Reports and Research

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Issue Brief
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The COMMONWEALTH FUND

Closing the Gap: Past Performance of Health Insurance in Reducing Racial and Ethnic Disparities in Access to Care Could Be an Indication of Future Results

Susan L. Hayes, Pamela Riley, David C. Radley, and Douglas McCarthy

Abstract This historical analysis shows that in the years just prior to the Affordable Care Act's expansion of health insurance coverage, black and Hispanic working-age adults were far more likely than whites to be uninsured, to lack a usual care provider, and to go without needed care because of cost. Among insured adults across all racial and ethnic groups, however, rates of access to a usual provider were much higher, and the proportion of adults going without needed care because of cost was much lower. Disparities between groups were narrower among the insured than the uninsured, even after adjusting for income, age, sex, and health status. With surveys pointing to a decline in uninsured rates among black and Hispanic adults in the past year, particularly in states extending Medicaid eligibility, the ACA's coverage expansions have the potential to reduce, though not eliminate, racial and ethnic disparities in access to care.

The mission of The Commonwealth Fund is to promote a high performance health care system. The Fund carries out this mandate by supporting independent research on health care issues and making grants to improve health care practice and policy. Support for this research was provided by The Commonwealth Fund. The views presented here are those of the authors and not necessarily those of The Commonwealth Fund or its directors, officers, or staff.

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OVERVIEW

Before the Affordable Care Act (ACA) spurred major expansions in health insurance coverage, black and Hispanic working-age adults were far more likely than whites to be uninsured.[1] While these minority groups still have higher uninsured rates than whites, the share of blacks and of Hispanics with coverage increased after the ACA's initial open enrollment period ended in the spring of 2014, with some of the biggest gains occurring in states that expanded eligibility for their Medicaid programs.[2] Early evidence also shows an overall increase in the likelihood of working-age adults with a personal health care provider, and a decrease in the percentage of adults who could not afford to pay their medical bills.[3]

To gauge the narrowing of racial and ethnic disparities in health care access and affordability that could result from insurance coverage expansion, we analyzed historical differences among white, black, and Hispanic adults. We analyzed two measures: not having a usual source of care, and going without needed care because of cost among adults ages 18

to 64 in 2012 and 2013—the two years leading up to major expansions in insurance coverage under the ACA. We looked at differences among the three racial and ethnic groups overall as well as differences by insurance status, taking into account income, age, sex, and health status. (For more information on our approach, see How We Conducted Our Study.)

Our analysis shows that having health insurance indeed reduces racial and ethnic disparities in key measures of health care access and affordability, even after adjusting for income and other factors. Still, even with coverage, Hispanics are less likely than both whites and blacks to have a usual source of care. Having health insurance makes it easier to gain access to and afford care,[4] but insurance alone is unlikely to eliminate differences in access among all groups.

Closing the gaps that remain among the insured will likely require efforts not only to connect Hispanics and other newly insured individuals to health services, but also to ensure that health plans provide enrollees with adequate benefits and that enrollees have protection from steep deductibles and other high out-of-pocket costs. Ensuring equitable access to health care, however, will likely be all the more difficult in the 22 states that, as of February 2015, have declined to expand Medicaid. Moreover, the gains already attained could be reversed if legal challenges succeed in eliminating premium subsidies for low- and middle-income adults in the 34 states with federally run insurance marketplaces.

RESEARCH FINDINGS IN DETAIL

Blacks and Hispanic Adults Less Likely to Have Insurance

Historically, uninsured rates within the working-age population have been much higher for blacks and Hispanics than for whites. In 2013, the year before the ACA's major coverage expansions took effect, more than one of five blacks ages 18 to 64 (22%) and one of three Hispanics (33%) did not have health insurance, compared with one of seven whites (14%) (Exhibit 1).

