
  - In some cases, there will be no discernible or probable effects.

Secondary Effects—The "Ripple"

Tool: Statewide Model

- The Statewide Model is a state-of-the-art, customized, dynamic computable general equilibrium model (CGE) originally developed for Florida by Monash University (Melbourne, Australia) in 2011. This model:
  - Contains a vast amount of data to replicate the Florida's economy, tax structure, and state budget.
  - Uses hundreds of mathematical equations to account for the relationships (linkages and interactions) between the various economic agents, as well as likely responses by businesses and households to changes in the economy. Started with 388 equations with 1,699,000 total elements within those equations.
  - Has a time dimension that adheres to the state fiscal year (July 1 to June 30) to be useful in the state government budgeting process.
  - Allows different programs to be evaluated on the same footing.
  - Can be modified to reflect research results and targeted developments specific to the analysis being performed.

Analysis

- When the Statewide Model is deployed to evaluate economic effects, the model is shocked using static analysis to develop the initial or direct effects attributable to the petition-induced change that is under review. In this analysis, the direct effects (shocks) will likely consider:
  - Infusion of federal dollars from Medicaid match.
  - Changed distribution of state expenditures to meet Florida's share of the costs.
  - Additional demand for and supply of health care workers and the impact on directly related fields.
  - To the extent that they are identifiable and credible, any expected changes in overall health, productivity, capital investment or the cost of uncompensated care.

Standard Variables

The core economic variables that are available for reporting include:

1. Population…focuses on the change in population projections caused by altered economic circumstances.
2. Jobs…focuses on the change in employment projections caused by altered economic circumstances.
3. Personal Income…nearly two-thirds of this metric typically comes from compensation of employees.
4. Household Consumption…consumer spending.
5. Gross Domestic Product…the total value of goods and services produced within the state during one year; based on final output.
6. Gross Output…principally a measure of sales or revenue from production for most industries, although it is measured as sales or revenue less cost of goods sold for margin industries like retail and wholesale trade.
7. Investment & Savings…from a business perspective, this leads to an increase in the capital stock (physical and human) with the intent to increase productivity, efficiency and output of goods and services.
8. State Government Revenues and Expenditures…largely conditioned by Florida's tax policy.

Proposed Style of Model Results

- Relative to the economic baseline, the change in each of the eight Standard Variables will be reported numerically with the appropriate direction indicated (+ or -). Positive changes improve the economy relative to the baseline, while negative changes reflect a weakening of the baseline condition.

- In addition, each variable's change will be reported as a percentage of the variable's total value in order to provide context.

Key Protocols

- The Statewide Model almost always treats Florida as a single region…this means that typically the analysis will be generalized statewide. A specific local economy will only be considered in rare circumstances where the localized impact must be considered due to a unique feature of the proposed amendment under review (for example, the Slots amendment).
- Balanced budget requirement by fiscal year…however, this does not mean that the budget is strictly held to official forecasts (for example, the inclusion of federal dollars grows the available revenues for expenditure).
- The underlying model is calibrated for current budget policy and the official economic and revenue forecasts which comprise the baseline. All analyses performed in a given year will be compared to the same baseline.

Tab 6

Materials from the Sponsor

Date: June 25, 2019

To: Financial Impact Estimating Conference

From: Florida Decides Healthcare

Subject: Constitutional Amendment to Provide Medicaid Coverage to Eligible Low-Income Adults - Ballot #18-16

PURPOSE OF AMENDMENT

The purpose of this constitutional amendment is to provide Medicaid coverage to Floridians over age 18 and under age 65 whose incomes are at or below 138 percent of the federal poverty level ("FPL") and to do so with no greater burdens placed on eligibility, enrollment, or benefits for these newly eligible individuals compared to other Medicaid beneficiaries.

INTRODUCTION

Under the Affordable Care Act, Medicaid was expanded to cover adults under the age of 65 whose incomes are below 138% of the federal poverty level. As part of this expansion, the federal government provided additional funding to states in the form of an enhanced Federal Assistance Matching Percentage ("FMAP") covering 100% of the costs for this population until 2016, and then gradually scaling back to 90% in 2020 where it shall remain. In June 2012, The U.S. Supreme Court rendered a decision making the expansion optional for states. Currently, 36 states and Washington, DC have elected to expand Medicaid. Florida has not. Not expanding Medicaid has already impacted Florida's economy. Because of this decision, the state has failed to draw as much as $18 billion from the federal government. Those funds would generate tens of thousands of jobs and more than $500 million in annual state and local revenues, while replacing approximately $620 million in current state spending on low income and high need populations. [1]

To assist the Financial Impact Estimating Conference ("FIEC") in its duty to analyze our amendment and produce a financial impact statement, we offer the following analysis drawn from the experiences of the 36 states that have already expanded Medicaid and analyses conducted by the Office of Economic and Demographic Research ("EDR") and the Agency for Health Care Administration ("AHCA"). Further, because of the recent passage of House Bill 5, we also offer insight into the anticipated impact this initiative will have on our economy and overall state budget. We will illustrate how this constitutional amendment will result in net annual savings of $199 million and generate new annual revenue of more than $402 million for the State of Florida and local governments. All told, this amendment will yield a total positive net annual impact in excess of $600 million. These savings and

new revenues will be achieved by replacing current state health care related spending with federal dollars, e.g. inpatient health care for incarcerated populations, and drawing down the enhanced FMAP for some populations already covered, e.g. the medically needy. Further, based on other states' experiences, we can expect Florida to receive new revenues from existing provider fees and from the macroeconomic effects of returning billions of federal dollars to the state. [2]

STATE SAVINGS FROM ACCESSING ENHANCED FEDERAL MATCHING FUNDS

Prior to the passage of the ACA, many states, including Florida, provided coverage to high need populations such as the "medically needy," individuals with disabilities, and pregnant women. While they did receive federal matching dollars, these states were still responsible for roughly 30% to 50% of the cost of providing care to these populations. Under Medicaid expansion many of these populations became eligible for full Medicaid benefits. Now the states that expanded Medicaid are receiving an enhanced FMAP of 90% of the cost to provide benefits to these populations, saving them hundreds of millions per year. Below are some examples.

- **Arkansas.** Since expanding its Medicaid program in January 2014, Arkansas has saved $91-$111 million per year as a share of its medically needy; aged, blind, and disabled; SSI disability population; and pregnant women became eligible for Medicaid expansion and its associated enhanced FMAP. Additionally, Arkansas was able to discontinue a number of optional Medicaid waiver programs because their income eligibility thresholds overlapped with the expansion population. It is now saving an additional $23-$26 million per year after it discontinued its ARHealthNetwork, Family Planning, Tuberculosis, and Breast and Cervical Cancer programs.[3]

- **Virginia** expanded Medicaid in 2018 and just began enrollment in January of 2019. The state projects that the expansion will create $342 million in state budget savings over the next biennium as newly covered populations will receive the enhanced federal matching rate.[4] These populations include low income residents covered under the Governor's Access Plan for the Serious Mentally Ill, the indigent care program, those hospitalized under the state's Temporary Detention Order program, and others.[5]

- **Missouri.** While Missouri has not yet expanded its Medicaid program, a recent study by the Center for Health and Economic Policy at the Institute for Public Health at Washington University found that if Missouri were to expand it could generate more than $930 million in annual savings by 2024. Specifically, it would save more than $17 million per year on its permanently and totally disabled program and another $55 million per year on its SSI waiting list population because a percentage of those meeting expansion eligibility requirements will forgo the lengthy SSI determination process. It also expects to generate "significant savings" as many currently enrolled in its Blind Pensions, Presumptive Eligibility, Ticket to Work Health

Assurance, Breast/Cervical Cancer Treatment, and Women's Health Services programs become eligible to receive the enhanced FMAP.[6]

The State of Florida has at least four programs providing services for populations that may qualify for the enhanced FMAP including its Medically Needy, Adults with Disabilities, Adults with AIDS, and Adults with Breast and Cervical Cancer programs. In addition, the Pregnant Women program would experience significant savings because a number of eligible women would have already enrolled in the expansion program and qualify for the enhanced match.

Medically Needy Program

In its analysis of Senate Bill 2-A, the EDR estimated that the state would save more than $172 million per year on its Medically Needy program in FY2022-23.[7]

Pregnant Women

Currently, low-income women who become pregnant can qualify for Medicaid during their pregnancies. The state is receiving its standard FMAP (61.47%) for providing these services. In April 2019, there were approximately 105,000 women with incomes below 138% of the FPL receiving these services. Under Medicaid expansion, we can conservatively assume that 45% of these women would be eligible, saving the state more than $52 million annually.[8]

Adults with Disabilities

There are a number of adults waiting for a disability determination in both the SSI and "Meds AD" programs, who like in Arkansas and Missouri, will choose to forgo their determination and enroll directly in Medicaid, if the state expanded its Medicaid program. If we assume just a 4% attrition rate, which is the median attrition rate according to a recent study (see endnote for more details), 12,720 would forego their determinations. Based on current per member per month rates ("PMPMs") for the SSI population, we estimate annual savings to be more than $36 million per year.[9]

Adults with AIDS

Similarly, Florida has a federal waiver program extending Medicaid to individuals diagnosed with AIDS with incomes below 300% of the Federal Benefit Rate, or 222% of the FPL, that meet certain criteria. Potential enrollees must go through the Comprehensive Assessment and Review for Long-Term Care Services offered by Department of Elder Affairs to enroll. Assuming a 4% attrition rate, similar to the Adults with Disabilities population above, among those whose income eligibility is below 138%, or about 62% of monthly enrollees, we would expect savings of nearly $3.9 million per year.[10]

Breast and Cervical Cancer Program

Lastly, we expect a number of those enrolled in the Mary Brogan Breast and Cervical Cancer Program to be eligible for the enhanced FMAP, saving the state an estimated $1.3 million.[11]

SUMMARY OF STATE SAVINGS FROM ACCESSING ENHANCED FEDERAL MATCHING FUNDS

STATE	PROGRAMS	ANNUAL SAVINGS
Virginia	▪ Governor's Access Plan for the Seriously Mentally Ill ▪ Indigent Care program ▪ Temporary Detention Order program	$342M[a]
Arkansas	▪ Medically Needy ▪ Aged, Blind, and Disabled ▪ SSI Disability ▪ Pregnant Women ▪ Family Planning ▪ Breast and Cervical Cancer	$124-137M
Missouri	▪ Permanently and Totally Disabled ▪ SSI ▪ Breast/Cervical Treatment ▪ Women's Health Services	$72M[b]
Florida	▪ **Medically Needy Program** ▪ **Adults with Disabilities** ▪ **Breast and Cervical Cancer Program** ▪ **Adults with HIV/AIDs** ▪ **Pregnant Women**	**$266M**

STATE SAVINGS FROM REPLACING STATE HEALTH CARE FUNDING WITH FEDERAL FUNDS

Another area of savings could come from replacing state funding for health care for low income populations with federal funds. Many states have traditionally supported services for the uninsured population through general revenue spending. Some of the largest categories of such spending are mental health and substance abuse, health care for incarcerated populations, and indigent care funding. If Florida expanded its Medicaid program many of these costs would be covered by Medicaid and matched at the enhanced FMAP. See the examples below.

- **Michigan** has already replaced nearly $1.3 billion in state spending on mental health and other programs with federal funds and expects to continue to use federal dollars to replace $235 million in state spending on these programs each year going forward.[12]

- **Louisiana's** Department of Health estimated that it will save $313 million in FY2019 alone by replacing what it was spending on care for the uninsured and the incarcerated population.[13]

[a] This is a biennial figure.
[b] This figure does not include savings from its Blind Pensions, Presumptive Eligibility, Ticket to Work Health Assurance, Breast/Cervical Cancer Treatment, and Women's Health Services programs.

- **Virginia**. By replacing general fund dollars currently being spent on programs for inpatient health care for inmates and substance abuse and mental health care services for low income Virginians, the state will save another $86 million.[14]

- **Arkansas** has reduced its general fund spending on uncompensated care since expansion and projects it will save $43 million in FY2020 and another $45 million in FY2021.[15]

If Florida were to expand Medicaid it would draw down federal dollars to replace some of what it spends on state mental health and substance abuse services. The Agency for Health Care Administration reported to the Legislature in 2016 that 132,940 Floridians dealing with a Serious Mental Illness or Substance Use Disorder being served by the Department of Children and Families ("DCF") met eligibility requirements for Medicaid expansion. The same report identified that DCF spent more than $412 million per year to provide these services to this population. Based on that report and using the PMPM rates for "SSI Medicaid Only SMI," we estimate expanding Medicaid to this population would reduce state costs by more than $200 million per year.[16]

Based on the experience of other states that expanded Medicaid, additional savings will be realized as inpatient care for prisoners and uncompensated care services for the uninsured and underinsured become eligible for federal funding under the expansion. Between these two categories we estimate that this would save the state nearly $155 million per year.[17]

SUMMARY OF STATE SAVINGS FROM REPLACING STATE HEALTH CARE FUNDING WITH FEDERAL FUNDS

STATE	PROGRAMS	ANNUAL SAVINGS
Michigan	▪ Mental Health ▪ Inpatient Care for the Incarcerated	$235M
Louisiana	▪ Inpatient Care for the Incarcerated ▪ Care for the uninsured	$313M
Virginia	▪ Inpatient health care for inmates ▪ Substance abuse and mental health care services	$86M[c]
Arkansas	▪ Uncompensated Care	$41-$45M
Florida	▪ **Mental Health and Substance Abuse** ▪ **Uncompensated Care** ▪ **Inpatient Care for Prisoners**	**$355M**

NEW REVENUES FROM PROVIDER TAXES

Not only has Medicaid expansion proven to create state savings, it has also increased state revenues. This often comes in the form of existing hospital or managed care provider taxes. Nearly every state raises revenue through fees or assessments on hospitals and health plans. As more people secure

[c] This is a biennial figure.

health coverage through Medicaid expansion, additional net revenues are generated for hospitals and health plans, which in turn, create new income for the state. A few examples of this include:

- **Michigan** has already raised $685 million from its Health Insurance Claims Assessment, Use Tax, and its provider assessment program. It expects to raise an additional $168-$171 million from these sources in each of the next two years.[18]

- **Arkansas** has and will continue to raise $25-$27 million per year in increased premium tax revenues on health policies associated with its expansion.[19]

- **Louisiana** has raised additional revenue from a premium tax on managed care organizations. In FY2019, it will generate more than $260 million, which is significantly more than the state contribution for the expansion.[20]

Florida currently has a provider assessment program, the Public Medical Assistance Trust Fund, which assesses 1.5% on inpatient net operating revenue and 1% on outpatient net operating revenue. Expanding Medicaid has been shown to produce additional net revenues for hospitals.[21] These additional revenues would generate $19 million annually in new assessments, according to an analysis from the Florida Policy Institute.[22]

SUMMARY OF NEW REVENUES FROM PROVIDER TAXES

STATE	NEW ANNUAL REVENUE FROM PROVIDER ASSESSMENTS
Michigan	$164-171M
Arkansas	$25-27M
Louisiana	$260M
Florida	$19M

NEW REVENUE FROM INCREASED ECONOMIC ACTIVITY

Since the passage of House Bill 5 in the 2019 session, the FIEC must now also determine the amendment's estimated economic impact on the state's economy. We found that many expansion states experienced a macroeconomic stimulus from the influx of new federal expenditures. This increase in economic activity benefitted the states by creating new jobs and increasing personal income, which in turn had a multiplier effect of producing additional spending and employment in other industries. This additional consumer spending produced new revenues for state and local governments. Here are some examples:

- **Michigan** has already received more than $18 billion in federal revenues since it expanded Medicaid. This increased economic activity has yielded between $145 and $153 million in annual state tax revenues. Further, it has created and sustained more than 30,000 jobs and generates more than $2.3 billion in annual personal income for Michiganders.[23]

- **Arkansas** projects that the federal match for expansion will exceed $9 billion over the next five years and will generate $67-$77 million per year in "economically sensitive taxes."[24] The macroeconomic activity has also created and sustained more than 6,100 jobs and generates more than $320 million in annual personal income.[25]

- **Colorado** estimates that the federal dollars from Medicaid expansion support more than 31,000 jobs. Further, the influx of federal dollars has generated more than $102 million in General Fund revenues from sales and use taxes and will generate up to $248M each year in the future.[26]

A 2013 study of the potential macroeconomic impacts of Medicaid expansion found that the additional federal dollars flowing into the state would generate an average of more than $540 million per year in state and local taxes; alone more than enough to cover any potential new costs incurred by the state. Further, it projected more than 120,000 jobs would be created and sustained. It should be noted that this study was based on significantly higher enrollment numbers and higher costs than what are currently projected by EDR. If we scaled this analysis to reflect current projections it would still generate an estimated $402.5 million in additional state and local revenues. [27] We expect an updated analysis to be released during this comment period.

SUMMARY OF NEW REVENUE FROM INCREASED ECONOMIC ACTIVITY

STATE	ANNUAL NEW REVENUE FROM MACROECONOMIC ACTIVITY
Michigan	$148-153M
Arkansas	$72-77M
Colorado	$102M
Florida	**$403M**

SUMMARY OF STATE BUDGET SAVINGS AND NEW REVENUES

As a result of this amendment, we anticipate a positive net annual impact for state and local governments of nearly $602 million. Using data from an EDR analysis of potential Medicaid expansion enrollment, approximately 964,000 adults would enroll in Medicaid expansion by FY2022-2023.[28] We chose FY2022-2023 assuming that enrollment would be close to fully ramped up by this time. The state share to cover these costs is estimated to be $442 million.[29] We then used the most recent enrollment and cost data available from AHCA and EDR, most of which is from FY2018-2019, unless noted otherwise below. To be conservative, we elected not to project the future costs of these programs, even though costs are likely to rise by FY2022-23, and could potentially yield greater budgetary savings.

SUMMARY OF POTENTIAL FY2022-FY2023 STATE BUDGET SAVINGS AND NEW REVENUES	
State-only cost of Expansion	$441,900,000
State savings from accessing enhanced federal matching funds	
Medically Needy Program	$172,300,000
Adults with Disabilities	$36,437,000
Adults with Breast and Cervical Cancer	$1,291,000
Adults with AIDS	$3,876,000
Pregnant Women	$52,481,000
Total	**$266,385,000**
State savings from replacing state health care funding with federal funds	
Substance Abuse and Mental Health Services	$200,482,000
Prisoner Hospitalization Costs	$57,524,000
Uncompensated Care (Low Income Pool)	$97,394,000
Total	**$355,400,000**
Total State Savings	**$621,785,000**
Estimated Revenue Gains	
Increased Hospital Taxes/Provider Tax Assessment	$19,110,000
Macroeconomic Effects of New Federal Funds	$402,545,000
Total	**$421,655,000**
Total Savings and New Revenues	**$1,043,440,000**
Net Savings from Amendment	***$601,540,000***

CONCLUSION

Based on the experience of states across America that have expanded Medicaid and the work of EDR and AHCA, this amendment will reduce existing state spending on high need populations and health care services for low income people. It will also generate additional revenues from existing taxes like Florida's hospital provider fee and from the multiplier effect of bringing back more than $4 billion dollars in federal funding to our state each year.[30] The combination of increased revenues and reduced spending will more than cover the state's share of the cost for this new population, like it has most recently in Virginia, Arkansas, Louisiana and Michigan.

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[1] Hodges, A. and Rahmani, M. *Economic Impacts of Extending Health Care Coverage in Florida*, May 2013, p. 10. http://www.fha.org/reports-and-resources/show-details/Economic-Impacts-of-Extending-Health-Care-Coverage-in-Florida/75. The $620 million figure is based on the analysis contained in this paper.

[2] Brown, C. and Bennett J. *Economic Impacts of the Arkansas Private Option,* August 2015 http://www.arkhospitals.org/Misc.%20Files/August2015APOEconomicImpacts.pdf; *Assessing the Economic and Budgetary Impact of Medicaid Expansion in Colorado: FY 2015-16 through FY 2034-35*, Colorado Futures Center, September 2016 https://www.coloradohealth.org/reports/assessing-economic-and-budgetary-impact-medicaid-expansion-colorado-fy-2015-16-through-fy; *Economic and Fiscal Impact of Medicaid Expansion in New Mexico,* Bureau of Business and Economic Research, February 2016 http://bber.unm.edu/media/publications/Medicaid_Expansion_Final2116R.pdf; and *Healthy Michigan Plan*

Savings and Cost Estimates, Michigan House Fiscal Agency, September 2016. https://www.house.mi.gov/hfa/PDF/HealthandHumanServices/HMP_Savings_and_Cost_Estimates.pdf

[3] *Final Report,* Arkansas Health Reform Legislative Task Force, December 2016, p. 9. http://www.arkleg.state.ar.us/assembly/Meeting%20Attachments/836/I14804/TF%20FinalDraftReport.12-14-2016.pdf

[4] *Overview of the Governor's Introduced Budget*, January 2018, pp. 16-18. http://sfc.virginia.gov/pdf/health/2018/010818_No1_Jones_DMAS%20Budget%20Briefing.pdf

[5] *New Developments in Human Services: Health Care Expansion* Virginia Department of Medical Assistance Services, October 2018, p. 18. https://www.vml.org/wp-content/uploads/2018/10/New-Developments-in-Human-Services-Health-Care-Expansion_Jennifer-Lee.pptx

[6] *Analysis of the Fiscal Impact of Medicaid Expansion in Missouri*. Center for Health Economics and Policy, February 2019, pp. 5-6. https://publichealth.wustl.edu/wp-content/uploads/2019/02/Analysis-of-the-Fiscal-Impact-of-Medicaid-Expansion-in-Missouri-IPH.pdf

[7] *Impact Analysis of SB 2-A, As Filed*, Office of Economic and Demographic Research, June 2015, p. 7. http://edr.state.fl.us/Content/presentations/affordable-care-act/SB2-AHousePresentation_ImpactAnalysisAsFiled.pdf

[8] *Eligibles Report,* Agency for Health Care Administration, April 2019. We used the PMPM from Medicaid Eligibility Groups for 2016 of $377.36 for those earning <100% of the FPL and $363.33 for those earning more than 100%, but < 138%. http://ahca.myflorida.com/medicaid/Finance/data_analytics/eligibles_report/docs/age_program_group_sex_2019-04-30.pdf

[9] PMPMs come from *Medicaid Eligibility Groups 2018-2019,* Agency for Health Care Administration, for the March 2019 Social Services Estimating Conference and the source for the estimated enrollment is *Eligibles Report,* Agency for Health Care Administration, April 2019 http://ahca.myflorida.com/medicaid/Finance/data_analytics/eligibles_report/docs/age_program_group_sex_2019-04-30.pdf. The 4% attrition comes from *Alabama Medicaid Expansion: Summary of Estimated Costs and Savings,* Alabama Hospital Association, February 2019, p. 17. https://www.alaha.org/wp-content/uploads/2019/02/MedicaidExpansionReportCostsSavings.pdf

[10] PMPMs and enrollment come from *Medicaid Eligibility Groups 2018-2019,* Agency for Health Care Administration, for the March 2019 Social Services Estimating Conference. The 4% attrition comes from *Alabama Medicaid Expansion: Summary of Estimated Costs and Savings,* Alabama Hospital Association, February 2019, p. 17. https://www.alaha.org/wp-content/uploads/2019/02/MedicaidExpansionReportCostsSavings.pdf.

[11] PMPMs and enrollment come from *Medicaid Eligibility Groups 2016-2017,* Agency for Health Care Administration, for the January 2016 Social Services Estimating Conference. We assumed equal distribution of enrollment for incomes up to 200% of FPL would convert to the enhanced FMAP. This translates to roughly 69% of enrollees.

[12] *Healthy Michigan Plan Savings and Cost Estimates*, Michigan House Fiscal Agency, September 2016, p.4. https://www.house.mi.gov/hfa/PDF/HealthandHumanServices/HMP_Savings_and_Cost_Estimates.pdf

[13] *Medicaid expansion not diverting resources from traditional Medicaid*. Louisiana Budget Project, September 2018, https://www.labudget.org/wp-content/uploads/2018/09/Medicaid-HCBS.pdf

[14] Ibid. *Overview of Governor's Budget*.

[15] Ibid. *Arkansas Final Report.*

[16] *Behavioral Health Services Revenue Maximization Plan,* Agency for Health Care Administration, December 2016, p. 26. https://ahca.myflorida.com/medicaid/recent_presentations/SB_12_Behavioral_Health_Services_Revenue_Maximization_Plan_123016.pdf. We used a weighted PMPM of $1,328.48 to calculate the savings for this population. 1,328.48 X 132,940 = $2,119,297,574 in total cost. The state share of which would be $211,929,757. $412,411,814 (current DCF spending on this population) less $211,929,757= $200,482,057. The PMPMS are from Agency for Health Care Administration's *Statewide Medicaid Managed Care (SMMC) Managed Medical Assistance (MMA) Program's Monthly Base Rates*

http://ahca.myflorida.com/medicaid/Finance/data_analytics/actuarial/docs/MMA_Final_Base_Rates_SMMC-Imp_2019-09.pdf

[17] *Potential Budget Savings and Revenue Gains from Medicaid Expansion in Florida,* The Florida Policy Institute, June 2019.

[18] *Healthy Michigan Plan Savings and Cost Estimates*, Michigan House Fiscal Agency, September 2018, p.5. https://www.house.mi.gov/hfa/PDF/Alpha/Fiscal_Briefing_HMP_Savings_and_Cost_Estimates.pdf

[19] Ibid. *Arkansas Final Report.*

[20] Ibid. *Medicaid expansion not diverting resources*.

[21] *How Has the ACA Changed Finances for Different Types of Hospitals? Updated Insights from 2015 Cost Report Data*, Urban Institute, April 2017. https://www.urban.org/research/publication/how-has-aca-changed-finances-different-types-hospitals-updated-insights-2015-cost-report-data

[22] Ibid. *Potential Budget Savings*.

[23] Ayanian, J. et al. *Economic Effects of Medicaid Expansion in Michigan*, New England Journal of Medicine, February 2017.

[24] Ibid. *Arkansas Final Report*.

[25] Brown, C. and Bennett J. *Economic Impacts of the Arkansas Private Option,* August 2015, p. 9. http://www.arkhospitals.org/Misc.%20Files/August2015APOEconomicImpacts.pdf

[26] *Assessing the Economic and Budgetary Impact of Medicaid Expansion in Colorado: FY 2015-16 through FY 2034-35*, Colorado Futures Center, September 2016, pp. 5-6. https://www.coloradohealth.org/reports/assessing-economic-and-budgetary-impact-medicaid-expansion-colorado-fy-2015-16-through-fy

[27] Ibid. Hodges, A and Rahmani, M., pp. 7, 10.

[28] Ibid. *Impact Analysis of SB 2-A.*

[29] Ibid. *Impact Analysis of SB 2-A.* Using the data from this report we determined the per capita cost and simply scaled it to the more recently projected enrollment numbers.

[30] Ibid. *Impact Analysis of SB 2-A*.

Potential Budget Savings and Revenue Gains from Medicaid Expansion in Florida

June 2019

FLORIDA POLICY INSTITUTE

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Overview

- The Takeaway
- The Context
- By the Numbers
- Potential Savings from Enhanced Federal Matching Funds
- Potential Savings from Replacing State Funds with Federal Funds
- Summary Savings and Revenue Gains

The Takeaway: Outcomes

Based on the experience of other states, legislative projections and our own analysis, Medicaid expansion could:

- Significantly reduce the number of uninsured Floridians.
- Reduce state costs for uncompensated health care.
- Result in significant budget savings and increased state revenues.
- Free up state general revenue funds for other priorities.

Sources:
Buettgens, M., *The Implications of Medicaid Expansion in the Remaining States: 2018 Update*, Urban Institute, May 2018. https://www.urban.org/research/publication/implications-medicaid-expansion-remaining-states-2018-update
Dorn, S. et al., *The Cost of Not Expanding Medicaid: An Updated Analysis.* Robert Wood Johnson Foundation. April 2017. https://www.rwjf.org/en/library/research/2017/04/the-cost-of-not-expanding-medicaid.html
Antonisse, Larisa et al., *The Effects of Medicaid Expansion Under the ACA: Updated Findings from a Literature Review*. Kaiser Family Foundation. March 2018. https://www.kff.org/medicaid/issue-brief/the-effects-of-medicaid-expansion-under-the-aca-updated-findings-from-a-literature-review-march-2018/
Bachrach et al. *States Expanding Medicaid See Significant Budget Savings and Revenue Gains. Early Data Shows Consistent Economic Benefits Across Expansion States*. Robert Wood Johnson Foundation. March 2016. http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2016/rwjf419097

The Takeaway: Net Savings

TOTAL NET ESTIMATED SAVINGS OF MEDICAID EXPANSION IN FLORIDA FOR FY 2022-2023:

$198,995,000

Notes:

- This report focuses on specifically identified state programs where budget savings could be realized with Medicaid expansion. However, it is important to note that there are additional state funded programs, not analyzed in this report, where millions more in savings could be generated. This includes multiple public health programs delivered through county health departments and disease prevention and treatment programs, such as those focused on HIV/AIDS, STDs and TB.
- Also not considered in this estimate is new revenue likely to be generated for state and local governments from overall increased economic activity due to the infusion of billions of new federal dollars.
- Additional state costs that would be imposed are based on Office of Economic & Demographic Research (EDR) projections for FY 2022-23.
- Medically Needy gross savings are based on EDR's projected savings for FY 2022-23. We chose FY 2022-2023 assuming that expansion enrollment would be close to fully ramped up at this time.
- Other Medicaid program estimated savings are based on the most recently available Agency for Health Care Administration (AHCA) enrollment and cost data, typically 2018-19 data. However, these costs are likely to rise in the future, meaning that potentially there are even greater savings that could be gained through expansion.
- The report also considers the experience of other Medicaid expansion states.

The Takeaway: Long-Term Savings

- Even with the lower enhanced federal match, the state will experience long term savings.
- Other states that have already expanded Medicaid have experienced state budget gains since expansion.

Sources:
Buettgens, M., *The Implications of Medicaid Expansion in the Remaining States: 2018 Update*, Urban Institute, May 2018.
https://www.urban.org/research/publication/implications-medicaid-expansion-remaining-states-2018-update
Antonisse, L. et al., *The Effects of Medicaid Expansion under the ACA: Updated Findings from a Literature Review*, Kaiser Family Foundation, 2018.
https://www.kff.org/medicaid/issue-brief/the-effects-of-medicaid-expansion-under-the-aca-updated-findings-from-a-literature-review-march-2018/
Dorn, S. et al., *The Cost of Not Expanding Medicaid: An Updated Analysis*, Urban Institute. 2017.
https://www.rwjf.org/en/library/research/2017/04/the-cost-of-not-expanding-medicaid.html
Dorn, S. et al., *The Cost to States of Not Expanding Medicaid.* 2016. http://www.urban.org/sites/default/files/alfresco/publication-pdfs/2000886-The-Cost-to-States-of-Not-Expanding-Medicaid.pdf

The Context: What is Expansion?

- Medicaid expansion under the Affordable Care Act (ACA) includes adults under the age of 65 with incomes up to 138 percent of the Federal Poverty Level (FPL). For 2019, this is $17,236 for an individual and $29,435 for a family of three.
- A June 2012 U.S. Supreme Court ruling made expansion of Medicaid optional for states.
- Florida is one of 14 states that have opted not to expand Medicaid.
- For Medicaid expansion states, the federal government covered 100 percent of the Medicaid costs for newly eligible enrollees in 2016, and covered 94 percent of costs starting in FY 2018. The federal share phases down to 90 percent in 2020 and thereafter.

Sources:
Dorn, S. et al., *The Cost of Not Expanding Medicaid: An Updated Analysis.* Urban Institute. 2017. https://www.urban.org/sites/default/files/publication/98467/the_implications_of_medicaid_expansion_2001838_2.pdfhttps://www.rwjf.org/en/library/research/2017/04/the-cost-of-not-expanding-medicaid.htm
Kaiser Family Foundation, *Status of State Action on Medicaid Expansion*, May 13, 2019. https://www.kff.org/health-reform/state-indicator/state-activity-around-expanding-medicaid-under-the-affordable-care-act/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D
U.S. Dept. of Health & Human Services. *2019 Federal Poverty Guidelines.* https://aspe.hhs.gov/2019-poverty-guidelines

The Context: When Can States Expand?

- There is no deadline for states to expand Medicaid.
- The current Medicaid expansion Federal Medical Assistance Percentage (FMAP) would apply:

FMAP for New Enrollees				
Fiscal Year	**2017**	**2018**	**2019**	**2020**
FMAP	95	94	93	90

Source:
Office of Economic and Demographic Research. *Social Services Estimating Conference, Estimates Related to Federal Affordable Care Act: Title XIX (Medicaid) & Title XXI (CHIP) Programs.* March 7, 2013.
http://edr.state.fl.us/Content/conferences/medicaid/FederalAffordableHealthCareActEstimates.pdf

The Context: Who Qualifies Now?

- To qualify for Medicaid in Florida, a family of three with dependent children must not earn more than 32 percent of the FPL, or $6,825 per year.
- To qualify for marketplace health insurance assistance, a family of three with dependent children must earn at least $21,330 per year. Families between $6,825 and $21,330 annual income are not eligible for any coverage, representing the coverage gap.
- Adults without dependent children are currently ineligible for Medicaid unless they have severe, long-term disabilities.

Sources:
U.S. Dept. of Health & Human Services. *2019 Federal Poverty Guidelines.* https://aspe.hhs.gov/2019-poverty-guidelines
The Florida Legislature, Office of Economic and Demographic Research (EDR). *Impact Analysis of SB 2-A, As Filed (With Preliminary numbers for proposed Amendment)*. June, 2015. edr.state.fl.us/Content/presentations/affordable-care-act/SB2-AHousePresentation_ImpactAnalysisAsFiled.pdf

The Context: Who Would Benefit?

- With Medicaid expansion, families with incomes up to 138 percent of the FPL would be eligible for Medicaid coverage - $17,236 for an individual and $29,435 for a family of three in 2019.
- Expansion would guarantee healthcare coverage to:
  - Floridians who are currently in the coverage gap.
  - Floridians who are struggling to afford marketplace health insurance.
- If Florida were to expand Medicaid, EDR projects that for FY 2022-23, 964,056 Floridians would gain access to affordable health care. This includes adults in the coverage gap and those with incomes up to 138% of poverty.

Notes:
This report assumes enrollment based on EDR's FY 2022-2023 enrollment projections. We selected FY 2022-2023 because at at that time we expect enrollment will be close to fully ramped up by this time.
Sources:
The Florida Legislature, Office of Economic and Demographic Research (EDR). *Impact Analysis of SB 2-A, As Filed (With Preliminary numbers for proposed Amendment)*. June 1, 2015. http://edr.state.fl.us/Content/presentations/affordable-care-act/SB2-AHousePresentation_ImpactAnalysisAsFiled.pdf; U.S. Dept. of Health & Human Services, 2019 Poverty Guidelines. https://aspe.hhs.gov/2019-poverty-guidelines; U.S. Centers for Medicaid and Medicare Services, https://www.healthcare.gov/medicaid-chip/medicaid-expansion-and-you/

The Context: FMAP

- The Federal Medical Assistance Percentage (FMAP) is a formula through which the federal government pays a larger portion of Medicaid costs in states with lower per capita incomes relative to the national average and smaller portion for states with higher per capita incomes.
- For the current federal fiscal year, Florida's regular FMAP is 61.47 and the state share is 38.53. This means for every $1 Florida spends on Medicaid, it receives $0.61 from the federal government while only $0.38 comes from Florida funds.
- However, with expansion the state would get an enhanced federal match for newly-eligible people. In 2020 the enhanced match is 90 percent.

Sources:
Office of Economic and Demographic Research,SSEC Official FMAP, Feb. 28, 2019.
http://edr.state.fl.us/Content/conferences/fmap/index.cfm;Rudowitz
R., et al., *10 things to Know About Medicaid*, Kaiser Family Foundation, March 6, 2019. https://www.kff.org/medicaid/issue-brief/10-things-to-know-about-medicaid-setting-the-facts-straight/

The Context: Benefits to States

- States that expand Medicaid benefit financially by accessing enhanced federal matching funds for income-based Medicaid beneficiaries under expansion.
- If Florida were to expand Medicaid, at least 90 cents of every dollar spent could come from the federal government for newly eligible low-income adults, and other services would qualify for this higher reimbursement.
- The current Medicaid coverage groups that would benefit from higher FMAP includes:
  - Medically Needy program
  - Pregnant Women
  - Adults with Disabilities
  - Adults with Breast and Cervical Cancer
  - Adults with AIDS

Notes: The ACA definition of "newly eligible" or income-based Medicaid beneficiaries under expansion includes some groups currently covered by Medicaid with full or limited benefits (e.g., "Medically Needy" or pregnant women). With expansion some individuals who would have otherwise been covered under these existing Medicaid coverage categories would now be covered in the expansion group. For these individuals, the state will be able to access the enhanced federal match, thereby replacing state dollars with federal dollars.

Sources:

Bachrach et al., *States Expanding Medicaid See Significant Budget Savings and Revenue Gains. Early Data Shows Consistent Economic Benefits Across Expansion States,* State Health Assistance Reform Network, April 2015. https://www.shvs.org/resource/states-expanding-medicaid-see-significant-budget-savings-and-revenue-gains/

Antonisse, L.,et al., *The Effects of Medicaid Expansion Under the ACA: Updated Findings from a Literature Review, Kaiser Family Foundation*, March 28, 2018. https://www.kff.org/medicaid/issue-brief/the-effects-of-medicaid-expansion-under-the-aca-updated-findings-from-a-literature-review-march-2018/

The Context: Benefits to States

- States that expand Medicaid benefit financially by replacing state health care funding with federal funds.
    - Many states have supported programs and services for the uninsured — mental and behavioral health programs, public health programs, health care services for prisoners etc. — with state general fund dollars.
    - With expansion, many of the beneficiaries of these programs and services are able to secure Medicaid coverage in the new adult category, which means states can fund these services with enhanced federal — not state — dollars.
- If Florida were to expand Medicaid, the services that would be newly covered by federal funds include:
    - State mental health and substance abuse services
    - Hospital inpatient care services for prisoners
    - Uncompensated care services for the uninsured and underinsured Floridians

Source:
Bachrach et al. *States Expanding Medicaid See Significant Budget Savings and Revenue Gains. Early Data shows consistent Economic Benefits Across Expansion States*. Robert Wood Johnson Foundation. March 2016. http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2016/rwjf419097

The Context: Benefits to States

- States that expanded Medicaid have benefited financially by:
  - Increasing revenue
    - States raise revenue through individual income taxes or sales taxes. Many also have corporate income taxes, property taxes and other revenue sources. When economic activity increases, these revenue sources yield more funds.
    - Medicaid expansion increases economic activity within a state. The additional federal dollars buy more health care services. A "multiplier effect" ensues when health care providers use their increased revenue to employ more personnel and buy more goods and services within the state.
  - Increasing revenue generated from existing taxes on health plans and health care providers.
    - Many states raise revenue through assessments or fees on providers and health plans. Provider and health plan revenues increase with expansion, the fees generate additional revenue.
    - Florida would gain additional tax revenue from provider assessments.

Note: This report does not address potential state revenue gains from increased economic activity throughout the state with Medicaid expansion. A 2013 economic analysis found that over a 10 year period the infusion of additional federal dollars into Florida's economy would generate more than $400 million annually in additional state and local taxes. An updated analysis is expected to be released shortly.
Sources: Bachrach et al. *States Expanding Medicaid See Significant Budget Savings and Revenue Gains. Early Data shows consistent Economic Benefits Across Expansion States*. Robert Wood Johnson Foundation. March 2016 . http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2016/rwjf419097; *Dorn, S. et al. The Cost to States of Not Expanding Medicaid.* Urban Institute. August 2016. http://www.urban.org/sites/default/files/alfresco/publication-pdfs/2000886-The-Cost-to-States-of-Not-Expanding-Medicaid.pdf ; Hodges, A. and Rahmani, M. *Economic Impacts of Extending Health Care Coverage in Florida*, May 2013, p. 10. http://www.fha.org/reports-and-resources/show-details/Economic-Impacts-of-Extending-Health-Care-Coverage-in-Florida/75

The Context: Other States' Savings

Virginia	FY2019	FY2020	FY2021
Total Cost of New Enrollees	$81	$226	No data available
Savings from Enhanced Federal Match	$121	$221	No data available
Savings from Replacing State General Fund Revenues with Medicaid Funds	$34	$52	No data available
Total Estimated Savings Related to Medicaid Expansion (millions)	$74	$47	

Michigan	FY2019	FY2020	FY2021
Total Cost of New Enrollees	$408	$448	$456
Savings from Replacing State General Fund Revenues with Medicaid Funds	$235	$235	$235
Estimated Revenue Gains from the Provider Taxes	$164	$168	$171
Revenue Increase from State Tax Benefits	$153	$150	$148
Total Estimated Savings Related to Medicaid Expansion (millions)	$141	$101	$95

Sources:
Overview of the Governor's Introduced Budget, January 8, 2018.
http://sfc.virginia.gov/pdf/health/2018/010818_No1_Jones_DMAS%20Budget%20Briefing.pdf
Ayanian, John Z. ,et al., *Economic Effects of Medicaid Expansion in Michigan*, New England Journal of Medicine 2017, 376:407-410, Feb. 2017.
https://www.nejm.org/doi/full/10.1056/NEJMp1613981
Koorstra, K., *Healthy Michigan Plan Savings and Cost Estimates*, Fiscal Brief, House Fiscal Agency, October 30, 2018.
https://www.house.mi.gov/hfa/PDF/Alpha/Fiscal_Briefing_HMP_Savings_and_Cost_Estimates.pdf

The Context: Other States' Savings

Louisiana	FY2019	FY2020	FY2021
Total Cost of New Enrollees	$210	no data available	no data available
Savings from Replacing State General Fund Revenues with Medicaid Funds	$313	no data available	no data available
Estimated Revenue Gains from the Hospital and Managed Care Fee	$260	no data available	no data available
Total Estimated Savings Related to Medicaid Expansion (millions)	$363		

Arkansas	FY2019	FY2020	FY2021
Total Cost of New Enrollees	$125	$173	$215
Savings from Enhanced Federal Match	$124	$131	$137
Savings from Reduction in State Spending on Uncompensated Care	$41	$43	$45
Increase in Premium Tax Revenues	$25	$26	$27
Revenue Increase from State Tax Benefits	$72	$74	$77
Total Estimated Savings Related to Medicaid Expansion (millions)	$137	$101	$71

Sources:
Medicaid expansion not diverting resources from traditional Medicaid, Louisiana Budget Project, Sept. 2018. https://www.labudget.org/wp-content/uploads/2018/09/Medicaid-HCBS.pdfttps://www.labudget.org/wp-content/uploads/2018/09/Medicaid-HCBS.pdf
tps://www.labudget.org/wp-content/uploads/2018/09/Medicaid-HCBS.pdf
Final Report (Draft), Arkansas Health Reform Legislative Task Force, December 2016. Access via:
http://www.arkleg.state.ar.us/assembly/Meeting%20Attachments/836/I14804/TF%20FinalDraftReport.12-14-2016.pdf

The Context: Other States' Savings

Virginia:

Expansion will lead to $422 in state budget savings in FY2019-20.