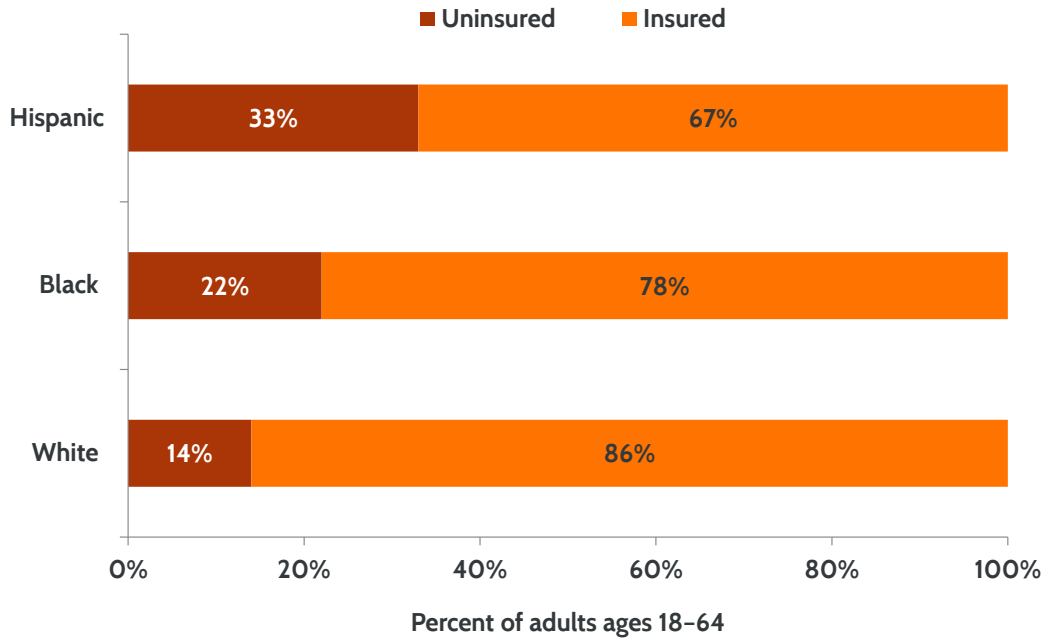
Before the ACA's coverage expansions, uninsured rates were also highest among adults with low incomes. And black and Hispanic adults are disproportionately more likely than whites to have low incomes. In 2013, among adults ages 18 to 64, nearly half of Hispanics and of blacks had incomes below 200 percent of poverty, compared with less than one-quarter of whites.[5]

Blacks and Hispanics More Likely to Lack Usual Source of Care and Go Without Care Because of Cost

Having a usual source of care—one or more people identified as one's personal doctor or health care provider—has been shown to be an important link to primary and preventive care services and better health outcomes.[6] Yet in 2012–13, more than one-quarter of black adults ages 18 to 64 (27%) and more than two-fifths of Hispanics (43%) reported not having a usual source of care, compared with just over one-fifth of whites (21%).

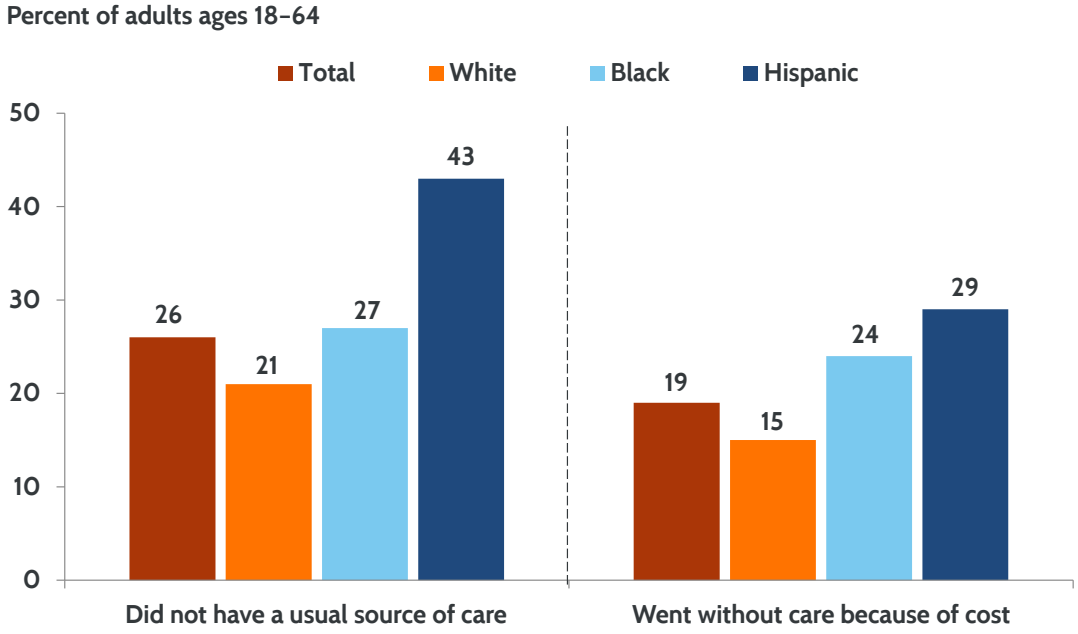
Black and Hispanic working-age adults also reported a time in the past year when they could not see a health care provider when needed because of cost at rates one-and-a-half to nearly two times as high as whites (Exhibit 2).

Exhibit 1. Uninsured Rates for Blacks and Hispanics Are One-and-a-Half to Two Times Higher Than for Whites (2013)



Notes: Black and white refer to black and white non-Hispanic populations. Hispanics may identify as any race.
Source: U.S Census Bureau, Community Population Survey, Annual Social and Economic Supplement (CPS ASEC), collected in 2014.