- Virginia has already forgone more than $10.5 billion in federal funding for failing to expand prior to FY2019.
- The Expansion will create $342 million in state budget savings over the next biennium as newly covered populations will receive the enhanced federal matching rate.
- By replacing general fund dollars currently being spent on inpatient healthcare for inmates and substance abuse and mental health care services for low income Virginians, the state will save another $86 million.
- All told, even after the required state matching funds, Virginia will cover more than 400,000 new people and save more $121 million over the next biennium.

Source:
Overview of the Governor's Introduced Budget, January 2018,
http://sfc.virginia.gov/pdf/health/2018/010818_No1_Jones_DMAS%20Budget%20Briefing.pdf

The Context: Other States' Savings

Michigan:

State costs of expansion continue to be fully covered by savings and new revenue.

- Michigan has already received more than $18 billion in federal funding to provide coverage for more than 630,000 people.
- MI has saved nearly $1.3 billion in state spending on mental health and other programs, while generating more than $1.6 billion in new state revenue through contributions from hospitals, health plans, and new economic activity.
- The state has cumulatively saved nearly $2.3 billion since it expanding Medicaid.
- In FY2020 and FY2021, the state will save $235 million each year by replacing previous state spending on mental health and other programs and generate $318 million and $319 million in revenue gains from hospitals, health plans, and from new economic activity, resulting in net savings for the state for the next two years of $101 million and $95 million, respectively.

Source:
Ayanian, John Z., et al. *Economic Effects of Medicaid Expansion in Michigan*, New England Journal of Medicine, 376:407-410, Feb. 2017
https://www.nejm.org/doi/full/10.1056/NEJMp1613981
Koorstra, K., Healthy Michigan Plan Savings and Cost Estimates, House fiscal Agency, Oct. 30, 2018.
https://www.house.mi.gov/hfa/PDF/Alpha/Fiscal_Briefing_HMP_Savings_and_Cost_Estimates.pdf

The Context: Other States' Savings

Louisiana:

Expansion will lead to net savings of $361 million in FY2018-19.

- With a higher federal match rate for Medicaid populations previously funded at the regular matching percentage and additional revenue from a premium tax on managed care organizations, Louisiana recognized state savings in in FY2016/2017 of $199 million due to expansion.
- This is expected to continue as fees from hospitals and insurance providers are projected to generate $260 million and savings from replacing general fund spending on the uninsured and the incarcerated populations will total $313 million. Combined these sources will exceed the state share by more than $361 million.

Source:
Medicaid expansion not diverting resources from traditional Medicaid, Louisiana Budget Project, Sept. 2018. https://www.labudget.org/wp-content/uploads/2018/09/Medicaid-HCBS.pdfttps://www.labudget.org/wp-content/uploads/2018/09/Medicaid-HCBS.pdf

The Context: Other States' Savings

Arkansas:

State savings and new revenues continue to more than cover the cost of expansion.

- In FY2020 and FY2021, Arkansas expects to save $131 and $137 million, respectively, through enhanced federal matching dollars by shifting populations from traditional Medicaid to expansion coverage. And another $43 and $45 million, respectively, by reducing state spending on uncompensated care.
- Further, it expects to generate new premium tax revenues of $26 million and $27 million and another $74 million and $77 million in new revenue due to increased state economic activity.
- Between the new revenues and state savings in FY 2020 and FY2021, the state will continue to cover 320,000 more Arkansans and even with the state share of the expenses, come out ahead by $101 million in FY2020 and $71 million in FY2021.

Source:
Final Report (Draft), Arkansas Health Reform Legislative Task Force, December 2016. Access via:
http://www.arkleg.state.ar.us/assembly/Meeting%20Attachments/836/I14804/TF%20FinalDraftReport.12-14-2016.pdf

Medicaid in Florida: By the Numbers

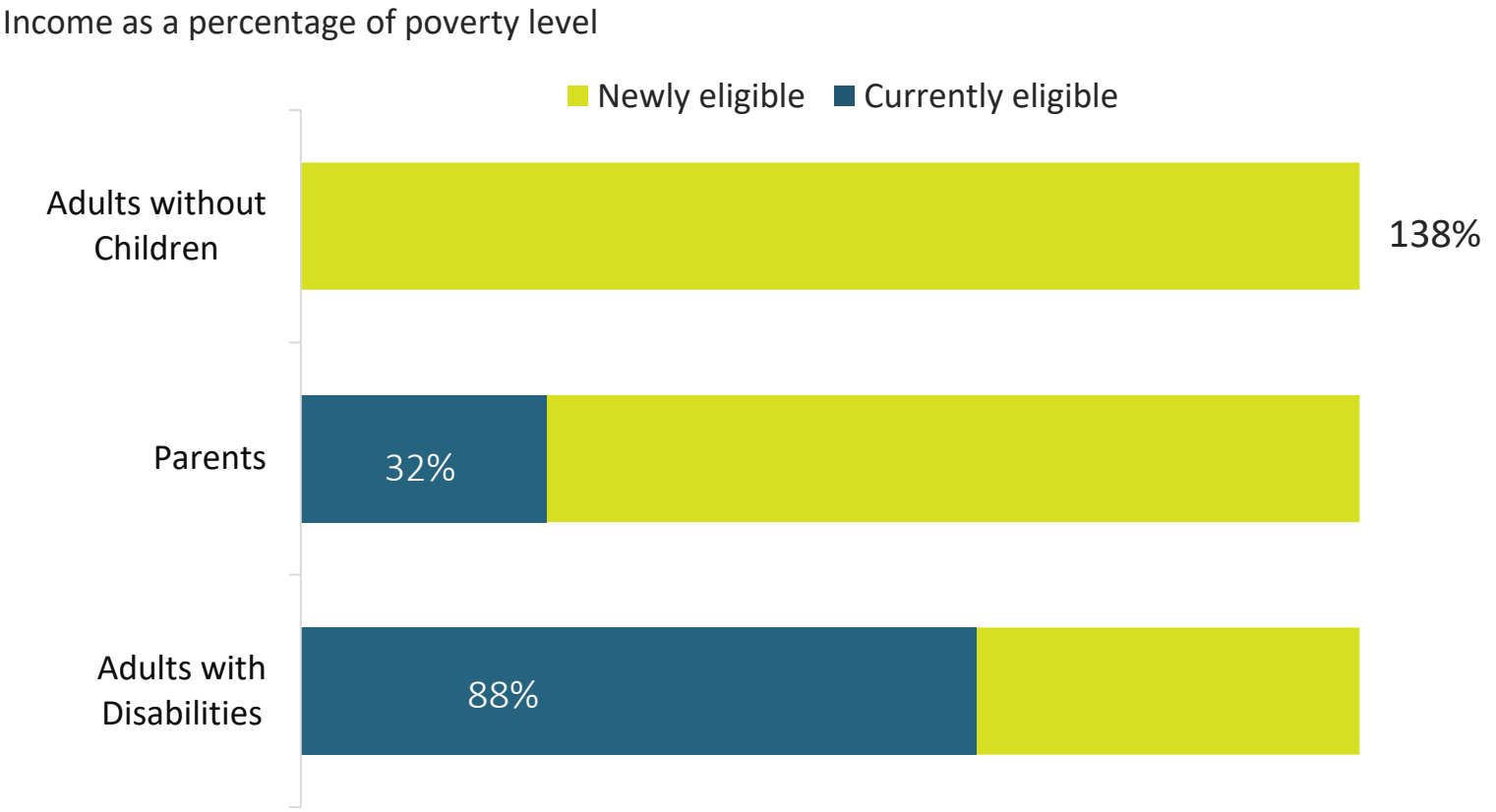
By the Numbers: FY 2018-19

Average Monthly Caseload	3,845,450
Per Member, Per Year (PMPY) Cost	$7,210
Total Costs (Federal and State)	$27.7 billion
FMAP	60.87%
Total State Appropriations	$10.5 billion

Notes:
The current FMAP for federal FY 2019-2020 is 61.47%.
Sources:
AHCA, Medicaid Eligibility Groups for 2018-19, estimated costs, average monthly caseload & PMPM), based on March 2019 EDR Social Services Estimating Conference. (Copy provided by AHCA to FPI). http://edr.state.fl.us/Content/conferences/medicaid/index.cfm
EDR, Medicaid Federal Share of Matching Funds, Feb. 28, 2019. http://edr.state.fl.us/Content/conferences/fmap/fmap.pdf

By the Numbers: Who Gets Benefits?

New coverage groups would be added and income eligibility would increase up to 138% of the Federal Poverty Level for most adults.



The Potential Savings with Expansion Outweighs Costs

Medicaid expansion could result in a substantial net savings to Florida's budget

Potential Budget Impacts of Medicaid Expansion in Florida, FY 2022-2023

Estimated Costs of Expansion	$441,900,000
Estimated Savings from Accessing Enhanced Federal Matching Funds	$266,385,000
Estimated Savings from Replacing State General Revenue funds with Medicaid Funds	$355,400,000
Estimated Revenue Gains	$19,110,000
Net Estimated Savings of Medicaid Expansion in Florida	**$198,995,000**

Note: Based on available data, estimates from the Office of Economic and Demographic Research (EDR) and Agency for Health Care Administration .
Source: Dorn, S., et al. *The Cost to States of Not Expanding Medicaid*. Urban Institute. 2016.
http://www.urban.org/sites/default/files/alfresco/publication-pdfs/2000886-The-Cost-to-States-of-Not-Expanding-Medicaid.pdf

Expansion Caseload: New State Costs

Fiscal Year	Expansion Caseload	State Cost of Expansion
2022-23	964,056	$441.9 million

It's important to note that for the same fiscal year, $4.1 billion of new federal funding would flow to Florida. As state costs grow, so would federal dollars.

New federal dollars are also projected to stimulate substantial increased economic activity throughout the state.

Notes:

- The newly eligible caseload projection (which includes the crowd-out, new uninsured presenters and the conversion of the Medically Needy into the expansion program based on 2011-2013 ACS Public Use Microdata Sample). The total and state cost of expansion is based on the Office of Economic and Demographic Research (EDR) projection. However, the caseload projection does not include Floridians who are currently eligible, but not enrolled in Medicaid.
- The currently eligible, but not enrolled population might be already realized. With economic recovery, more people can benefit from health insurance marketplace subsidies.
- The state cost of expansion reflects the specific cost for new uninsured presenters and the crowd-out population.
- Hodges, A. and Rahmani, M. *Economic Impacts of Extending Health Care Coverage in Florida*, May 2013, p. 10. http://www.fha.org/reports-and-resources/show-details/Economic-Impacts-of-Extending-Health-Care-Coverage-in-Florida/75. An updated study will be issued shortly.

Source: The Florida Legislature, Office of Economic and Demographic Research (EDR). *Impact Analysis of SB 2-A, As Filed (With Preliminary numbers for proposed Amendment)*. June 1, 2015. http://edr.state.fl.us/Content/presentations/affordable-care-act/SB2-AHousePresentation_ImpactAnalysisAsFiled.pdf

Potential State Savings from Accessing Enhanced Federal Matching Funds

Potential Savings: Sources

Florida could generate budgetary savings by accessing enhanced FMAP for programs serving:

- Medically Needy Floridians
- Adults with Disabilities
- Adults with AIDS
- Adults with Breast and Cervical Cancer
- Pregnant Women

Potential Savings Amount from Enhanced Federal Matching funds

State Savings From Enhanced Federal Matching Fund

Medically Needy Program	$172,300,000
Adults with Disabilities	$36,437,000
Adults with AIDS	$3,876,000
Adults with Breast and Cervical Cancer	$1,291,000
Pregnant Women	$52,481,000
Total	**$266,385,000**

Potential Savings: Medically Needy

STATE BUDGETARY SAVINGS FROM THE MEDICALLY NEEDY PROGRAM: $172,300,000

Notes and Key Assumptions:

- EDR projects that the state will save $172,300,000 million from the Medically Needy program due to a higher FMAP in FY 2022-2023.
- Expansion states' experience reveals that, "High-need and high-cost individuals who previously would have only qualified for Medicaid by 'spending down' their incomes to the medically needy eligibility group instead were able to enroll in the new adult group, where the federal government provides enhanced match for their services. This is a significant area of savings for states with medically needy programs…"
- Other expansion states have realized savings in their medically needy programs.

Sources:

The Florida Legislature, Office of Economic and Demographic Research (EDR). *Impact Analysis of SB 2-A, As Filed (With Preliminary numbers for proposed Amendment)*. June, 2015. p. 7 http://edr.state.fl.us/Content/presentations/affordable-care-act/SB2-AHousePresentation_ImpactAnalysisAsFiled.pdf

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http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2016/rwjf419097

Potential Savings: Adults with Disabilities (SSI & MEDS-AD Programs)

STATE BUDGETARY SAVINGS FROM SSI & MEDS-AD PROGRAMS: $36,437,000

Notes and Key Assumptions:

- Savings from enrollees in these programs assume that some low-income individuals who previously would have had to pursue a disability determination to qualify for Medicaid will enroll into the new adult group based on income alone. Accordingly, there should be a reduction in the number of individuals seeking disability determinations for Medicaid eligibility and reduced corresponding administrative costs.
- AHCA April 2019 enrollment data show a total of 318,012 adults ages 19-64 enrolled in the SSI and MEDS-AD programs. We assume 4% annual attrition in program enrollment-12,720. The 2018-19 annual PMPM for these groups is $10,450.68. Applying the regular state match for FY 2022-23 (37.41%) and comparing it to the enhanced match with expansion, the state is projected to save $36,437,000. Savings would be cumulative over time.
- A study commissioned by AHCA also confirms that potential budgetary savings from the Disabled Adults Program are possible if the state chooses to expand Medicaid. Additionally, other expansion states have realized savings in these coverage categories.

Sources:

AHCA Medicaid Eligibles Report, Age by Program, April 30, 2019.
http://ahca.myflorida.com/medicaid/Finance/data_analytics/eligibles_report/index.shtml
AHCA Medicaid Eligibility Groups for 2018-19. (provided to FPI by AHCA).
Manatt, *Alabama Medicaid Expansion, Summary of Estimated Costs and Savings, SFYs 2020-2023,* Alabama Hospital Association, February 2019.
https://www.manatt.com/Insights/White-Papers/2019/Alabama-Medicaid-Expansion-Summary-of-Estimated-Co
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Potential Savings: Adults with AIDS

STATE BUDGETARY SAVINGS FROM ADULTS WITH AIDS:
$3,876,000

Notes and Key Assumptions:

- The 2017 Florida Legislature amended section 409.904, Florida Statutes to allow certain individuals diagnosed with AIDS to qualify for Medicaid coverage. They must meet the following eligibility criteria: Have income at or below 222% of the federal poverty level (or 300% of the federal benefit rate), and meet hospital level of care, as determined by the Department of Elder Affairs, Comprehensive Assessment and Review for Long-term Care Services (CARES). We assume that individuals at or below 138% of poverty who previously would have had to pursue an assessment by CARES to qualify for Medicaid would instead opt to enroll in the new adult expansion group based on income alone. Accordingly, there should be a reduction in the number of individuals seeking assessments from CARES and reduced corresponding administrative costs.
- For 2018-19, the average monthly caseload was 18,028. We assume that 62% of the caseload had income at or below 138% of poverty (138/222) – or 11,177 eligible for Medicaid expansion. As with other adult disability coverage groups, we assume a 4% annual attrition rate from this program which would be 447 individuals. Based on a PMPM cost of $2,636.19 and a regular match rate of 37.41, state savings are projected to be $3,876,000 for one year. Savings would be cumulative over time.
- Since this eligibility group was created through a federal waiver AHCA could opt to amend it if expansion was implemented. Then this coverage group could be limited to persons with income 139-222% of poverty. All individuals with income at or below 138% of poverty could instead qualify through expansion coverage. It is projected that this change could save the state $98.5 million.

Sources:

AHCA Medicaid Eligibles Report, Age by Program, April 30, 2019.
http://ahca.myflorida.com/medicaid/Finance/data_analytics/eligibles_report/index.shtml
AHCA Medicaid Eligibility Groups for 2018-19, provided to FPI by AHCA.

Potential Savings: Breast and Cervical Cancer Program

STATE BUDGETARY SAVINGS ON THE BREAST AND CERVICAL CANCER PROGRAM: $ 1,291,000

Notes and Key Assumptions:

- Based on data available from the state Medicaid office, for FY 2016-17 the total budget allocated for the Breast and Cervical Cancer Program was $6,823,518. Using the 2022-2023 FMAP of 37.41 percent, the state share would be $2,552,678 based on the state's 2022-2023 FMAP of 37.41%.
- Cost savings are achieved by transitioning women below 138% FPL to Medicaid.
- Accordingly, FPI assumed even distribution of the current income requirement of 200% Federal Poverty Level (FPL) for all program-eligible low-income, uninsured and underinsured women. (138%/200%=69% of enrollees). With expansion the state share would be reduced to just 10 percent resulting in estimated net savings of $1,291,000.
- Other expansion states have realized savings from their Breast and Cervical Cancer programs.

Sources:

AHCA Medicaid Eligibility Groups for 2016-17. (provided to FPI by AHCA).

Bachrach et al. *States Expanding Medicaid See Significant Budget Savings and Revenue Gains. Early Data shows consistent Economic Benefits Across Expansion States.* Robert Wood Johnson Foundation March 2016. http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2016/rwjf419097

Potential Savings: Pregnant Women

STATE BUDGETARY SAVINGS FROM PREGNANT WOMEN PROGRAM : $ 52,481,000

Notes and Key Assumptions:

- The pregnant women program covers women up to 196% of the poverty level. AHCA's April 2019 Medicaid eligibles report only shows enrollment for pregnant women who are at or below poverty level. (87,505) To account for the lack of data for women earning 100-138% we constructed a ratio based on 2016-2017 AHCA data for women in both categories. We estimate the current total for both groups to be 104,433. Based on the PMPMs for both groups included in AHCA's 2016-17 data and applying the 2022-2023 state match of 37.41%, the state could realize total savings exceeding $130 million, if all pregnant women converted to the expansion group. However, a conservative estimate is that 45% of these women would shift to the expansion group in FY 2022-2023 amounting to $ 52,481,000 in state savings.
- Expansion states' experience reveals that, "Many women who are enrolled in the new adult group and become pregnant will remain in the new adult group, where the states receive the enhanced federal match for their services, at least until women renew their coverage. Savings occur even if states maintain their previous Medicaid eligibility levels for pregnant women."

Sources:

ACHA 2016-2017 Eligibility Groups for 2016-17, Total Estimate, Avg Monthly Caseload, PMPM, obtained by FPI from AHCA.