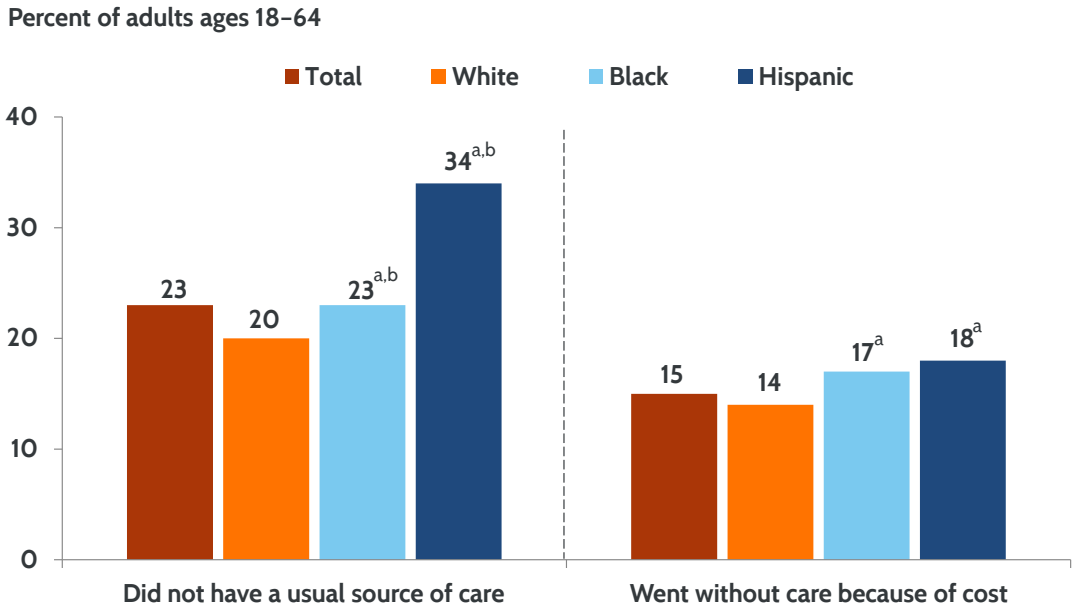
Exhibit 2. Blacks and Hispanics Are More Likely Than Whites to Lack a Usual Source of Care and Go Without Care Because of Cost (2012–13)



Notes: Black and white refer to black and white non-Hispanic populations. Hispanics may identify as any race.
Source: 2012 and 2013 Behavioral Risk Factor Surveillance Survey (BRFSS).

After we adjusted for respondents' income, age, sex, and health status, the gaps between white and minority adults on these two measures of health care access narrowed. However, the disparities persisted (Exhibit 3).

Exhibit 3. Disparities in Health Care Access by Race or Ethnicity Persist Even After Accounting for Income and Other Factors (2012–13)



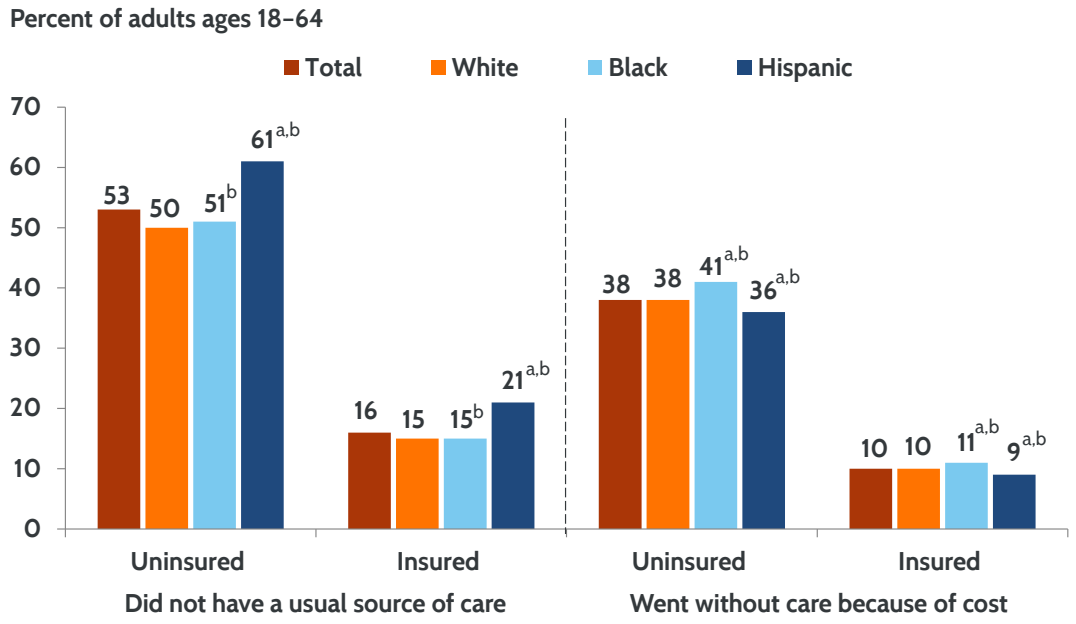
Notes: Black and white refer to black and white non-Hispanic populations. Hispanics may identify as any race. Adjusted means controlled for respondents' age, sex, health status, and income. Differences are statistically significant at the 0.05 level: (a) minority population compared with white; (b) black compared with Hispanic.
Source: 2012 and 2013 Behavioral Risk Factor Surveillance Survey (BRFSS).