AHCA Medicaid Eligibility Groups for 2018-19, provided to FPI by AHCA

AHCA Medicaid Eligibles Report, Age by Program, March 31, 2019.
http://ahca.myflorida.com/medicaid/Finance/data_analytics/eligibles_report/index.shtml

Manatt, *Alabama Medicaid Expansion, Summary of Estimated Costs and Savings, SFYs 2020-2023*, Alabama Hospital Association, February 2019.
https://www.manatt.com/Insights/White-Papers/2019/Alabama-Medicaid-Expansion-Summary-of-Estimated-Co

Bachrach et al. *States Expanding Medicaid See Significant Budget Savings and Revenue Gains. Early Data shows consistent Economic Benefits Across Expansion States,* p. 3, Robert Wood Johnson Foundation. 2016. http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2016/rwjf419097

Potential State Savings from Replacing General Revenue Funds with Federal Medicaid Funds

Potential Savings: Sources

Florida could generate budgetary savings by replacing state General Revenue (GR) funds with Medicaid funds for:

- Mental Health and Substance Abuse Programs
- Prisoner Hospitalization Costs
- Uncompensated Care

Potential Savings Amount from Replacing State General Revenue With Medicaid Funds

Substance Abuse and Mental Health Services	$200,482,000
Prisoner Hospitalization Costs	$57,524,000
Uncompensated Care (Low Income Pool)	$97,394,000
Total	**$355,400,000**

GR Savings: Mental Health and Substance Abuse

STATE BUDGETARY SAVINGS FROM MENTAL HEALTH AND SUBSTANCE ABUSE PROGRAM:
$200,482,000

Notes and Key Assumptions:

- The Department of Children and Families estimates that there are 132,940 adults receiving general revenue funded mental health/substance abuse services and that $412,411,814 in general revenue could be used for state Medicaid match. These numbers are from 2016 and are likely to be higher today. Savings are projected using AHCA 2018/19 MMA Capitation rates for SSI SMI Ages 14+. A weighted average across all regions of $1,328.48 PMPM was used. The cost of converting these adults into coverage under Medicaid expansion has been deducted from the savings.
- These savings could help mitigate critical mental health funding priorities of the state, particularly for community-based agencies providing mental health care services.
- Other states' experience reveal that, "The largest savings in this category come as individuals who previously relied on state-funded behavioral health programs and services—including mental health and substance use disorder services—are able to secure Medicaid coverage in the new adult group, which means states can fund these services with federal—not state—dollars without reducing services."
- The Georgetown University Center for Children and Families has estimated even higher savings- $250 million annually- from the community substance abuse and mental health program if the state opted to expand Medicaid.

Sources:

Agency for Health Care Administration, *Behavioral Health Services Revenue Maximization Plan, Report to the Florida Legislature*, December 31, 2016. https://ahca.myflorida.com/medicaid/recent_presentations/SB_12_Behavioral_Health_Services_Revenue_Maximization_Plan_123016.pdf

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Alker, J. et al. *Florida's Medicaid Choice: Understanding Implications of Supreme Court Ruling on Affordable Health Care Act,* p. 7, 2012. http://ccf.georgetown.edu/wp-content/uploads/2012/11/florida-medicaid-choice-nov-2012.pdf

Bachrach, D. et al. *States Expanding Medicaid See Significant Budget Savings and Revenue Gains. Early Data shows consistent Economic Benefits Across Expansion States,* p. 4, Robert Wood Johnson Foundation, March 2016. http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2016/rwjf419097

GR Savings: Prisoner Hospitalization Costs

STATE BUDGETARY SAVINGS FROM HOSPITAL INPATIENT CARE FOR PRISONERS:
$57,524,000

Notes and Key Assumptions:

- "Medicaid's 'inmate exclusion' prohibits payment of care of services for any individual who is an inmate of a public institution. However, Medicaid will cover services provided to an inmate during an inpatient stay of at least 24 hours in a medical institution such as an acute care facility. To qualify, the inmate must be otherwise Medicaid-eligible. Expansion states are seeing health care related savings in their correction budgets for newly Medicaid-eligible prisoners who are treated in an inpatient medical facility outside of the state correctional system."

- FPI presumes that nearly all state prisoners are likely to qualify for the new adult group. Applying an expansion take-up rate of 85.8 percent, we assume that the state could save $45,903,000 of its $53,500,000 hospital inpatient care spending based on costs for FY 2016-17 (the last year of data available to FPI). From FY 2016-17 to FY 2018-19, state appropriations for inmate health services increased 24%. Applying this increase to the 2016-17 costs, we project $57,524,000 in savings.

Sources:

The Florida Department of Corrections. Florida's FY 2016-17 allocated budget for inmate health care services is $383,388,630, of which $53,500,000 is allocated for Inpatient Cost of Care for inmates. (Information provided to FPI by the Department of Corrections).

General Appropriations Acts, FYS 2017-18, 2018-19. http://laws.flrules.org/files/Ch_2017-071.pdf; http://laws.flrules.org/files/Ch_2018_009.pdf

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EDR. *Impact Analysis LIP, IGTs and SB2512* , p. 5, (take-up rate of 85.8 percent), April 2015. http://edr.state.fl.us/Content/presentations/affordable-care-act/Expansion2015PresentationtoSenate.pdf

GR Savings: Uncompensated Care/ Low Income Pool

STATE BUDGETARY SAVINGS
FROM UNCOMPENSATED CARE COSTS:
$97,394,000

Notes and Key Assumptions:

- Medicaid expansion is projected to lower the number of uninsured by 29% with a moderate caseload enrollment. This figure is based on a 29% reduction of the state's uncompensated care costs. The FY 2017-2018 General Appropriations Act allotted $586,762,066 for the state share to access a total pool of $1.5 billion of combined state and federal funding. (Nearly identical amounts have been appropriated in subsequent FYs). However, local entities, such as counties and hospital taxing districts, which are charged with raising the state share just raised $335,839,712 for FY 2017-18. The LIP savings projection is based on this reduced amount.

- Another potential source of state savings due to a reduction in the uninsured rate is the disproportionate share hospital (DSH) payments program. Through this program, the state spends millions of dollars annually for uncompensated hospital care. This analysis does not include these potential savings.

Sources:

FY 2017-18 General Appropriation Act, HB 5001. Medical Hospital Funding Programs, Fiscal Year 2016-17.
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ahca.myflorida.com/medicaid/recent.../IGT_Rev_Max_SFY17-18.pdf
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http://www.urban.org/sites/default/files/alfresco/publication-pdfs/2000866-What-if-More-States-Expanded-Medicaid-in-2017-Changes-in-Eligibility-Enrollment-and-the-Uninsured.pdf

Potential Revenue Gains from Provider Taxes

$19,110,000

Notes and Key Assumptions:

- Figure is based on 1.5% tax on inpatient care and 1% on outpatient, with a revenue distribution of 73% and 27%, respectively. This distribution is applied to $2.1 billion in increased revenue if the state expanded Medicaid in FY 2016. Also, 1/3 of Medicaid revenue gains are offset by lost marketplace revenues, resulting in net revenues of $19.11 million.
- Other states' experience reveals increased state revenue from existing assessments on insurers and providers. These gains occurred as local insurer and provider revenues increased, resulting in higher state collections on insurer and provider assessments.
- Other states have also experienced macroeconomic benefits from billions of new federal dollars flowing through their local and state economies generating more state and local revenues. Those potential fiscal gains are not addressed in this report.

Sources:

Dorn, S. et al. *The Financial Benefits to Hospitals From State Expansion of Medicaid*. Urban Institute. 2013.
http://www.urban.org/sites/default/files/alfresco/publication-pdfs/412770-The-Financial-Benefit-to-Hospitals-from-State-Expansion-of-Medicaid.pdf
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http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2016/rwjf419097

Summary of Potential Savings

Potential FY 2022-2023 State Budget Savings And Revenue Gain Estimates In Florida

State-only Cost of Expansion	$441, 900,000
SAVINGS FROM ENHANCED FEDERAL MATCHING RATES	
Medically Needy Program	$172,300,000
Adults with Disabilities	$36,437,000
Adults with AIDS	$3,876,000
Breast and Cervical Cancer Program	$1,291,000
Pregnant Women	$52,481,000
Total	**$266,385,000**
SAVINGS FROM REPLACING STATE FUNDS WITH FEDERAL MEDICAID FUNDS	
Substance Abuse and Mental Health Services	$200,482,000
Prisoner Hospitalization Costs	$57,524,000
Uncompensated Care (Low Income Pool)	$97,394,000
Total	**$355,400,000**
ESTIMATED REVENUE GAINS	
Increased Hospital Taxes/Provider Tax Assessments	$19,110,000
Total	**$19,110,000**
Total Savings and Revenue Gains	**$640,895,000**
Net Savings with Medicaid Expansion	**$198,995,000**

For Additional Information

- Antonisse, L.,et al., The Effects of Medicaid Expansion Under the ACA: Updated Findings from a Literature Review, Kaiser Family Foundation, March 28, 2018. https://www.kff.org/medicaid/issue-brief/the-effects-of-medicaid-expansion-under-the-aca-updated-findings-from-a-literature-review-march-2018/
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Florida Policy Institute

1001 N. Orange Ave

Orlando, FL 32801

407.440.1421

The Economic and Employment Benefits of Expanding Medicaid in North Carolina:

June 2019 Update

Leighton Ku, PhD, MPH
Brian Bruen, PhD
Erin Brantley, MPH, PhD (cand.)

Center for Health Policy Research
The George Washington University

Milken Institute School of Public Health
THE GEORGE WASHINGTON UNIVERSITY

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About Cone Health Foundation

Cone Health Foundation's mission is to measurably improve the health of the people in the greater Greensboro area. Founded in 1997, the Foundation has long been focused on increasing access to care and is Greensboro's only health-specific philanthropic organization. Since its inception, Cone Health Foundation has awarded more than $91 million to community nonprofit partners. Most of these grants fall into the Foundation's four focus areas: Access to Health Care, Adolescent Pregnancy Prevention, HIV and Substance Use and Mental Health Disorders.

About the Kate B. Reynolds Charitable Trust

The Kate B. Reynolds Charitable Trust works to improve the health and quality of life of financially disadvantaged residents in Forsyth County and around the state, as Mrs. Reynolds stated when she established the Trust in 1947. We support thriving North Carolina communities and thriving residents by working toward equitable access to care and equitable health outcomes. We invest in promising programs, efforts that foster systems change, and innovative ideas to help residents and communities succeed. Wells Fargo Bank, N.A. serves as sole trustee. Learn more at www.kbr.org.

About the Authors

***Leighton Ku**, PhD, MPH, is the Director of the Center for Health Policy Research and Professor of Health Policy and Management in the Milken School of Public Health, The George Washington University. He is a nationally known expert who has conducted health policy research about Medicaid, health reform and economic aspects of health policies for more than 25 years. He previously was on the staff of the Urban Institute and the Center on Budget and Policy Priorities. He is on the Executive Board of the District of Columbia's Health Benefits Exchange Authority.*

***Brian Bruen**, PhD, is a Lead Research Scientist and Lecturer in the Department of Health Policy and Management at The George Washington University. He has conducted research and analyses about health policy and Medicaid for more than 20 years, including research about the economic effects of health policies. He previously worked at Avalere Health, the National Association of Chain Drug Stores and the Urban Institute. He recently received his PhD in public policy and administration at The George Washington University and will soon join the staff of RTI International.*

***Erin Brantley,** MPH, PhD (cand.) is a Senior Research Associate and doctoral candidate at The George Washington University. She has conducted several studies about health policy, including recent research about work requirements.*

The Economic and Employment Benefits of Expanding Medicaid in North Carolina: A 2019 Update

Executive Summary

Governor Roy Cooper has proposed expanding eligibility in North Carolina's Medicaid health insurance program. North Carolina currently covers parents with incomes up to 42 percent of the poverty line and generally does not cover adults without dependent children. The expansion would lift income criteria to 138 percent of the poverty line for adults 19 to 64 ($29,400 for a family of three). North Carolina is one of 14 states that has not expanded Medicaid; only eight states in the U.S. have more austere income guidelines.

This brief is an update of a December 2014 report about the potential economic and employment consequences of expanding Medicaid in North Carolina. The earlier report examined the consequences of not expanding Medicaid in 2014 and then estimated what would happen if the Tar Heel state expanded it in 2016. This report addresses the consequences of the Governor's proposal to expand Medicaid beginning November 2019. It offers a nonpartisan analysis of potential changes in economic growth at the state level and in each of North Carolina's 100 counties.

Briefly, the analysis indicates that if Medicaid is expanded:

- In Calendar Year 2020, about 464,000 more people will gain Medicaid coverage. This will rise to about 634,000 people in 2022, then stabilize.

- New federal funding flowing into North Carolina will rise by $2.8 billion in 2019 and gradually climb to $4.7 billion by 2022 because the federal government would pay 90 percent of Medicaid costs for newly eligible adults. From 2020 to 2022, North Carolina will gain $11.7 billion more in federal funding.

- The injection of billions of dollars into North Carolina's economy will spur business activity, which will in turn create more jobs. We estimate that 24,400 additional jobs would be created in 2020, climbing to 37,200 more jobs in 2022, compared to levels if Medicaid is not expanded.

- The Gross State Product (a measure of economic activity in North Carolina) would be increased by $1.9 billion in 2020 and $2.9 billion in 2022.

- The increased economic activity and employment would trigger increases in state and county tax revenues, totaling $500 million in state revenue from 2020 to 2022 and $100 million in county revenue over the three-year period. The additional revenues can help the state and the counties address other budgetary needs.

Since more low-income people will get health insurance coverage, increasing health care access across the state, the benefits will be broadly dispersed. This analysis estimates economic gains in all 100 counties. Almost half the job gains – 17,900 jobs by 2022 -- will occur in six large counties

(Buncombe, Durham, Forsyth, Guilford, Mecklenburg and Wake Counties), while the other 19,200 new jobs will be distributed across the rest of the state, including rural areas.

Slightly more than half of the job growth (20,600 jobs) would be in the health care field, hardly surprising since Medicaid is a health insurance program. But the other 16,600 jobs created would be in other fields such as construction, retail sales, professional and management services, etc. Although Medicaid funds would first flow to health care providers, they would then ripple out into other parts of the economy as staff employed in health and other fields purchase food, pay their rent and mortgages, and make other consumer purchases. The economic growth would increase North Carolina's tax base and ultimately increase both state and county tax revenues.

The current employment estimates are similar to but a little lower than we projected in 2014. The main reason is that the current proposal would not be effective until late 2019, as compared to the 2016 start assumed before. In addition, projected Medicaid expenditures are somewhat lower than estimated before.

These estimates are projections, based on a sophisticated, dynamic economic model produced by Regional Economic Models, Inc. As with any projection, there is uncertainty and other factors may affect the outcomes. The economic methods employed are well-respected and widely used to estimate effects of changing state and local policies for local economies.

An alternative to the Governor's proposal has been introduced in the House of Representatives, House Bill 655. It also presents a health insurance option for adults with incomes up to 138 percent of the poverty line but adds requirements that low-income beneficiaries pay monthly premiums and comply with work requirements. We are not aware of detailed analyses of that bill and cannot conduct a comparable analysis. This bill would also increase Medicaid participation and federal funding flowing into the state, compared to current law. However, when compared to the expansion proposed by the Governor, the premiums and work requirements would depress participation. Enrolling fewer North Carolinians would yield lower federal revenue and reduced economic and employment gains.

Medicaid expansion could be an important engine for economic growth and job creation across the breadth of North Carolina. More fundamentally, expanding Medicaid coverage will empower 634,000 low-income North Carolinians get Medicaid coverage by 2022 which will help assure they can get affordable care when they are sick and preventive and primary care to help them stay healthy.

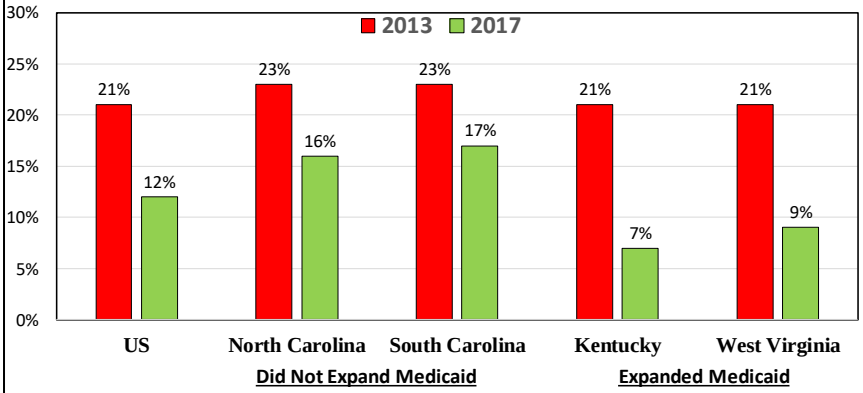
Introduction

As of May 2019, North Carolina was one of 14 states that has not expanded its Medicaid program, an option under the Patient Protection and Affordable Care Act (ACA).[1] Thirty-four states (including the District of Columbia) have implemented expansions, while Idaho, Nebraska and Utah voters passed referenda to expand Medicaid and are pending implementation. Governor Roy Cooper has proposed expanding North Carolina's Medicaid eligibility, effective November 2019. This issue is currently before the legislature.

Most states in the nation now offer Medicaid to low-income adults with incomes up to 138 percent of the federal poverty level ($29,400 for a family of three). In North Carolina, parents are not eligible if their incomes exceed 42 percent of poverty and most adults without dependent children are ineligible for Medicaid.

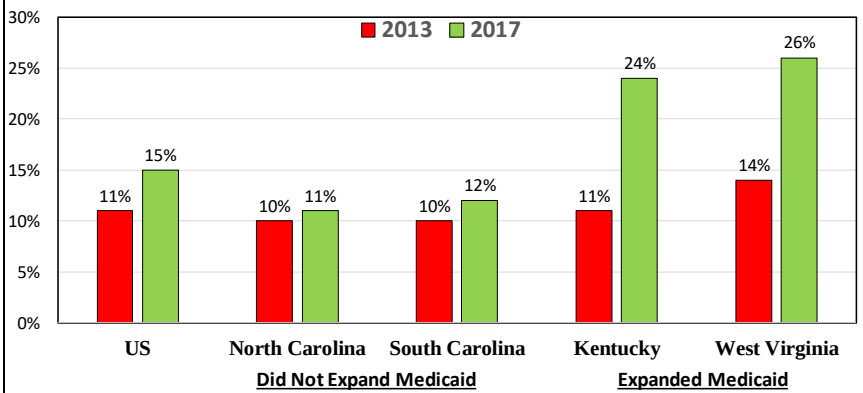
As a result, North Carolinians are about twice as likely to be uninsured as their neighbors in Kentucky or West Virginia, which expanded Medicaid (see Figure 1). The most recent Census data indicates that almost a million (994,000) North Carolina adults 19 to 64 lacked health insurance coverage in 2017, roughly one-sixth (16%) of the state's adult population, far higher than the 7% of adults uninsured in Kentucky or 9% in West Virginia. The differences were primarily driven by the Medicaid expansions (see Figure 2).

Fig 1. Changes in Percent of Adults 19-64 Who Are Uninsured



Source: Census Bureau, American Community Survey data

Fig 2. Changes in Percent of Adults 19-64 with Medicaid Coverage



Source: Census Bureau, American Community Survey data

The ACA requires the federal government to cover most (or all) of the cost of expanding Medicaid eligibility. From 2014 to 2016 the federal government financed 100 percent of the costs of Medicaid eligibility expansions. The federal share declined after the initial period, reaching 93 percent in 2019. In 2020 and thereafter, the federal government will pay 90 percent of the cost. As a result, expansion will bring a substantial inflow of additional federal funding to the state, triggering economic and employment growth, particularly in the health care sector.

An earlier report[2], issued in December 2014, indicated that by failing to adopt a Medicaid expansion, North Carolina lost access to billions of federal dollars, and did not gain the economic growth opportunities experienced by most states. The analysis estimated that if North Carolina expanded Medicaid in 2016, the number of jobs could increase by 43,000 by 2020. And while much of the job growth would occur in the health care sector, growth would occur in other areas too, due to the "economic multiplier" effect.

This brief updates the 2014 report, based on more recent information such as changes in estimates of Medicaid costs. This update focuses on the effects of Medicaid expansion and does not address other important changes under discussion in the state, including the transformation of the state Medicaid's system of delivering health care from fee-for-service to managed care and an expansion of services to address the opioid crisis. A bill proposed in the legislature (House Bill 655) would also expand Medicaid but would require that newly eligible adults pay monthly premiums and comply with new work requirements, unless they have a dependent child or are exempt (e.g., medically frail or pregnant).

Key differences between this update and the 2014 report are:

- The earlier report examined effects if Medicaid expansion began in 2016. Based on the current proposal, this analysis assumes Medicaid expansion begins November 2019 and takes two years for enrollment to ramp up.

- As a result, federal revenue increases are lower than estimated before due to the later start date. Our earlier report projected that federal revenue would rise from $5.05 billion in 2020 to $5.78 billion in 2022, while we now estimate additional federal revenue of $2.85 billion in 2020, rising to $4.69 billion in 2022. The change in projections appears to be because Medicaid costs grew more slowly in North Carolina than anticipated earlier.

- Since the economic benefits of Medicaid expansion are related to the contribution of new federal funding into North Carolina's economy, the projected economic effects are somewhat lower, particularly in the initial years. While the 2014 report estimated that Medicaid expansion could lead to 43,000 additional jobs by 2020, this update estimates employment growth of 24,400 jobs in calendar year 2020. By 2022, 37,200 more jobs would exist across the state than would exist if Medicaid does not expand.

Research About Benefits of Medicaid Expansion

A March 2018 review by the Kaiser Family Foundation identified over 200 studies about the effects of Medicaid expansions across a variety of areas.[3] The review found that Medicaid expansions (a) increased insurance coverage and reduced the number of uninsured, benefiting both rural and urban residents and those who are African-American, white and Latino, (b) strengthened access to health care services, (c) increased low-income families' financial security, (d) improved a variety of health outcomes, (e) reduced uncompensated care costs and stabilized safety net health care providers and (f) have done so with without creating major cost increases for states.

A more focused review on health benefits, published in the *New England Journal of Medicine*, found consistent evidence that expanding health insurance coverage, especially Medicaid, improves access to and utilization of appropriate health care, such as cancer screening, improves

assessments of health, eases depression, increases financial security and appears to lower mortality.[4]

Some additional impacts of expansion that may be important in North Carolina:

- Medicaid expansions lower hospitals' uncompensated care burdens, improves their balance sheets and reduces the risk that rural hospital close.[5] This may be particularly relevant to North Carolina, where six rural hospitals (Washington County Hospital, Our Community Hospital (Halifax County), Davie Medical Center-Mocksville, Yadkin Valley Community Hospital, Vidant Pungo Hospital, and Blowing Rock Hospital) closed between 2014 and May 2019 (Note: The reopening of Washington County Hospital was announced in late April.).[6] Of the 76 rural hospitals that closed across the nation in that period, 83% were in states that did not expand Medicaid, while only 17% were in the more numerous states that expanded Medicaid, according to data from the Sheps Center at the University of North Carolina.[7] Other North Carolina rural hospitals could be at risk if Medicaid is not expanded.[8] Randolph Health has reported being in severe distress.[9]

- Medicaid expansions have also benefited other safety net facilities that provide care to low-income and uninsured patients, including community health centers.[10]

- Expansions of Medicaid eligibility help get more people into treatment for opioid use disorder and have not fueled greater addiction. States that expanded Medicaid have been able to increase access to buprenorphine and related medications used to help treat opioid addiction, compared to states that did not expand Medicaid.[11] Both expansion and non-expansion states have reduced prescriptions of opioid pain relief medications in recent years at roughly equal rates to curb future addiction. Medicaid expansions also help finance hospital care for treatment of opioid use disorder; they reduced uncompensated care costs and gained Medicaid revenue to support treatment services.[12]

- Contrary to some criticisms, Medicaid expansions have not created serious budget problems for states; in fact they sometimes helped state budgets.[13] [14] This is in part because state spending on uncompensated care and mental health services can decline if more health care use is covered under Medicaid.[15] [16] Prof. Mark Hall of Wake Forest University explained that "claims that the costs of Medicaid expansion have far exceeded expectations are overstated, misleading and substantially inaccurate, based on a review of the credible evidence from either academic or government sources."[17]

- Medicaid programs have been particularly effective in holding down increases in health care costs. A recent analysis compared growth in per person insurance costs from 2006 to 2017. The annual growth in Medicaid costs per person averaged 1.6% per year, lower than increases in Medicare costs, which averaged 2.4%. Growth in both Medicaid and Medicare were below average cost increases in private insurance costs (4.4% per year).[18]

- The financial performance above is consistent with research that it is less expensive to insure low-income adults through Medicaid than through private insurance.[19] [20] In addition, Medicaid beneficiaries – who are quite poor – have lower out-of-pocket cost

burdens than similarly low-income people with private insurance, improving their ability to get necessary preventive and primary care, as well as medications.

- Some critics have inaccurately claimed that Medicaid expansions prevent states from meeting the needs of elderly or residents with disabilities who are on waiting lists to receive home or community-based care service. In fact, analyses have shown that between 2013 and 2017, waiting lists were much likely to grow in states that did not expand Medicaid (69%) than in expansion states (41%).[21] Expanding Medicaid and providing more home and community-based care need not be mutually exclusive choices. Both choices would earn additional federal matching funds as well as help meet residents' health needs. However, Medicaid expansion earns a 90% matching rate while increasing support for home and community-based care setting would earn the regular 67% federal match.

North Carolina's Medicaid Program and Proposed Expansion

North Carolina currently provides Medicaid coverage to parents with family incomes up to 42 percent of the federal poverty line, but does not cover most non-elderly, non-disabled adults without dependent children, regardless of their incomes.[22] (Some childless adults may be eligible for Medicaid if they are disabled or pregnant.) Only eight states (Alabama, Florida, Georgia, Idaho, Kansas, Mississippi, Missouri and Texas) have lower income eligibility guidelines. In the past year, Virginia and Maine expanded Medicaid and voter-approved referenda to expand Medicaid in Idaho, Nebraska and Utah are pending implementation.

North Carolina's "regular" federal Medicaid match rate is 67.16% for federal fiscal year 2019, falling slightly to 67.03% in 2020. That is, the state generally pays about 33% of the total cost of Medicaid services. If North Carolina had expanded Medicaid in the 2014 to 2016 period, the federal government would have covered the full cost of the Medicaid expansion. Even now, the government will provide an enhanced match rate of 93% for eligibility expansion costs in 2019 and 90% in 2020 and later years.

If Medicaid expands, it is likely some additional Medicaid enrollees who are already eligible (i.e., parents with incomes at or below 42% of poverty) will enroll, but the number should be modest. This effect, sometimes called the "woodwork" effect, occurs because already eligible people come "out of the woodwork" and enroll after publicity about expansions. In North Carolina, most of the woodwork effect of the ACA already occurred, due to the publicity about ACA implementation and the development of the HealthCare.gov website, which referred income-eligible people to the Medicaid program. Between SFY 2012-13 and 2015-16, North Carolina's Medicaid enrollment grew by 227,000.[23] (Since then, there has been growth in Medicaid due to an increase in the number of women and men getting a very limited family planning benefit; the number of other Medicaid enrollees declined slightly through SFY 2017-18.) Thus, it is expected that a modest number of already eligible people would join Medicaid if expansions occur later this year, further reducing the number of uninsured. These individuals are eligible for the regular 67% match.

A recent report by the Urban Institute, a nonpartisan think tank, estimated that Medicaid expansion in North Carolina could increase the number of Medicaid enrollees in North Carolina by 626,000 and reduce the number of uninsured by 365,000.[24] Some of those who will gain Medicaid currently have other forms of insurance, primarily subsidized insurance from the ACA's health insurance

marketplace. There are budgetary advantages to such a shift; supporting Medicaid may be less costly than subsidizing marketplace beneficiaries.[25]

North Carolina Governor Roy Cooper has proposed to expand Medicaid eligibility from 42 percent of the poverty line for parents and zero percent for other low-income adults to 138 percent for both groups. The state estimated the following budget impacts of his proposal to expand Medicaid beginning November 2019:[26]

- In Governor Cooper's budget proposal, the SFY 2019-20 costs of care for the expansion group are projected to require a total of $2.13 billion, of which $1.91 billion will be covered by federal matching funds and $216 million will be covered by non-federal funds (primarily hospital assessments). The budget proposes to fund the remaining need of $3.3 million with a tax on managed care capitation payments made on behalf of the expansion population. In addition, the state will need $63 million to meet the additional costs of existing eligible people and will gain $46 million in federal matching funds and $2 million in non-federal funds (hospital assessments).

- The budget anticipates that costs will ramp up in SFY 2020-21 as the expansion takes hold: the costs of the expansion group will increase to $4.17 billion, of which federal matching revenue will cover $3.74 billion and non-federal revenue will cover $356 million. The budget anticipates the tax on managed care capitation payments for the expansion population will generate the remaining balance of $75 million. The projected costs of serving additional people who are already eligible is estimated at $126 million and North Carolina will receive $92 million from federal and non-federal sources.

- The costs ought to rise a little more in SFY 2021-22, after which the enrollment and cost increases are expected to plateau. Based on the experience of other states, it should take about two years to reach a steady state.

Some of the costs of Medicaid expansion are expected to be offset by savings of about $31 million in SFY 2019-20 and $69 million in SFY 2020-21 for other care, mental health services, corrections, the state health plan and state operated health facilities.[27]

These projections are consistent with Urban Institute analyses, based on its Health Reform Policy Simulation Model, which estimated that expanding Medicaid in North Carolina would increase federal funding by $4.012 billion if it was fully implemented in 2019. [28] This includes not only the additional costs of Medicaid, but accounts for the fact that some North Carolinians who currently receive premium tax credits under the ACA health insurance marketplaces (Obamacare) would transfer to Medicaid, reducing federal spending on marketplace coverage.

Other important changes in North Carolina's Medicaid program are afoot as well, particularly a major transformation from providing care under a fee-for-service delivery system to a managed care program. This report focuses exclusively on the effects of a Medicaid expansion, although we note that it is possible to simultaneously expand Medicaid to implement other major delivery system changes, as other states have done.

The Updated Economic Analysis

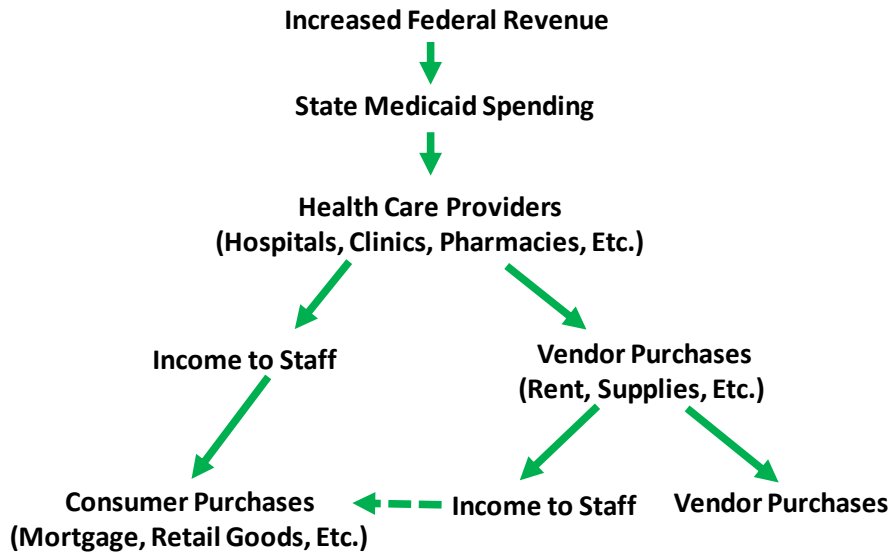
This brief updates our December 2014 report on the economic and employment effects of expanding Medicaid in North Carolina. The earlier report considered the effects of expanding Medicaid beginning in 2016. We now estimate the effects of an expansion beginning in November 2019. We project that effects will phase-in over a two-year period. Thus, we estimate effects for calendar years 2020, 2021 and 2022.

This analysis, like the earlier one, is based on an economic model developed by Regional Economic Models, Inc. (REMI)[29] The model is well-respected and has been used by governments and universities around the nation, including North Carolina's Office of State Budget and Management and the State Legislature. The model examines the flows of revenue and outputs through the state's economy and the effect of economic multipliers. The use of multiplier estimates in economic impact studies is well-accepted; the approach is used by not only ourselves and those in North Carolina, but by economists at the Congressional Budget Office[30], the International Monetary Fund,[31] the White House Office of Economic Advisers[32] and business economists[33] in analyses of how policies and investments can stimulate (or depress) additional economic growth.

Other researchers have also conducted similar economic analyses of the benefits of Medicaid expansion in increasing employment.[34] [35] [36] [37] Their conclusions are like those presented in this analysis; Medicaid expansions can fuel economic development and employment.

In this model, the key determinant of the economic stimulus is the injection of new federal revenue into North Carolina's economy because of the Medicaid expansion. Figure 3 illustrates how the additional federal revenue would flow and multiply through the state, boosting employment and economic growth.

Figure 3. Illustration of Multiplier Effect in Medicaid



- As the state expands Medicaid, additional federal funds flow to health care providers (hospitals, clinics, pharmacies, etc.) as the newly eligible individuals get medical care supported by Medicaid.

- Health care providers used these funds to increase staffing (the largest expense for most health providers) as well as to purchase goods from other vendors, such as paying to build out their facilities, pay rent, purchase supplies and other services.

- Increased employment lets the workers purchase consumer goods. Their salaries are used to pay their mortgages or rent, buy retail goods like food, clothing or furniture, and they also pay more taxes to their state and local governments.

- In turn, businesses such as medical good suppliers, grocery stores and real estate companies gain increased consumer activity, hire more staff and pay other vendors.

- As the funds flow through the local economies, the economic impact multiplies.

Some critics of economic impact studies argue that they are unrealistic because they fail to consider the effects of alternative uses of the resources.[38] That is, rather than spending, say $20 million on Medicaid, North Carolina might spend $20 million more on building roads or prisons and these too would yield economic benefits. Our methodology addresses this problem by being based *entirely* on the net federal funds that will flow into the state solely due to Medicaid expansion; we exclude the use of state funds which might be used for other purposes. The additional federal matching funds derive from external sources and would not flow into North Carolina if there was no Medicaid expansion. The new federal funds received will fuel additional benefits for North Carolinians. Federal taxes paid by North Carolinians will not change, aside from taxes paid because state residents and businesses have higher incomes.

North Carolina contributes about 2.4% of total federal tax collections.[39] However, since most states have already expanded Medicaid, North Carolinians have helped pay for expansions and economic gains in most of the country with their federal taxes, while they have not reaped the benefits so far.

When we compute the net federal revenue gained by North Carolina under a Medicaid expansion, we use a blend of estimates from the Office of State Budget and Management and the Urban Institute, assuming that the Medicaid expansion begins November 2019. We include additional federal revenue gained because the federal government will cover 90% of the cost the Medicaid expansion. We subtract the federal tax credits that would otherwise have been paid for individuals with incomes between 100% and 138% of poverty for premium tax credits in the health insurance marketplaces. To the extent that North Carolina uses in-state sources to fund the expansion, these funds are subtracted in computing the net federal funding created by expansion.

Using the approach described in our 2014 report, additional federal Medicaid revenue generates additional spending on hospital care, ambulatory care and pharmaceuticals (plus slight amounts for long-term care services); these are distributed across North Carolina's 100 counties, based on the expected growth in Medicaid spending in each county. These are used as inputs (i.e., new spending) in the REMI model, which then produce estimates of outputs, such as increased

employment, state or county gross state product and county revenue. For this brief report, we re-estimated the federal revenue inputs to the model, based on the more recent budget data, described in the paragraph above, and compare them to our prior estimates for Calendar Years 2020, 2021 and 2022. We apply the percentage difference in federal revenue inputs to the outputs from the 2014 report to generate our new estimates. This proportionate adjustment is a rough approximation but should be close to what would be found if the entire model was run again.

Key terms used in this report are:

- Employment: This is the number of jobs that would be added or lost in the county or state related to Medicaid expansion, full-time plus part-time. These include jobs in all sectors, including health-related jobs, construction, retail, professional jobs, state or local government, etc.

- Business Activity (Output): This is equivalent to the sum of all revenue (public and private) generated by the Medicaid expansion at the state or county levels. For example, if a retail firm buys a product from a wholesaler for $1,000 and a customer pays $1,500 to the retailer for that same product, the increase in business activity is the sum of both levels of purchase, or $2,500.

- Gross State (or County) Product: Gross State Product (GSP) is a subset of output and refers to the "value added" by economic activity. GSP can be thought of as all net new economic activity or output minus the goods and serves used as inputs to production. Effectively, it measures only the final stage of a transaction. In the example above, it would be the $1,500 paid by the customer to the retailer.

- State Tax Revenue: This is the value of additional state government revenue related to the expansion, not including any health taxes that may change under the proposal.

- County Tax Revenue: This is the value of additional county/local government revenue related to the expansion, separate from state revenues.

What Would Be the Effects of Expanding Medicaid Beginning November 2019?

The results of our analysis, aggregated at the state level, are summarized in Table 1 below. All levels are compared to a baseline in which Medicaid does not expand. If Medicaid is expanded:

- Estimated additional federal revenue that North Carolina earns would rise from $2.8 billion in calendar year 2020, to $4.2 billion by 2021 and to $4.7 billion in 2022, for a total of $11.7 billion over the three years. After that, it would be relatively stable, growing due to inflation and population changes.

- The number of additional Medicaid enrollees would grow by 464,000 in 2020, increasing to 634,000 by 2022.

- In 2020, an additional 24,400 jobs would be added, rising to 34,500 in 2021 and to 37,200 in 2022.

Table 1. Estimated State-Level Changes in Federal Revenue, Medicaid Enrollees, Jobs, Business Activity, Gross State Product, State and County Tax Revenue If Medicaid Expands in Late 2019

Calendar Years	2020	2021	2022	2020-22
Federal Revenue (billions)	$2.85	$4.19	$4.69	$11.73
New Medicaid Enrollees*	464,000	582,000	634,000	N.A.
Total Jobs Added*	24,400	34,500	37,200	N.A.
Business Activity (billions)	$2.94	$4.19	$4.54	$11.67
Gross State Product (billions)	$1.88	$2.65	$2.92	$7.45
State Tax Revenue (millions)	$124	$181	$200	$506
County Tax Revenues (millions)	$25	$38	$43	$106

* Unlike dollars, the number of new enrollees and the number of new jobs do not sum over the years.

- Total business activity would increase from $2.9 billion in 2020 to $4.7 billion in 2022, or $11.7 billion over three years.

- Gross State Product, the net increase in state economic activity, would be $1.9 billion higher in 2020 and $2.9 billion higher by 2022.

- The state of North Carolina would earn $506 million more in tax revenue from 2020 to 2022 and North Carolina counties would earn $106 million more due to the additional economic activity caused by the Medicaid expansion. These additional revenues would help the state and the counties address other budgetary needs in the future.

The growth in economic activity and employment would be varied. As seen in Table 2, there would be an increase of 20,600 jobs in the health care sector by 2022. But other sectors would gain almost 16,600 more jobs, such as construction, retail sales, administrative and professional services. As described earlier, though Medicaid funds would first flow to the health sector, economic benefits and employment gains ripple out to other sectors of the economy.

Table 2. Composition of Additional Jobs by Sector, 2022

Industrial Sector	2022
Ambulatory health care services	16,200
Hospitals	4,400
Construction	4,000
State & local	3,300
Retail & wholesale trade	1,900
Administrative and support services	1,400
Professional, scientific, and technical services	1,100
Food services & hospitality	1,100
All others	3,800
Total	37,200

The growth in employment would be shared across the state, flowing from increased Medicaid enrollment and revenue in both urban and rural areas. Table 3 estimates the number of additional jobs created in each of North Carolina's 100 counties. About 17,900 jobs would be created by 2022 would be in six large counties (Buncombe, Durham, Forsyth, Guilford, Mecklenburg and

Table 3. Estimated Number of New Jobs If Medicaid Expands, by County

County	2020	2021	2022
Alamance	516	731	787
Alexander	48	67	72
Alleghany	75	107	116
Anson	28	39	43
Ashe	55	78	84
Avery	38	54	58
Beaufort	86	122	132
Bertie	19	27	29
Bladen	40	57	62
Brunswick	142	202	218
Buncombe	845	1,199	1,293
Burke	297	421	456
Cabarrus	361	510	547
Caldwell	127	180	195
Camden	2	3	4
Carteret	91	130	141
Caswell	25	35	38
Catawba	342	484	523
Chatham	152	214	228
Cherokee	49	69	75
Chowan	17	25	27
Clay	10	14	15
Cleveland	251	357	386
Columbus	150	213	232
Craven	107	154	169
Cumberland	452	649	710
Currituck	6	8	8
Dare	34	48	51
Davidson	369	523	562
Davie	51	71	76
Duplin	87	124	135
Durham	2,875	4,044	4,351
Edgecombe	68	96	105
Forsyth	1,159	1,642	1,772
Franklin	163	231	248
Gaston	548	780	845
Gates	3	5	5
Graham	8	11	12
Granville	89	125	135
Greene	36	51	56
Guilford	1,779	2,514	2,706
Halifax	85	122	133
Harnett	220	316	344
Haywood	65	92	99
Henderson	214	303	326
Hertford	89	127	138
Hoke	51	72	78
Hyde	2	3	3
Iredell	375	529	568
Jackson	172	244	263

County	2020	2021	2022
Johnston	435	617	662
Jones	8	11	12
Lee	191	270	292
Lenoir	132	187	203
Lincoln	88	123	131
McDowell	62	88	95
Macon	41	58	62
Madison	31	44	48
Martin	48	69	75
Mecklenburg	2,514	3,517	3,751
Mitchell	31	44	47
Montgomery	44	62	67
Moore	277	395	428
Nash	182	258	278
New Hanover	577	815	876
Northampton	13	18	19
Onslow	101	146	161
Orange	409	581	629
Pamlico	22	31	34
Pasquotank	48	68	74
Pender	75	106	114
Perquimans	6	8	9
Person	78	111	120
Pitt	344	493	537
Polk	28	40	44
Randolph	335	474	508
Richmond	85	122	133
Robeson	397	567	616
Rockingham	176	250	270
Rowan	239	339	367
Rutherford	138	196	212
Sampson	62	89	97
Scotland	78	111	120
Stanly	133	190	205
Stokes	52	73	77
Surry	161	227	242
Swain	21	30	32
Transylvania	46	66	71
Tyrrell	1	2	2
Union	237	333	354
Vance	95	135	146
Wake	2,691	3,794	4,076
Warren	14	19	21
Washington	8	12	13
Watauga	183	259	279
Wayne	249	356	386
Wilkes	98	139	149
Wilson	177	250	268
Yadkin	36	51	54
Yancey	21	30	32

Wake Counties), while 19,200 new jobs are shared by the other 94 North Carolina counties. While the more populous counties gain more jobs, job growth will occur in all corners of the state.