Insurance Dramatically Improves Access to Care and Reduces Racial and Ethnic Disparities

We also measured the independent effect of insurance on disparities after adjusting for income, age, sex, and health status. Our results indicate that by itself, insurance had a large impact on whether working-age adults had a usual source of care and could afford care when needed in 2012–13. Within all racial and ethnic groups, uninsured adults reported not having a usual source of care and going without care because of cost at rates roughly three to four times higher than among insured adults.

Disparities between racial and ethnic groups were narrower among individuals with insurance compared to those without. However, despite being less connected to a usual care provider, Hispanics reported a lower rate of forgone care than whites and blacks (Exhibit 4).

Exhibit 4. Insurance Dramatically Improves Access to Care and Reduces Racial and Ethnic Disparities, Even After Accounting for Income and Other Factors (2012–13)



Notes: Black and white refer to black and white non-Hispanic populations. Hispanics may identify as any race. Adjusted means controlled for respondents' age, sex, health status, and income. Differences are statistically significant at the 0.05 level: (a) minority population compared with white; (b) black compared with Hispanic.
Source: 2012 and 2013 Behavioral Risk Factor Surveillance Survey (BRFSS).

POLICY IMPLICATIONS

Our analysis shows that while health insurance may not be the great equalizer, it does help reduce inequity. While black and Hispanic working-age adults faced much greater barriers to gaining access to and affording health care than their white counterparts in 2012–13, we found smaller differences among those with insurance coverage, even after we adjusted for income, age, sex, and health status.

These results highlight the potential for the ACA's major coverage expansions to improve access to a usual care provider among millions of black and Hispanic Americans, and reduce the likelihood that they will go without care because of cost. Gains in access may already be under way, as several key surveys have recorded a drop in the share of working-age blacks and Hispanics who were uninsured in 2014 compared with 2013.[7]

However, our findings also suggest that insurance coverage alone will not eliminate disparities in health care access. In the two years before the ACA's major coverage expansions, even insured Hispanic adults were more likely than insured white and black adults to lack a usual source of care.

Previous expansions of insurance coverage support the implications of our findings for the ACA's reforms. After Massachusetts achieved near-universal coverage, for example, the share of Hispanic adults with a personal provider rose—but still remained lower than the share of white adults with a personal provider.[8]

Historically, black and Hispanic adults also have been much more likely than whites to lack health insurance and to live in poverty, which puts these groups at risk of persistent health inequities. Even after insurance levels the playing field, other factors remain, including deep-seated historical inequities and pervasive cultural barriers, which the health care system alone cannot address. The slightly lower rates of forgone care because of cost among both uninsured and insured Hispanics

compared with blacks and whites, for example, could reflect different cultural perceptions as to when a doctor's visit is needed.[9]

Gaps in the ACA's coverage expansions—and differences in Medicaid expansion across states—also are leaving millions of very-low-income adults uninsured. The Commonwealth Fund Affordable Care Act Tracking Survey, conducted after the first open enrollment period, found the uninsured rate among Latinos statistically unchanged in states that had not expanded Medicaid.[10]

Uninsured blacks with incomes that would make them eligible for Medicaid under the law are more likely to live in the 22 states that have not yet chosen to expand their Medicaid programs.[11] What's more, several states with some of the largest black or Hispanic populations—Florida, Georgia, North Carolina, Texas, and Virginia—are also among the 34 states relying on the federal government to run their health insurance marketplace. This month, the Supreme Court heard oral arguments in *King v. Burwell,* a lawsuit challenging the legality of providing federal subsidies to low- and middle-income people who buy coverage in federally facilitated marketplaces. A ruling for the plaintiffs could put affordable coverage options at risk for large numbers of black and Hispanic adults.[12]

Despite the limitations of the ACA, maximizing its potential to narrow disparities in access to care among minority adults is important. Targeted culturally and linguistically appropriate programs that strive to ensure that coverage leads to better access to care could help. One example is the Centers for Medicare and Medicaid Services' Coverage to Care initiative, which offers outreach tools in Spanish and English to help newly insured people connect to the health care system and take full advantage of primary and preventive services.[13]