Detailed, county-level estimates of changes in Medicaid caseloads, gross county product and county tax revenues increases are shown in Appendix Tables A-1 to A-3.

House Bill 655

The analysis above is for an unencumbered Medicaid expansion, as it has been implemented in most expansion states and proposed by the Governor. An alternative, House Bill 655, has been proposed in the legislature by Representative Donny Lambeth and his colleagues.[40] Because of the lack of detailed analyses of the bill, we are unable to provide comparable estimates of the economic impacts.

HB 655 would also increase health insurance eligibility for adults with incomes up to 138 percent of the poverty line. In addition, it would require that newly eligible adults pay monthly premiums and comply with new work requirements, unless they have a dependent child or are exempt due to conditions like pregnancy or medical frailty. Both changes could potentially reduce the number of people who would be newly covered. While HB 655 ought to expand Medicaid participation and lead to an increase in federal funding and economic and employment gains, it would result in much lower Medicaid enrollment gains. Although most Medicaid beneficiaries work, some have difficulties finding steady employment and also encounter problems with the paperwork needed to comply with work requirements. Because of that, the reduction in the number of uninsured and the economic and employment gains would be much smaller than the expansion proposed by the Governor.

The work requirements in HB 655 are modeled on those used in the Supplemental Nutrition Assistance Program (SNAP, formerly food stamps). A preliminary analysis indicates that SNAP work requirements reduces the participation of those targeted by more than one-third.[41] This is comparable to the losses that occurred when Arkansas implemented work requirements in its Medicaid program.[42] Other analyses have found that SNAP work requirements substantially lower participation by eligible people, while providing, at best, scant gains in employment.[43] [44] In addition, new administrative systems needed to manage the new requirements could be costly.[45]

Research and experience also show that participation is depressed when low-income participants are charged premiums to enroll.[46] [47] This would further lower enrollment and federal revenue gained, while increasing the amount low-income North Carolinians must spend, thereby limiting economic growth opportunities.

Adopting these changes, particularly the work requirement, would require federal approval of a Medicaid Section 1115 demonstration waiver, since these depart from statutory rules for Medicaid. The federal Centers for Medicaid & Medicare Services (CMS) might approve such a waiver; it has approved waivers for several states already. But it is not clear if work requirements are lawful and consistent with the federal statute that governs Medicaid. Approval of these projects has been challenged in court and the first three federal court decisions found that CMS acted improperly and invalidated the waivers in Kentucky and Arkansas.[48] These rulings are being appealed.

Appendix Table A-1. Estimated Number of Additional Medicaid Enrollees If Medicaid Expands

	2020	2021	2022
Alamance	7,639	9,570	10,428
Alexander	1,734	2,172	2,367
Alleghany	747	936	1,020
Anson	1,224	1,534	1,671
Ashe	1,678	2,102	2,291
Avery	1,031	1,292	1,407
Beaufort	2,355	2,951	3,215
Bertie	893	1,119	1,219
Bladen	2,222	2,784	3,034
Brunswick	5,060	6,339	6,907
Buncombe	12,363	15,489	16,877
Burke	4,838	6,061	6,604
Cabarrus	7,528	9,432	10,277
Caldwell	3,833	4,803	5,233
Camden	325	407	443
Carteret	2,998	3,756	4,092
Caswell	1,003	1,257	1,369
Catawba	7,236	9,066	9,878
Chatham	2,690	3,371	3,673
Cherokee	1,358	1,701	1,853
Chowan	637	798	869
Clay	573	718	782
Cleveland	4,717	5,910	6,439
Columbus	2,944	3,688	4,019
Craven	4,190	5,250	5,720
Cumberland	13,516	16,934	18,451
Currituck	938	1,175	1,280
Dare	1,501	1,881	2,049
Davidson	7,236	9,066	9,878
Davie	1,610	2,018	2,198
Duplin	4,406	5,520	6,014
Durham	15,261	19,121	20,834
Edgecombe	2,789	3,495	3,808
Forsyth	18,665	23,385	25,480
Franklin	3,138	3,931	4,283
Gaston	9,943	12,457	13,573
Gates	463	580	632
Graham	448	561	612
Granville	2,437	3,053	3,327
Greene	1,168	1,464	1,595
Guilford	25,781	32,300	35,194
Halifax	2,547	3,192	3,478
Harnett	6,081	7,619	8,302
Haywood	2,505	3,139	3,420
Henderson	5,023	6,293	6,857
Hertford	1,205	1,509	1,645
Hoke	3,054	3,826	4,169
Hyde	319	399	435
Iredell	7,121	8,922	9,721
Jackson	2,417	3,028	3,299

	2020	2021	2022
Johnston	9,219	11,550	12,585
Jones	542	679	740
Lee	3,393	4,251	4,632
Lenoir	3,311	4,148	4,519
Lincoln	3,296	4,129	4,499
McDowell	2,102	2,633	2,869
Macon	969	1,213	1,322
Madison	1,254	1,571	1,711
Martin	2,267	2,841	3,095
Mecklenburg	47,088	58,996	64,281
Mitchell	645	808	880
Montgomery	1,767	2,214	2,412
Moore	3,471	4,348	4,738
Nash	4,598	5,761	6,277
New Hanover	9,660	12,103	13,188
Northampton	983	1,231	1,342
Onslow	7,095	8,889	9,686
Orange	5,314	6,658	7,254
Pamlico	496	622	677
Pasquotank	1,745	2,186	2,382
Pender	2,697	3,380	3,682
Perquimans	580	727	792
Person	1,776	2,225	2,424
Pitt	9,583	12,006	13,082
Polk	891	1,116	1,216
Randolph	7,937	9,944	10,834
Richmond	2,708	3,392	3,696
Robeson	10,070	12,617	13,747
Rockingham	4,282	5,365	5,846
Rowan	7,094	8,888	9,684
Rutherford	3,522	4,413	4,809
Sampson	4,023	5,040	5,492
Scotland	1,908	2,390	2,604
Stanly	2,489	3,119	3,398
Stokes	1,888	2,365	2,577
Surry	4,159	5,210	5,677
Swain	809	1,014	1,105
Transylvania	1,452	1,820	1,983
Tyrrell	238	298	324
Union	7,063	8,850	9,643
Vance	2,547	3,192	3,478
Wake	32,899	41,218	44,911
Warren	1,106	1,386	1,510
Washington	596	747	814
Watauga	3,222	4,036	4,398
Wayne	6,699	8,393	9,145
Wilkes	4,100	5,136	5,597
Wilson	4,673	5,854	6,379
Yadkin	1,859	2,329	2,538
Yancey	869	1,088	1,186

Appendix Table A-2. Estimated Changes in Gross County Products If Medicaid Expands (millions)

	2020	2021	2022	2020-22
Alamance	$40	$57	$63	$159
Alexander	$2	$3	$3	$7
Alleghany	$2	$3	$3	$8
Anson	$2	$3	$3	$7
Ashe	$3	$5	$5	$13
Avery	$2	$3	$3	$8
Beaufort	$5	$7	$8	$19
Bertie	$1	$2	$2	$5
Bladen	$3	$4	$4	$11
Brunswick	$11	$15	$17	$43
Buncombe	$67	$95	$105	$267
Burke	$19	$26	$29	$74
Cabarrus	$25	$35	$39	$99
Caldwell	$9	$12	$14	$34
Camden	$0	$0	$0	$1
Carteret	$7	$9	$11	$26
Caswell	$1	$2	$2	$5
Catawba	$30	$42	$46	$118
Chatham	$7	$10	$11	$28
Cherokee	$3	$4	$4	$11
Chowan	$1	$2	$2	$5
Clay	$1	$1	$1	$2
Cleveland	$17	$23	$26	$66
Columbus	$8	$11	$12	$31
Craven	$9	$13	$14	$35
Cumberland	$35	$50	$56	$141
Currituck	$0	$1	$1	$2
Dare	$3	$4	$5	$12
Davidson	$19	$26	$29	$74
Davie	$3	$5	$5	$13
Duplin	$5	$7	$8	$21
Durham	$119	$159	$166	$444
Edgecombe	$5	$7	$8	$20
Forsyth	$106	$151	$167	$424
Franklin	$8	$11	$12	$30
Gaston	$41	$58	$65	$164
Gates	$0	$0	$0	$1
Graham	$1	$1	$1	$2
Granville	$7	$10	$11	$27
Greene	$2	$3	$3	$8
Guilford	$171	$243	$268	$683
Halifax	$6	$8	$9	$24
Harnett	$13	$18	$20	$51
Haywood	$5	$7	$8	$20
Henderson	$15	$21	$24	$60
Hertford	$4	$5	$6	$15
Hoke	$3	$4	$4	$11
Hyde	$0	$0	$0	$1
Iredell	$31	$44	$48	$122
Jackson	$9	$13	$15	$37

	2020	2021	2022	2020-22
Johnston	$27	$38	$42	$107
Jones	$1	$1	$1	$3
Lee	$15	$21	$23	$59
Lenoir	$10	$15	$16	$42
Lincoln	$7	$9	$10	$26
McDowell	$4	$6	$7	$17
Macon	$2	$4	$4	$10
Madison	$2	$3	$3	$8
Martin	$3	$5	$5	$13
Mecklenburg	$254	$356	$389	$1,000
Mitchell	$2	$3	$3	$8
Montgomery	$2	$3	$4	$9
Moore	$22	$32	$36	$90
Nash	$15	$21	$23	$59
New Hanover	$48	$69	$76	$193
Northampton	$1	$1	$1	$3
Onslow	$7	$11	$12	$30
Orange	$35	$50	$56	$141
Pamlico	$1	$1	$2	$4
Pasquotank	$4	$5	$6	$14
Pender	$5	$8	$8	$21
Perquimans	$0	$0	$0	$1
Person	$5	$7	$8	$20
Pitt	$28	$41	$46	$115
Polk	$1	$2	$2	$6
Randolph	$24	$34	$37	$95
Richmond	$6	$9	$10	$24
Robeson	$24	$35	$39	$98
Rockingham	$11	$16	$17	$44
Rowan	$19	$26	$29	$74
Rutherford	$9	$12	$14	$35
Sampson	$5	$7	$8	$21
Scotland	$5	$8	$9	$22
Stanly	$9	$13	$14	$36
Stokes	$3	$4	$4	$11
Surry	$12	$17	$19	$49
Swain	$1	$1	$2	$4
Transylvania	$3	$4	$5	$12
Tyrrell	$0	$0	$0	$0
Union	$18	$25	$27	$70
Vance	$7	$10	$11	$29
Wake	$276	$392	$433	$1,101
Warren	$1	$1	$1	$4
Washington	$0	$1	$1	$2
Watauga	$13	$18	$20	$52
Wayne	$19	$28	$31	$78
Wilkes	$7	$10	$11	$28
Wilson	$15	$21	$23	$59
Yadkin	$3	$4	$4	$10
Yancey	$1	$2	$2	$5

Appendix Table A-3. Estimated Changes in County Tax Revenue If Medicaid Expands (1000s)

	2020	2021	2022	2020-22
Alamance	$554	$846	$976	$2,375
Alexander	$46	$69	$78	$194
Alleghany	$27	$42	$49	$118
Anson	$19	$29	$33	$82
Ashe	$57	$89	$104	$251
Avery	$29	$46	$54	$130
Beaufort	$49	$74	$85	$208
Bertie	$22	$33	$38	$93
Bladen	$30	$45	$52	$128
Brunswick	$143	$216	$247	$605
Buncombe	$860	$1,314	$1,519	$3,694
Burke	$291	$447	$520	$1,258
Cabarrus	$477	$726	$833	$2,035
Caldwell	$125	$190	$219	$534
Camden	$5	$7	$8	$20
Carteret	$96	$147	$170	$413
Caswell	$51	$77	$87	$216
Catawba	$346	$516	$585	$1,448
Chatham	$322	$483	$548	$1,353
Cherokee	$32	$51	$60	$143
Chowan	$15	$22	$26	$63
Clay	$10	$16	$19	$46
Cleveland	$210	$323	$374	$907
Columbus	$94	$145	$168	$406
Craven	$91	$139	$160	$390
Cumberland	$304	$470	$548	$1,322
Currituck	$0	-$1	-$3	-$5
Dare	$30	$46	$54	$129
Davidson	$383	$583	$670	$1,636
Davie	$113	$168	$190	$471
Duplin	$77	$119	$138	$334
Durham	$496	$606	$557	$1,659
Edgecombe	$68	$105	$123	$295
Forsyth	$1,196	$1,805	$2,067	$5,067
Franklin	$195	$308	$364	$868
Gaston	$655	$1,020	$1,198	$2,873
Gates	$3	$5	$6	$14
Graham	$10	$16	$19	$44
Granville	$129	$197	$227	$553
Greene	$48	$77	$93	$218
Guilford	$1,802	$2,731	$3,135	$7,668
Halifax	$62	$95	$109	$266
Harnett	$322	$512	$612	$1,446
Haywood	$122	$188	$217	$527
Henderson	$250	$378	$433	$1,061
Hertford	$35	$53	$62	$150
Hoke	$120	$184	$214	$519
Hyde	$2	$3	$4	$10
Iredell	$408	$620	$713	$1,740
Jackson	$105	$159	$181	$445

	2020	2021	2022	2020-22
Johnston	$620	$976	$1,152	$2,749
Jones	$27	$42	$51	$119
Lee	$146	$220	$252	$619
Lenoir	$107	$169	$199	$475
Lincoln	$165	$249	$283	$696
McDowell	$50	$75	$85	$209
Macon	$39	$60	$71	$170
Madison	$32	$49	$57	$138
Martin	$36	$55	$63	$154
Mecklenburg	$2,802	$4,141	$4,646	$11,589
Mitchell	$20	$30	$34	$83
Montgomery	$39	$58	$66	$164
Moore	$295	$449	$518	$1,262
Nash	$174	$264	$303	$740
New Hanover	$630	$952	$1,089	$2,671
Northampton	$17	$26	$29	$72
Onslow	$46	$74	$91	$210
Orange	$888	$1,329	$1,508	$3,724
Pamlico	$18	$27	$31	$75
Pasquotank	$32	$50	$58	$140
Pender	$88	$135	$155	$378
Perquimans	$5	$8	$10	$23
Person	$100	$155	$180	$436
Pitt	$431	$662	$770	$1,863
Polk	$24	$36	$42	$102
Randolph	$415	$635	$733	$1,783
Richmond	$66	$102	$119	$288
Robeson	$316	$497	$588	$1,401
Rockingham	$165	$249	$285	$699
Rowan	$236	$357	$410	$1,002
Rutherford	$107	$163	$189	$459
Sampson	$88	$135	$156	$379
Scotland	$57	$88	$103	$247
Stanly	$142	$219	$255	$615
Stokes	$131	$196	$223	$549
Surry	$249	$390	$457	$1,097
Swain	$9	$13	$14	$36
Transylvania	$46	$70	$82	$198
Tyrrell	$2	$3	$3	$7
Union	$441	$677	$780	$1,897
Vance	$92	$139	$159	$390
Wake	$3,945	$5,956	$6,840	$16,741
Warren	$16	$24	$27	$68
Washington	$5	$7	$8	$20
Watauga	$153	$231	$264	$648
Wayne	$240	$373	$436	$1,050
Wilkes	$120	$181	$208	$509
Wilson	$161	$248	$286	$695
Yadkin	$70	$107	$124	$302
Yancey	$22	$34	$40	$95

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Tab 7

Materials from Proponents

DANIELLA LEVINE CAVA
MIAMI-DADE COUNTY COMMISSIONER
DISTRICT 8

June 21, 2019

The Florida Legislature
Office of Economic and Demographic Research
111 West Madison, Suite 574
Tallahassee, FL 32399-6588

Re: Ballot # 18-16, Medicaid Coverage to Low Income Eligible Adults; Sponsor, Florida Decides Healthcare Inc.

Dear Conference Members:

I have served as a Miami-Dade County Commissioner since 2014. During that time, I have repeatedly voiced strong support for Medicaid expansion in Florida. This includes taking a leadership role in passage of four county resolutions to make this issue a critical County priority for the Florida Legislature.[i]

Medicaid expansion would provide multiple financial benefits to Miami-Dade County (Miami-Dade) and its residents. We have been disproportionately harmed by the state's failure to expand since we have the largest number of uninsured in the state (over 450,000) and the largest number falling into the coverage gap-those with with incomes below poverty (over 107,00). [ii]

Thus Miami-Dade also receives the highest amount of Low Income Pool (LIP) and other safety-net funding in the state and contributes the most funding for county intergovernmental transfers needed to meet state matching requirements.[iii] However, historically this funding has fluctuated and there is no guarantee that what the county contributes to the state match will be re-invested in our community.

The amount of federal dollars that would flow into our county through Medicaid expansion far exceeds the amounts we receive through supplemental funding. It is estimated that expansion would generate about $4.6 billion in new mostly federal revenue to our county providers taking care of low-income residents.[iv]

DANIELLA LEVINE CAVA
MIAMI-DADE COUNTY COMMISSIONER
DISTRICT 8

Medicaid expansion would also dramatically reduce the county's uncompensated care burden. For FY 2016, Miami-Dade's total uncompensated care costs were $686,759,305, including $607,952,387 uncompensated care hospital costs. Jackson Health System, the county's major safety net provider shouldered more than half of this cost.[v]

Other expansion states have experienced significant reductions in uncompensated care costs. One study has suggested that Medicaid expansion cut every dollar that a hospital spent on uncompensated care by 41 cents between 2013-2015.[vi] That could mean millions of dollars of savings for our county.

Miami-Dade is also disproportionately financially impacted by uninsured residents with chronic diseases, particularly those diseases more prevalent in our county. For example, Miami leads the country in new cases of HIV infection. Experience in other expansion states is that people with HIV/AIDS had a 60 percent reduction in hospitalizations for uninsured people who were HIV positive, while non-expansion states had an 8 percent increase over the same period. Further the state could save over a million dollars annually that it is currently paying through the AIDS Drug Assistance Program just for uninsured residents of MD who need anti-retroviral medications. [vii]

Additional millions of dollars of savings would accrue by providing coverage to low income uninsured Miami-Dade residents who have a mental health or substance abuse disorder. They now rely on free or charitable clinics and community mental health centers supported by Miami-Dade taxpayers. Many of these uninsured who go untreated end up needing Baker Act crisis services for which the county must contribute a 25 percent match.[viii]

We would also experience significant savings on hospital care costs for county jail inmates. In 2014, Miami-Dade spent a half million dollars for this care. With expansion, Medicaid reimbursement would be available for low income inmates admitted to a hospital offsite for at least 24 hours. [ix]

There would be positive multiplier effects on our local economy as a result of expansion, including thousands more jobs. The Miami region could see as much as 19,176 new jobs within and outside the health sector. Millions more in revenues would be raised through occupational fees and local sales tax. [x]

Medicaid expansion will also greatly improve access to health care and financial security for thousands of Miami-Dade residents. It will help people stay healthy so they can look for work and stay employed.

DANIELLA LEVINE CAVA
MIAMI-DADE COUNTY COMMISSIONER
DISTRICT 8

All the above-described factors will significantly boost the county's economic outlook. Thank you for this opportunity to share information on the financial benefits of Medicaid expansion for Miami-Dade County. Please let me know if you have questions or need additional information.