Ensuring that newly acquired coverage comes with adequate benefits and financial protection is also important. The ACA requires individual and small-group plans to cover essential health benefits, sets annual limits on out-of-pocket spending, and offers cost-sharing subsidies to people with low incomes who purchase silver-level plans in the marketplaces. However, the growing trend toward higher deductibles, copayments, and coinsurance puts even insured adults—especially those with low or moderate income—at risk of forgoing needed care because of cost.[14]

While insurance coverage holds tremendous potential to reduce disparities in access to care among blacks and Hispanics, much work needs to be done to ensure that coverage translates into improved access to care among these adults. Existing inequities suggest the need for additional efforts to maximize the contribution of insurance coverage to achieving equitable access to health care for all.

HOW WE CONDUCTED OUR STUDY

This brief draws on the 2012–2013 Behavioral Risk Factor Surveillance System (BRFSS), an annual survey conducted by the Centers for Disease Control and Prevention in partnership with state governments. The surveys included landline and cellular telephone interviews with more than 400,000 adults age 18 and older across all 50 states. In performing our analysis, we combined two years of data to ensure an adequate sample size in each of the socioeconomic strata, including income, race and ethnicity, and insurance status. We restricted our analysis to adults under age 65.

BRFSS asks adults whether they did not visit a doctor when needed within the previous 12 months because of costs, and whether they have one or more than one person they think of as their personal doctor or health care provider.

Our analysis classifies respondents' socioeconomic (SES) characteristics as follows:

- Race/ethnicity: white (non-Hispanic), black (non-Hispanic), or Hispanic (any race).
- Income in three income groups:
    1. Low income: below 200 percent of the federal poverty level (income in 2012 of less than $22,340 if single, or less than $46,100 for a family of four).
    2. Middle income: 200 percent to 399 percent of poverty (income in 2012 of $22,340 up to $44,680 if single, or $46,100 to $92,200 for a family of four).
    3. Higher income: 400 percent of poverty or higher (income in 2012 at or above $44,680 if single, or $92,200 for a family of four).
- Insurance status: insured or not at the time of the questionnaire.

Exhibit 2 reports unadjusted point estimates, stratified by race/ethnicity. Exhibits 3 and 4 report adjusted means, to account for differences in respondents' age, sex, income, and health status. We adjusted estimates using survey-design adjusted logistic regressions in Stata (v.12.1).

Unadjusted point estimates were still subject to uncertainty because of the sample design. Each estimate has survey design–adjusted 95 percent confidence intervals of about 1 to 2 percentage points. Statistical significance associated with SES-adjusted point estimates is noted in Exhibits 3 and 4.

NOTES

[1] Authors' analysis of data from the Current Population Survey, prepared using the online CPS Table Creator tool. See also S. R. Collins, P. W. Rasmussen, M. M. Doty, and S. Beutel, *The Rise in Health Care Coverage and Affordability Since Health Reform Took Effect—Findings from the Commonwealth Fund Biennial Health Insurance Survey, 2014* (New York: The Commonwealth Fund, Jan. 2015); S. R. Collins and P. W. Rasmussen, "New Federal Surveys Show Declines in Number of Uninsured Americans in Early 2014," *The Commonwealth Fund Blog,* Sept. 16, 2014; B. D. Sommers, T. Musco, K. Finegold et al., "Health Reform and Changes in Health Insurance Coverage in 2014," *New England Journal of Medicine,* Aug. 28, 2014 371(9):867–74; M. M. Doty, P. W. Rasmussen, and S. R. Collins, *Catching Up: Latino Health Coverage Gains and Challenges Under the Affordable Care Act—Results from the Commonwealth Fund Tracking Survey* (New York: The Commonwealth Fund, Sept. 2014); and S. R. Collins, P. W. Rasmussen, and M. M. Doty, *Gaining Ground: Americans' Health Insurance Coverage and Access to Care After the Affordable Care Act's First Open Enrollment Period* (New York: The Commonwealth Fund, July 2014).

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[3] Collins, Rasmussen, Doty et al., *Rise in Health Care Coverage and Affordability,* 2015; and Sommers, Musco, Finegold et al., "Health Reform and Changes in Health Insurance Coverage," 2014.

[4] National Research Council, *America's Uninsured Crisis: Consequences for Health and Health Care* (Washington, D.C.: National Academies Press, 2009).

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[8] J. Maxwell, D. E. Cortes, K. L. Schneider et al., "Massachusetts' Health Care Reform Increased Access to Care for Hispanics, But Disparities Remain," *Health Affairs,* Aug. 2011 30(8):1451–60.

[9] A. Machado, "Why Many Latinos Dread Going to the Doctor: How Cultural Barriers Can Be More Important Than Income," *The Atlantic,* May 7, 2014; B. O'Hara and K. Caswell, *Health Status, Health Insurance, and Medical Services Utilization: 2010* (Washington, D.C.: Current Population Reports, U.S. Census Bureau, July 2013); and G. Livingston, S. Minushkin, and D. Cohn, *Hispanics and Health Care in the United States: Access, Information and Knowledge* (Washington, D.C., and Princeton, N.J.: Pew Hispanic Center and Robert Wood Johnson Foundation, Aug. 2008).

[10] Doty, Rasmussen, and Collins, *Catching Up: Latino Health Coverage Gains,* 2014; and Collins, Rasmussen, and Doty, *Gaining Ground: Americans' Health Insurance Coverage and Access,* 2014.

[11] L. Clemans-Cope, M. Buettgens, and H. Recht, *Racial/Ethnic Differences in Uninsurance Rates Under the ACA: Are Differences in Uninsurance Rates Projected to Narrow?* (Washington, D.C.: The Urban Institute, Dec. 2014); and Kaiser Commission on Medicaid and the Uninsured, *The Impact of Current State Medicaid Expansion Decisions on Coverage by Race and Ethnicity* (Washington, D.C.: Kaiser Family Foundation, July 2013).

[12] D. Blumenthal and S. R. Collins, "The Supreme Court Decides to Hear *King v. Burwell*: What Are the Implications?" *The Commonwealth Fund Blog,* Nov. 7, 2014.

[13] Centers for Medicare and Medicaid Services (CMS), press release: "CMS Initiative Helps People Make the Most of Their New Health Coverage," June 16, 2014.

[14] S. R. Collins, P. W. Rasmussen, M. M. Doty, and S. Beutel, *Too High a Price: Out-of-Pocket Health Care Costs in the United States—Findings from the Commonwealth Fund Health Care Affordability Tracking Survey, September–October 2014* (New York: The Commonwealth Fund, Nov. 2014); S. R. Collins, D. C. Radley, C. Schoen, and S. Beutel, *National Trends in the Cost of Employer Health Insurance Coverage, 2003–2013* (New York: The Commonwealth Fund, Dec. 2014); and C. Schoen, D. C. Radley, and S. R. Collins, *State Trends in the Cost of Employer Health Insurance Coverage, 2003–2013* (New York: The Commonwealth Fund, Jan. 2015).

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United States Government Accountability Office

Report to Congressional Requesters

March 2015

HEALTHCARE.GOV

CMS Has Taken Steps to Address Problems, but Needs to Further Implement Systems Development Best Practices

GAO-15-238

GAO Highlights

Highlights of GAO-15-238, a report to congressional requesters

March 2015

HEALTHCARE.GOV

CMS Has Taken Steps to Address Problems, but Needs to Further Implement Systems Development Best Practices

Why GAO Did This Study

The Patient Protection and Affordable Care Act required the establishment of health insurance marketplaces to assist individuals in obtaining health insurance coverage. CMS, a component of HHS, was responsible for establishing a federally facilitated marketplace for states that elected not to establish their own. This marketplace is supported by an array of IT systems, which are to facilitate enrollment in qualifying health plans. These include Healthcare.gov, the website that serves as the consumer portal to the marketplace, as well as systems for establishing user accounts, verifying eligibility, and facilitating enrollment.

GAO was asked to review CMS's management of the development of IT systems supporting the federal marketplace. Its objectives were to (1) describe problems encountered in developing and deploying systems supporting Healthcare.gov and determine the status of efforts to address deficiencies and (2) determine the extent to which CMS applied disciplined practices for managing and overseeing the development effort, and the extent to which HHS and OMB provided oversight. To do this, GAO reviewed program documentation and interviewed relevant CMS and other officials.

What GAO Recommends

GAO is recommending that CMS take seven actions to implement improvements in its requirements management, system testing, and project oversight, and that HHS improve its oversight of the Healthcare.gov effort. HHS concurred with all of the recommendations.

View GAO-15-238. For more information, contact Valerie C. Melvin at (202) 512-6304 or melvinv@gao.gov.

What GAO Found

Several problems with the initial development and deployment of Healthcare.gov and its supporting systems led to consumers encountering widespread performance issues when trying to create accounts and enroll in health plans:

- **Inadequate capacity planning:** The Centers for Medicare & Medicaid Services (CMS) did not plan for adequate capacity to support Healthcare.gov and its supporting systems.
- **Software coding errors:** CMS and its contractors identified errors in the software code for Healthcare.gov and its supporting systems, but did not adequately correct them prior to launch.
- **Lack of functionality:** CMS had not implemented all planned functionality prior to the initial launch of Healthcare.gov and its supporting systems.