Sincerely,

Daniella Levine Cava

Daniella Levine Cava,
Commissioner, Miami-Dade County
District 8

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[i]Resolution supporting Medicaid expansion, 11/8/2018: File No. 182567; Resolution supporting Medicaid expansion, 10/18/2016: File No. 162298. Resolution supporting Medicaid expansion, 9/16/15: File No. 152116; Resolution supporting Medicaid expansion, 12/16/2014: File No. 142798

[ii] Fact Sheets, Who Are the Remining Uninsured, Center on Budget and Policy Priorities, March 21, 2019. Accessed via: https://www.cbpp.org/research/health/fact-sheets-who-are-the-remaining-uninsured

[iii] Harmatz, M, Cassel, C., Medicaid Safety Net Funding Issues: Implications for Miami-Dade County and Low-Income Uninsured Residents, pp. xx Florida Legal Services, January 2016. Accessed via: https://floridalegal.org/s/LIP-Report-Miami-Dade-January-2016.pdf

[iv] Supra at p. x.

[v] Report Regarding Funding Indigent Health Care in Miami-Dade County prepared by Jackson Health System, July 30, 2018. File No. 18171

[vi] Antonisse, R., et al., The Effects of Medicaid Expansion under the ACA: Updated Findings from a Literature Review, p. 10, Kaiser Family Foundation. Accessed via: https://www.kff.org/medicaid/issue-brief/the-effects-of-medicaid-expansion-under-the-aca-updated-findings-from-a-literature-review-march-2018/

[vii] Brennaman, L., Health Coverage Plan Offers Better Health and Economic Outcomes for Miami-Dade County, Opportunity Report, p. 4, Florida CHAIN, April 2016. (copy enclosed)

[viii] Supra at 6.

[ix] Supra at 5.

[x] Ibid.

Tab 8

Materials from Opponents

(None Provided)

Tab 9

Materials from Interested Parties

(None Provided)

Tab 10

Requested Agency Material

Florida Medicaid

Presented to the
Fiscal Impact Estimating Conference

Tom Wallace
Assistant Deputy Secretary for
Medicaid Finance and Data Analytics

June 28, 2019

What is Medicaid?

- Medicaid is a federal program through which states partner with the federal government to provide health care coverage to low income children, families and the disabled.
- Medicaid is a voluntary program – states are not required to have a Medicaid program.
- The federal government establishes basic mandatory program parameters that states must meet in order to participate – and provides additional options that each state can chose to expand their program.
- States develop their unique Medicaid programs based on federal rules – each program must be approved by the Federal Centers for Medicare and Medicaid Services (CMS).

What is Medicaid?

- Jointly financed by state and federal funds.
  - Part of the cost of the program is borne by the federal government and part by the state government.
  - Both partners are obligated to pay their share.

Examples of Federal Share for Various State Medicaid Program Costs (Not Florida Specific)	
Administrative Costs (Expenses, supplies, etc.)	50%
Salaries	50% except for certain specialized categories which are 75%
Technology	90%
Medical Services	FMAP Rate: • Regular State FMAP Rate for most groups • 90% for Family Planning Services • 90% for Affordable Care Act Expansion group, for a limited time

What is the FMAP?

- The Federal Medical Assistance Percentage, or FMAP, is used to calculate the amount of federal share for state Medicaid program expenditures
  - Varies from state-to-state
  - Based on state per capita income
- The FMAP formula is based upon the ratio of the state per capita income to the national per capita income.
- Uses three most recent calendar years for which satisfactory data are available from the Department of Commerce, Bureau of Economic Analysis.
  - The lower the state's average per capita income, the more FMAP and vise versa.
  - All states receive at least 50% FMAP.

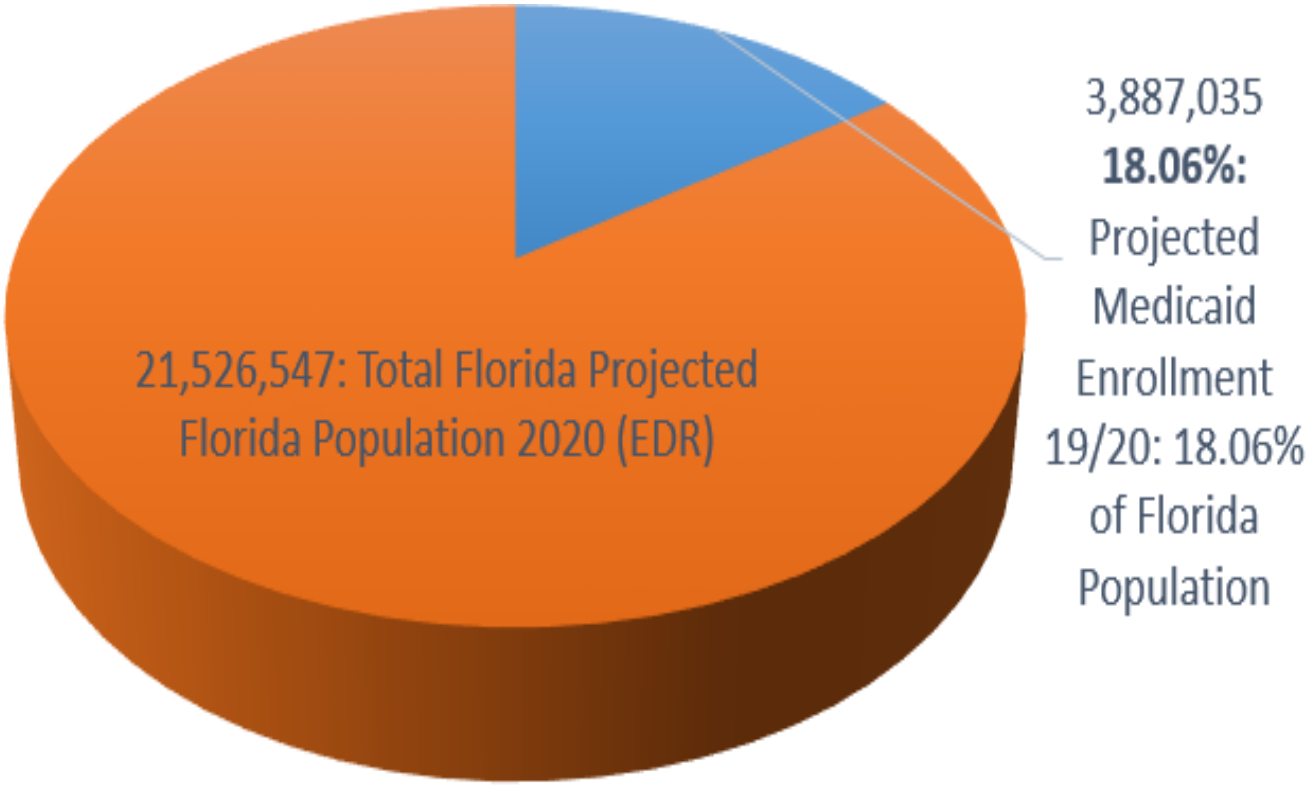
Federal Medicaid Mandatory and Optional Groups and Services

- The federal government identifies “Mandatory” groups and services a state program MUST cover:
  - Groups: Categories of people covered (children, pregnant women, etc.)
  - Services: Categories of medical care covered (physician services, hospital services, etc.)
- The federal government also identifies “Optional” groups and services that a state program can CHOOSE to cover

About Florida Medicaid

- Florida Medicaid:
  - 3.9 million recipients
    - Third largest in nation
  - $28 billion budget
    - Fifth largest in nation
- Florida FMAP:
  - 61.1% federal funding
  - 38.9% state funding
- Florida Delivery System:
  - Most people in the Florida Medicaid program receive their services through a managed care plan
  - The Agency pays the plan a capitated per member per month rate for each recipient enrolled.

18% of Floridians Enrolled in Medicaid

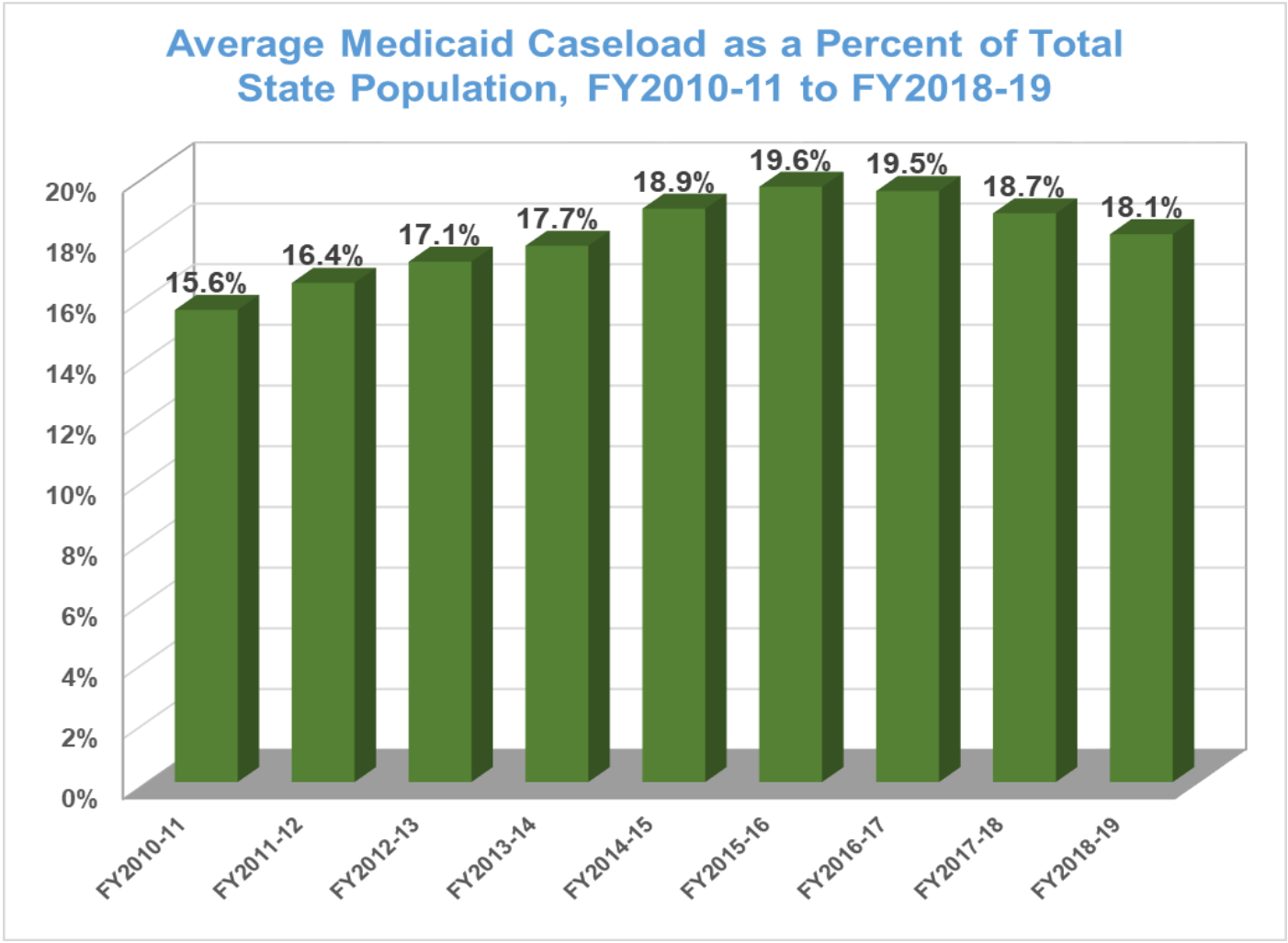


Population, Medicaid Enrollment, and Medicaid as % of Total Population, 2018

State	Total Population (7/1/2018)	Medicaid Enrollment (12/1/2018)	Medicaid as % of Total Population
United States	**327,167,434**	**66,350,839**	**20.3%**
California	39,557,045	10,625,303	26.9%
New York	19,542,209	5,881,178	30.1%
Florida	**21,299,325**	**3,981,126**	**18.7%**
Texas	28,701,845	3,701,865	12.9%
Pennsylvania	12,807,060	2,770,326	21.6%

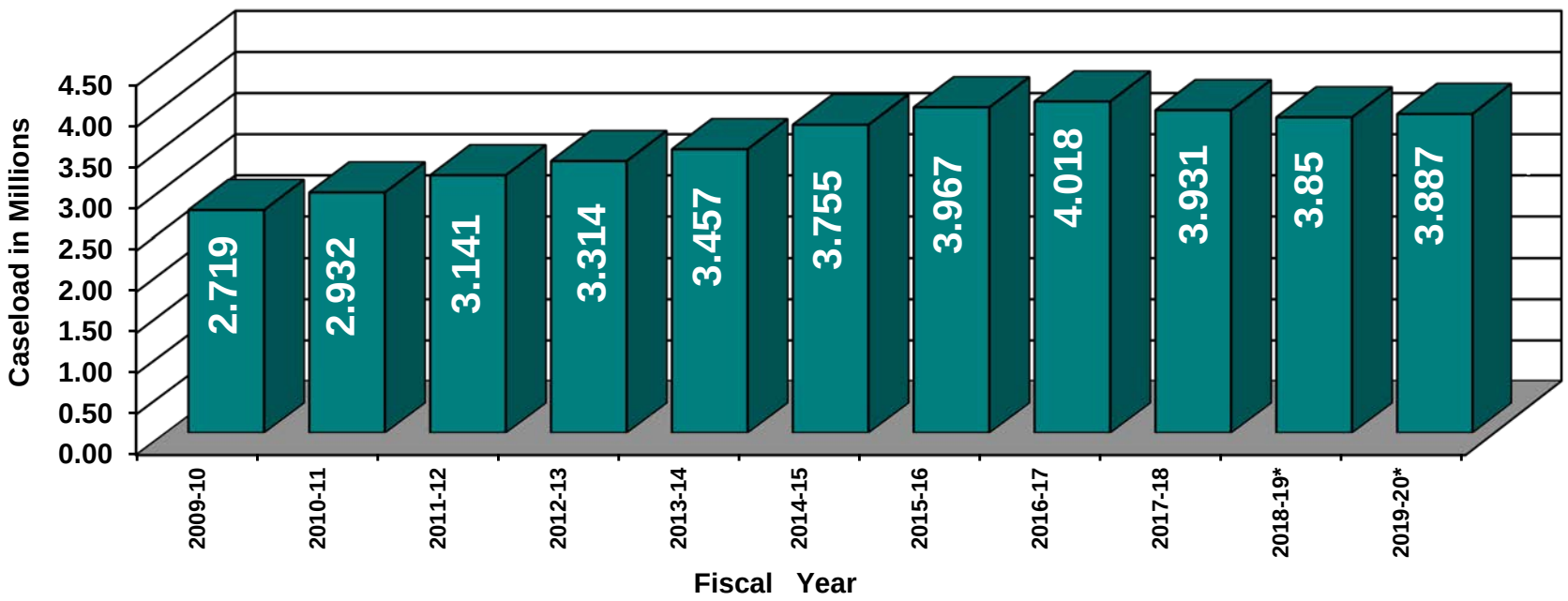
Source: U.S. Census Bureau, 2010-2018 Population Estimates; CMS Monthly Medicaid Enrollment Reports, December 1, 2018

Average Medicaid Caseload as a Percent of Total State Population, FY2010-11 to FY2018-19



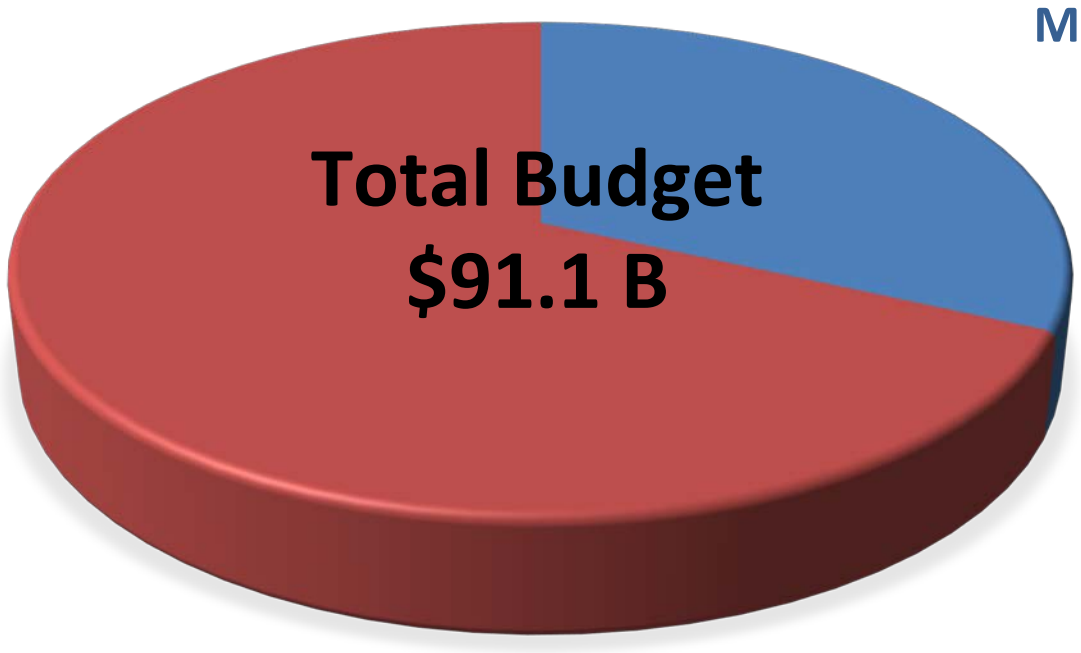
Source: Medicaid and GR Expenditure Reports, Bureau of Medicaid Finance; U.S. Census Bureau, 2010-2018 Population Estimates

Growth in Medicaid
Average Monthly Caseload



Source: Medicaid Services Eligibility Subsystem Reports.
*FY 2018-19, 2019-20 February 2019 Caseload Social Services Estimating Conference

Fiscal Year 2019-2020
Total State Budget
Compared to Medicaid Appropriations



MEDICAID
31%
$28.4B

OTHER
69%
$62.7B

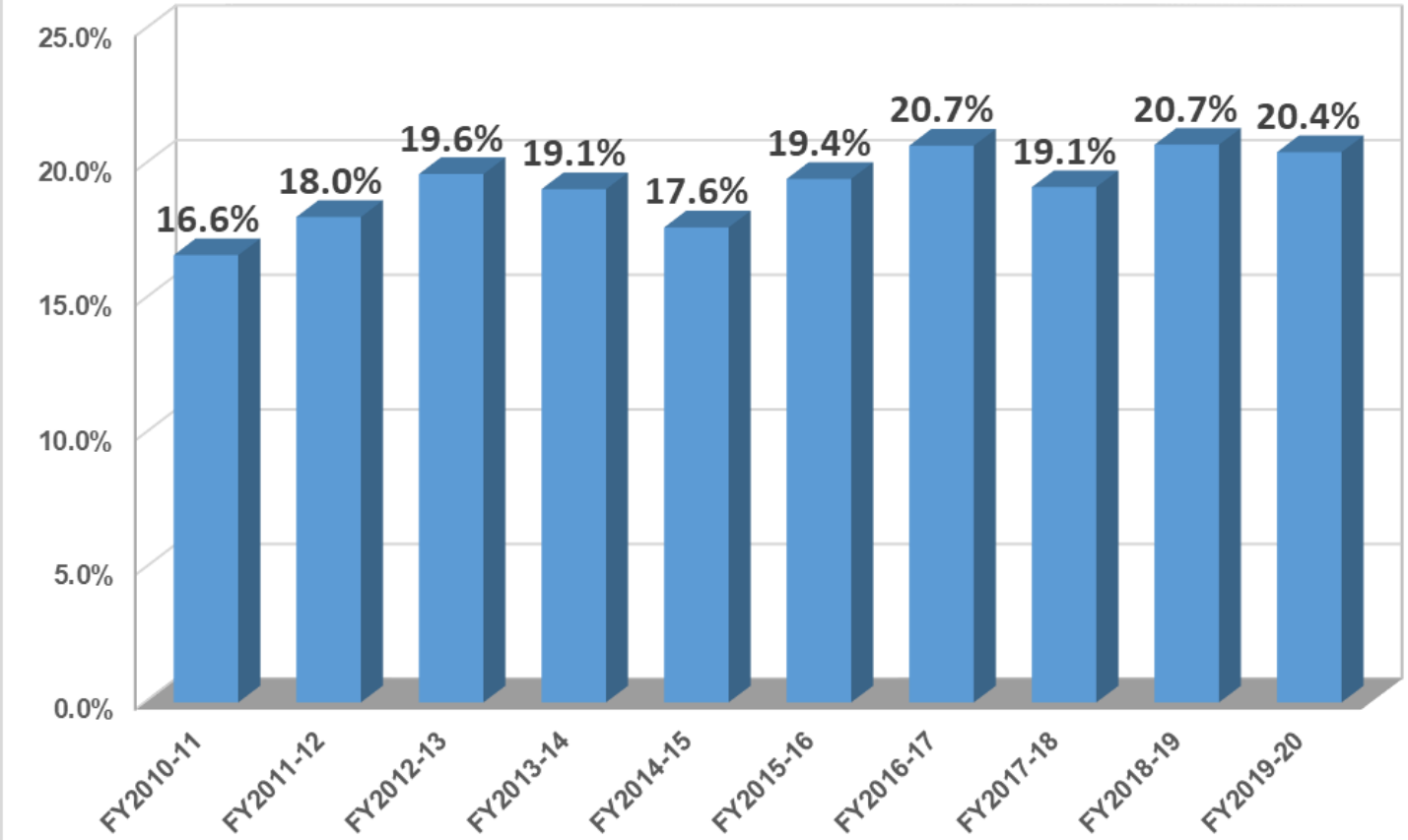
Source:
2019-20 GAA

Per Capita Medicaid Expenditures by State (per Total Population) for the Top Overall Medicaid Spenders, 2017