Since the initial launch, CMS has taken steps to address these problems, including increasing capacity, requiring additional software quality reviews, and awarding a new contract to complete development and improve the functionality of key systems. After it took these actions, performance issues affecting Healthcare.gov and its supporting systems were significantly reduced.

In addition, CMS did not consistently apply recognized best practices for system development, which contributed to the problems with the initial launch of Healthcare.gov and its supporting systems.

Requirements were not effectively managed: Requirements management helps ensure that a project's plans and work products are aligned with the needs of users. However, CMS did not always ensure that requirements were approved and were linked to source and lower-level requirements. As a result, CMS was hindered in ensuring that expected functionality for the system was delivered.

System testing was inconsistent. Testing is essential for ensuring that a system operates as intended. However, Healthcare.gov and its supporting systems were not fully tested prior to launch, and test documentation was missing key elements such as criteria for determining whether a system passed a test. Thus, CMS's assurance that these systems would perform as intended was limited.

Project oversight was not effective. Oversight includes monitoring a project's progress and taking corrective actions when its performance deviates from what is planned. However, CMS's oversight was limited by an unreliable schedule, lack of estimates of work needed to complete the project, unorganized and outdated project documentation, and inconsistent reviews of project progress.

As it has undertaken further development, CMS has made improvements in some of these areas, by, for example, establishing new requirements management processes and improving test documentation. However, weaknesses remain in its application of requirements, testing, and oversight practices. In addition, the Department of Health and Human Services (HHS) has not provided adequate oversight of the Healthcare.gov initiative through its Office of the Chief Information Officer. The Office of Management and Budget's (OMB) oversight role was limited, and GAO has previously recommended that it improve oversight of IT projects' performance.

Contents

Abbreviations

CALT	Collaborative Application Lifecycle Tool
CHIP	State Children's Health Insurance Program
CIO	Chief Information Officer
CMS	Centers for Medicare & Medicaid Services
DHS	Department of Homeland Security
DSH	Data Services Hub
FFM	Federally Facilitated Marketplace System
HHS	Department of Health and Human Services
IEEE	Institute of Electric and Electronics Engineers, Inc.
IRS	Internal Revenue Service
IT	information technology
ITIRB	Information Technology Investment Review Board
IV&V	independent verification and validation
OCIO	Office of the Chief Information Officer
OMB	Office of Management and Budget
PPACA	Patient Protection and Affordable Care Act
SSA	Social Security Administration
XLC	eXpedited Life Cycle

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March 4, 2015

Congressional Requesters

The Patient Protection and Affordable Care Act (PPACA),[1] signed into law on March 23, 2010, is intended to reform aspects of the private health insurance market and expand the availability and affordability of health care coverage. It requires the establishment of a health insurance marketplace[2] in each state and the District of Columbia to assist individuals and small businesses in comparing, selecting, and enrolling in health plans offered by participating private issuers of qualified health plans.[3]

The Department of Health and Human Services' (HHS) Centers for Medicare & Medicaid Services (CMS) is responsible for overseeing the establishment of these marketplaces, including creating a federally facilitated marketplace for states not establishing their own. CMS was responsible for designing, developing, and implementing the information technology (IT) systems needed to support the federally facilitated marketplace, to include Healthcare.gov—the website that provides a consumer portal to this marketplace—and the related data systems supporting eligibility and enrollment.

The federally facilitated marketplace began accepting applications for enrollment on October 1, 2013. However, individuals attempting to access the systems supporting the marketplace, including Healthcare.gov, encountered numerous problems. In light of these problems, you asked

[1]Pub. L. No. 111-148, 124 Stat. 119 (Mar. 23, 2010), as amended by the Health Care and Education Reconciliation Act of 2010, Pub. L. No. 111-152,124 Stat.1029 (Mar. 30, 2010). In this report, references to PPACA include all amendments made by the Health Care and Education Reconciliation Act.

[2]PPACA requires the establishment of health insurance exchanges—marketplaces where eligible individuals can compare and select among insurance plans offered by participating issuers of health coverage. In this report, we use the term marketplace.

[3]PPACA requires the insurance plans offered under an exchange, known as qualified health plans, to provide a package of essential health benefits—including coverage for specific service categories, such as ambulatory care, prescription drugs, and hospitalization.

us to examine the IT management of the systems supporting the federally facilitated marketplace operated by CMS.

Our objectives for this study were to (1) describe the problems encountered in developing and deploying Healthcare.gov and its supporting systems and determine the status in addressing these deficiencies and (2) determine the extent to which CMS oversaw the development effort and applied disciplined systems development practices to manage requirements and conduct systems testing, as well as the extent to which HHS and the Office of Management and Budget (OMB) provided oversight of the effort.