State	Total Medicaid Expenditures	Per Capita Medicaid Spending	Per Capita Spending Rank
United States	**$576,638,219,100**	**$1,770**	**--**
New York	$77,822,213,820	$3,921	2
Pennsylvania	$28,279,207,441	$2,208	12
California	$83,033,300,314	$2,100	15
Texas	$36,344,383,885	$1,284	37
Florida	$23,281,486,557	**$1,109**	**44**

Source: Kaiser Family Foundation Medicaid Expenditures by State, FY 2017; U.S. Census Bureau, 2010-2018 Population Estimates

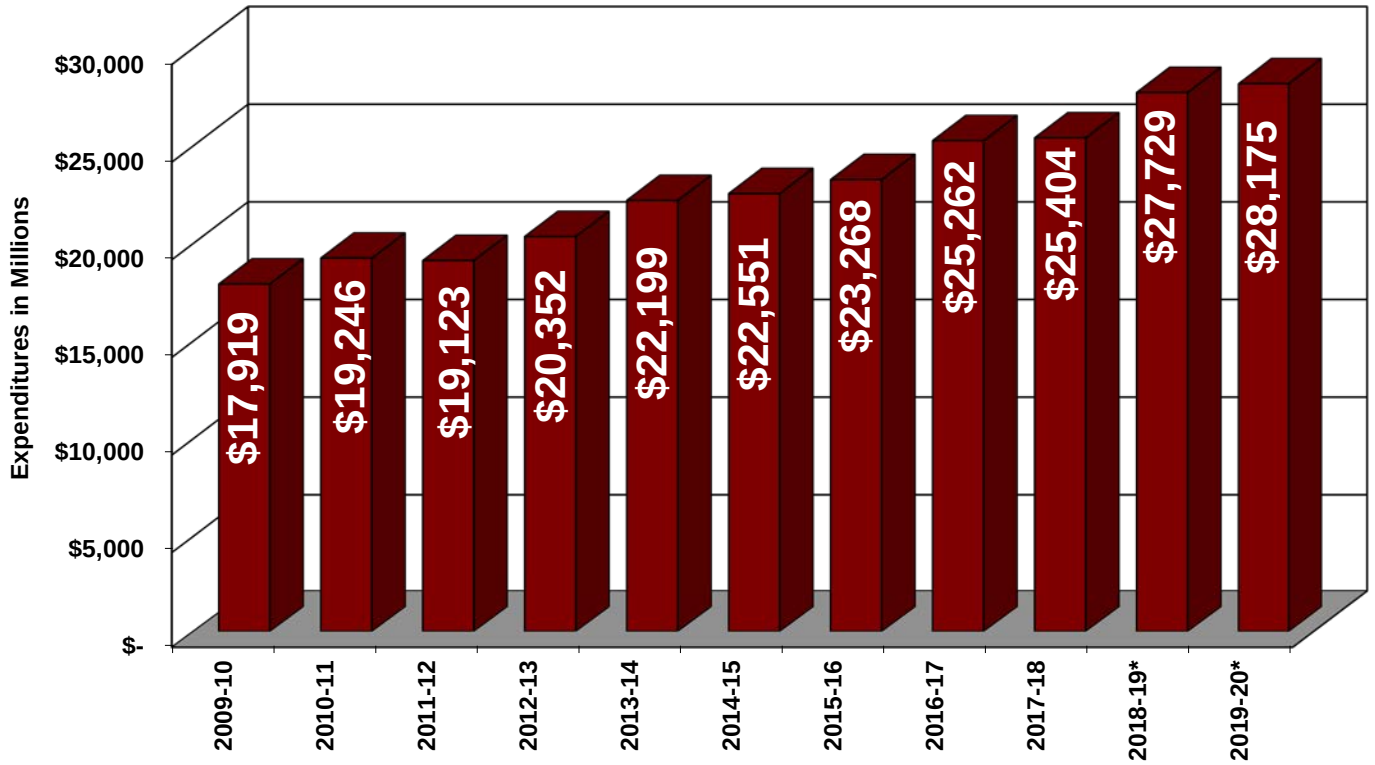
Annual Medicaid GR as a Percent of Total State GR, FY2010-11 to FY2019-20



Source: Medicaid Services Budget Forecasting System Reports.

***FY 2018-19, 2019-20 March 2019 Social Services Estimating Conference**.

Growth In Medicaid Service Expenditures



Source: Medicaid Services Budget Forecasting System Reports.
***FY 2018-19, 2019-20 March 2019 Social Services Estimating Conference.**

Florida Medicaid Eligibility

- To be eligible for Florida Medicaid services, you must be:

  (1) In a mandatory or optional group

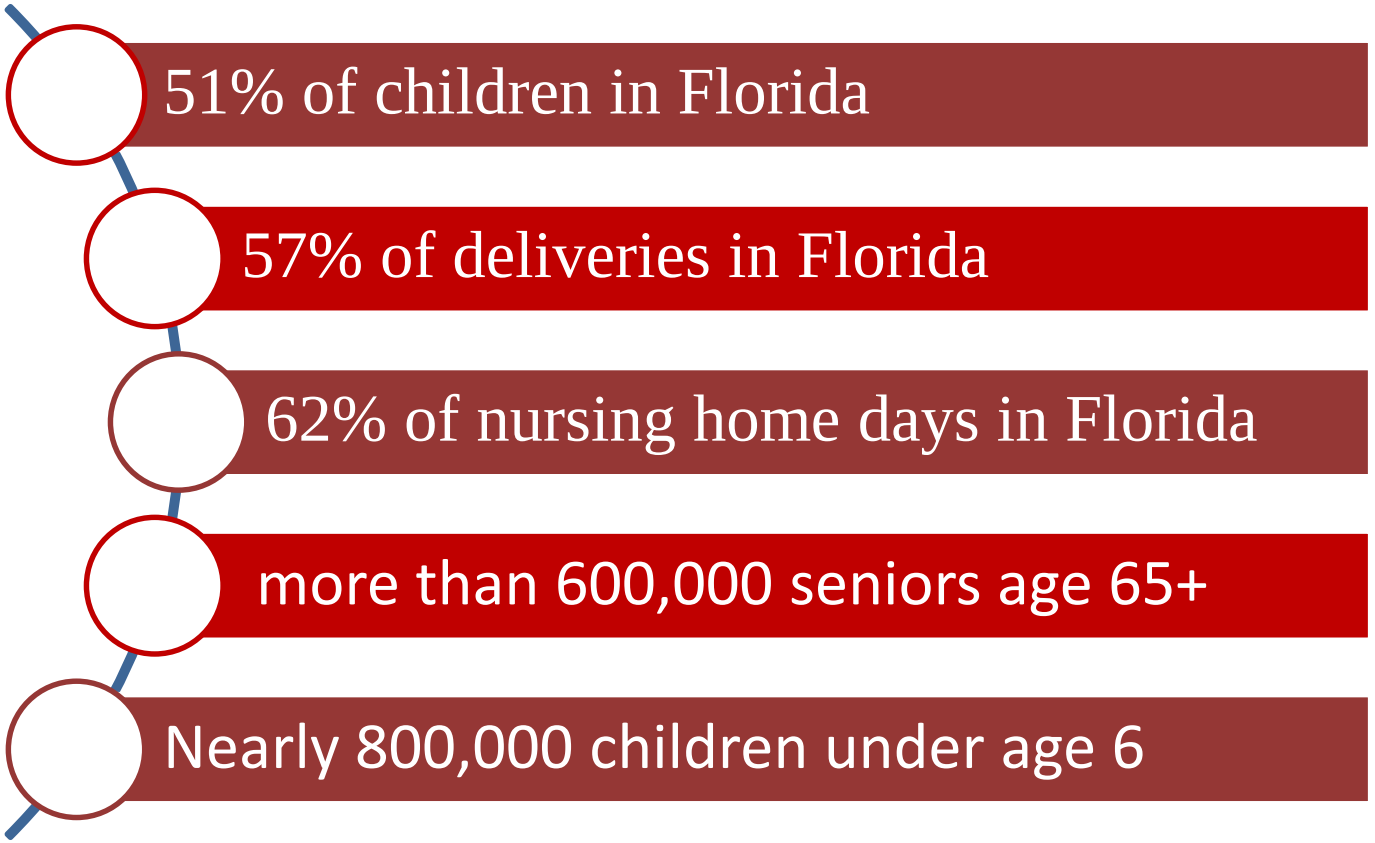
  (2) Meet financial requirements (have income and assets less than established thresholds)

  (3) Meet technical requirements (residency, have SS#, etc.)
- Florida covers all federal mandatory groups, and has chosen to cover some optional groups.
- Florida covers parents and 19-20 yr. at low-income levels only.
- Florida does **not currently cover non-pregnant, non-disabled single childless adults at any income level.**
- If you are not in a covered group, you cannot receive Florida Medicaid regardless of your income.

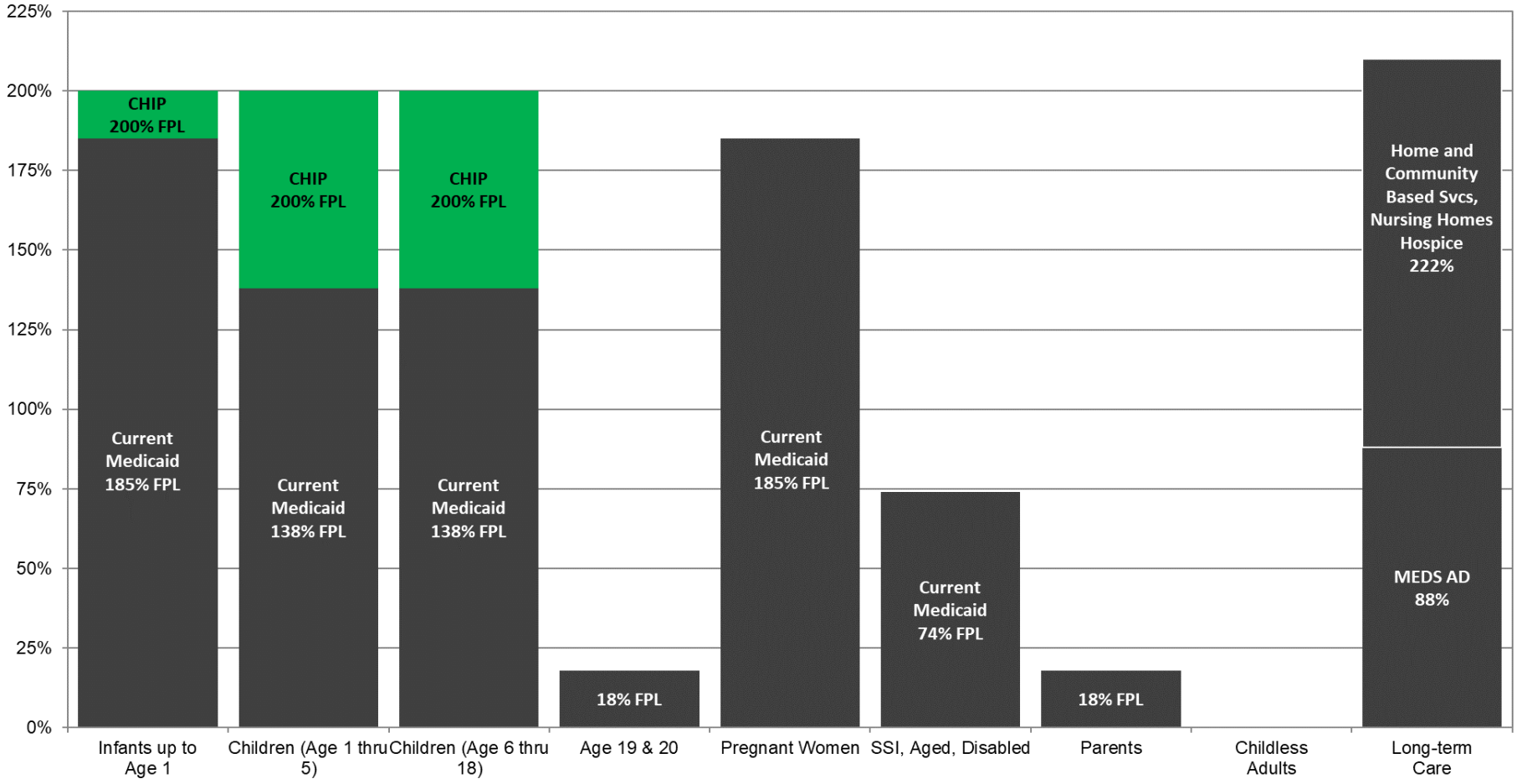
Florida Medicaid:
Optional Eligibility Groups

- The Florida Medicaid program includes the following optional eligibility groups:
  - Medically Needy
  - Breast and Cervical Cancer
  - Children under 1 - Medicaid Expansion under title XXI (185-200% FPL)
  - Children 19 and 20 year olds
  - MEDS-AD (Authorized under 1115 waiver)
  - Family Planning Waiver (Authorized under 1115 waiver)
  - Lawfully residing children during their first 5 years of residence.

Florida Medicaid Covers:



Florida Medicaid Groups Today



Florida Medicaid Provider Reimbursement

- Florida Medicaid reimburses providers either:
  - Through the fee-for-service system
    - Payments are made directly to individual providers by the state Medicaid program.
    - Providers do not bear any financial risk for their patients.
  - Through the managed care delivery system:
    - Health plans paid through a capitated arrangement.
    - Under managed care, the health care organization/ health plan may be “at risk”
    - Health plans have the flexibility to negotiate mutually agreed upon reimbursement rates with their network providers.
    - Health plans are responsible for making payments to their network providers.
  - On average, practitioners are reimbursed 68% of their cost through the managed care plans, and approximately 60% of their costs through the fee-for-service system

Florida Statewide Medicaid Managed Care

- Most Medicaid recipients are required to enroll with a Medicaid Managed Care Plan through the Statewide Medicaid Managed Care Program (SMMC).
  - Limited exceptions are made, mostly for Florida Medicaid recipients with limited eligibility. These recipient either have access to a limited set of services or have time limited eligibility
- Currently, the SMMC program has two key components:
  - Integrated Managed Medical Assistance (MMA) and Long-Term Care (LTC), and
  - Dental

SMMC: Capitation Rates

- Plans are paid a capitation rate for each recipient enrolled in their plan.
  - A capitation rate is the *per-member, per-month (PMPM) amount*, including any *adjustments*, that is paid by the Agency to a Managed Care Plan for *each* Medicaid recipient enrolled under a Contract for the provision of Medicaid services during the payment period.
  - Rates paid to the plans must be certified by an actuary and be "Actuarially Sound"
  - The capitation rate is paid regardless of the level of claims of the recipient.
- Plans are "at risk" because their costs may exceed the total capitated payments.

Federal Authority: Types of Waivers

- Section 1115 Research and Demonstration Waiver
- Section 1915(b) Managed Care Waiver
- Section 1915(c) Home and Community-Based Services Waiver
- Concurrent Section 1915(b) and 1915(c) Waivers

Federal Authority: 1115 Research & Demonstration Waivers

- **Commonly known as "Demonstration Waivers"**
- **Purpose:**
  - Give states additional flexibility to design and improve their programs to demonstrate and evaluate state-specific policy approaches to better serving Medicaid populations.
  - Experimental, Pilot or Demonstration Projects:
    - States Commit to a Policy Experiment that must be formally evaluated.

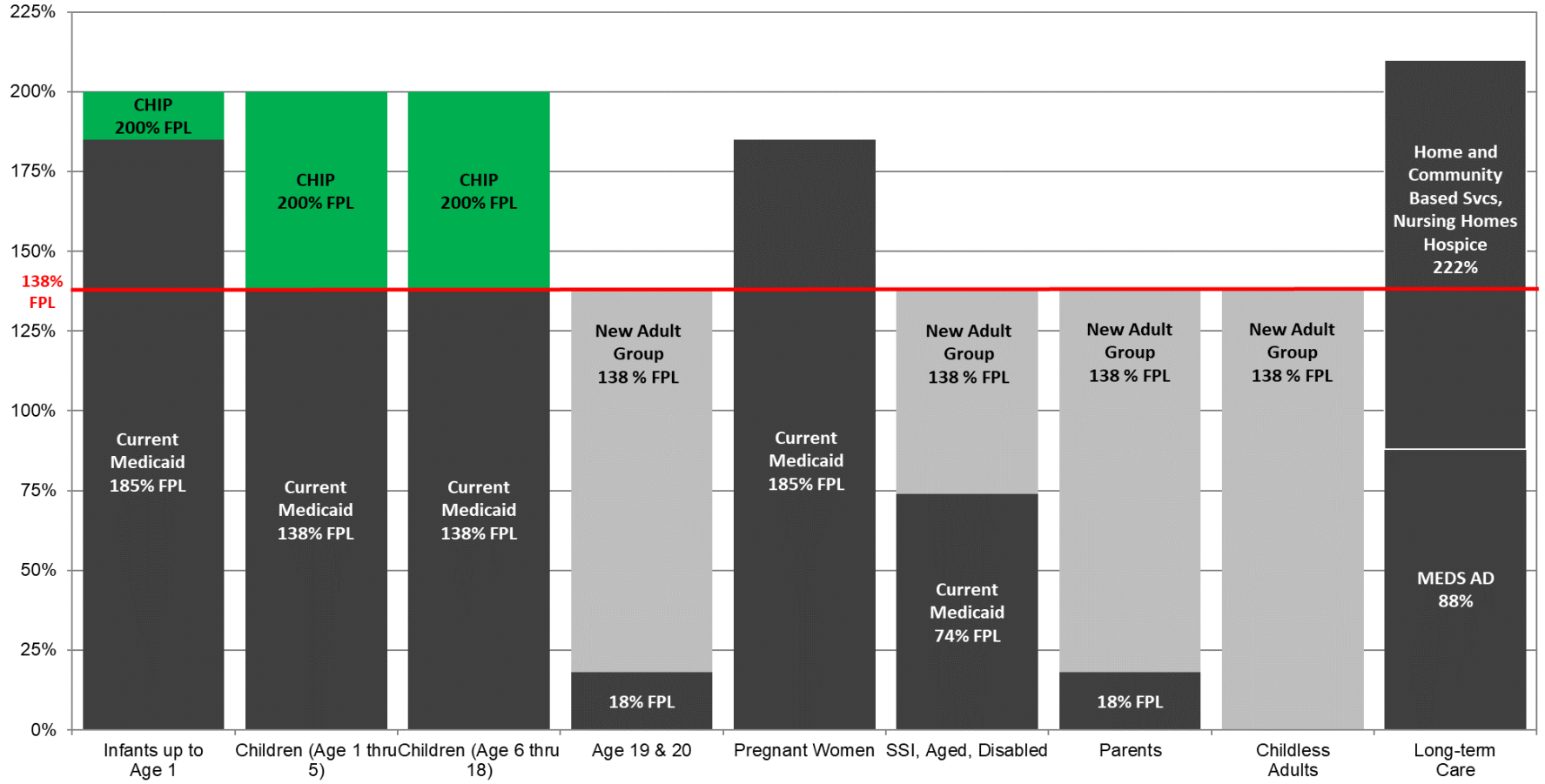
Florida's Largest 1115 Waiver		
Name	**Total Enrolled**	
Managed Medical Assistance Waiver	MMA Program	2,965,432
	Dental Program	3,097,633

Federal Authority: 1915(c) Waivers

- **Commonly Known as "Home and Community Based Services Waivers"**
  - **Purpose:** allow state Medicaid programs to cover services traditionally viewed as "long-term care" and provide them in a community setting to individuals instead of nursing home, hospital, or Intermediate Care Facilities for the Developmentally Disabled (ICF/DD).
  - Under 1915(c) waivers, state can established a fixed number of slots to limit program enrollment based on funding, etc.

Florida's Largest 1915(c) HCBS Waivers		
Name	**Total Enrolled**	**Waitlist**
Long-Term Care Managed Care	~ 110,000	~ 57,000
iBudget	~ 34,000	~ 22,000

New Adult Group Included in Proposed Amendment



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