To address the first objective, we reviewed independent verification and validation (IV&V) reports[4] on the development effort, testimony from CMS officials, and contracting documentation describing problems encountered by users after the launch of Healthcare.gov and when these problems were first identified by CMS and its stakeholders. To determine the status of efforts to address deficiencies, we reviewed data from relevant program documentation, such as system monitoring metrics, supplementary guidance to contractors, and independent, third-party reviews. In addition, we interviewed CMS program officials responsible for the development and oversight of Healthcare.gov and its supporting systems.

To address the second objective, we reviewed documents describing CMS's oversight and application of system development practices. We assessed the agency's actions against best practices identified by us and the Software Engineering Institute, the Institute of Electrical and Electronics Engineers (IEEE), federal statutes on OMB and agency IT investment management and oversight responsibilities, and CMS and HHS guidance pertaining to the oversight of major information technology programs. These included recognized practices for managing requirements, systems testing documentation, and conducting program oversight. These practices are identified in the Software Engineering Institute's Capability Maturity Model Integration for Development, Version 1.3; the IEEE Standard for Software and System Test Documentation; our

[4]The Department of Health and Human Services' Enterprise Performance Life Cycle Framework defines IV&V as a rigorous independent process that evaluates the correctness and quality of a project's business product to ensure that it is being developed in accordance with customer requirements and is well-engineered.

Schedule Assessment Guide Exposure Draft; and CMS and HHS systems development life-cycle frameworks. We reviewed data from relevant program documentation, such as requirements documentation, independent verification and validation reports, test plans and test cases, project schedules, project management and requirements management plans, and project milestone review documentation. In addition, we reviewed four non-generalizable, random samples of test cases and functional requirements. We also interviewed relevant officials from CMS responsible for the development and oversight of Healthcare.gov and its supporting systems. Further, we interviewed HHS and OMB officials to determine the extent to which HHS and OMB provided oversight of the effort.

To determine the reliability of the data obtained from CMS information systems used for managing requirements, conducting system testing, and tracking system defects, we interviewed knowledgeable agency officials within the Center for Consumer Information and Insurance Oversight and Office of Information Services about these systems and asked specific questions to understand the controls in place for ensuring the integrity and reliability of the data they contain. Based on these efforts, we determined that the data we used from these sources were sufficiently reliable for the purposes of our audit.

We conducted this performance audit from December 2013 to March 2015 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. A full description of our objectives, scope, and methodology can be found in appendix I.

Background

PPACA directed the federal government to establish and operate a health insurance marketplace, referred to as the federally facilitated marketplace, on behalf of states electing not to establish and operate a marketplace by January 1, 2014.[5] CMS operated a federally facilitated

[5]PPACA, § 1321(c), 124 Stat. at 186.

marketplace or partnership marketplace[6] for 34 states for plan years[7] 2014 and 2015.

Marketplaces, both federal and state, were intended to provide a seamless, single point of access for individuals to enroll in qualified health plans, apply for income-based financial assistance established under the law, and, as applicable, obtain an eligibility determination for other health coverage programs, such as Medicaid or the State Children's Health Insurance Program (CHIP).[8]

PPACA required federal and state marketplaces to be operational on or before January 1, 2014. Healthcare.gov, the public interface for the federally facilitated marketplace, began facilitating enrollments on October 1, 2013, at the beginning of the first annual open enrollment period established by CMS.

Since that time, CMS has reported that over 8 million individuals selected a qualified health plan through the federally facilitated marketplace or a state-based marketplace from October 1, 2013, through March 31, 2014. As of October 15, 2014, 6.7 million individuals were enrolled and paying for 2014 health coverage through the marketplaces. HHS estimated up to 9.9 million enrollees for the 2015 enrollment period, which began on November 15, 2014, and ended on February 22, 2015.[9] According to HHS, over 8.4 million people had submitted applications for coverage through the federally facilitated marketplace for the 2015 enrollment period as of January 2, 2015.

[6]A partnership marketplace is a variation of a federally facilitated marketplace. HHS establishes and operates this type of marketplace with states assisting HHS in carrying out certain functions of that marketplace.

[7]A plan year is a consecutive 12-month period during which a health plan provides coverage for health benefits.

[8]Medicaid is a joint federal-state program that finances health care coverage for certain low-income individuals. CHIP is a federal-state program that provides health care coverage to children 19 years of age and younger living in low-income families whose incomes exceed the eligibility requirements for Medicaid.

[9]The 2015 enrollment period was extended from February 15, 2015 to February 22, 2015. The extension was made to accommodate those individuals who were not able to complete their application by the initial deadline because they experienced long wait times when seeking assistance from the Healthcare.gov call center or because they encountered technical issues.

HHS established the Office of Consumer Information and Insurance Oversight in April 2010 as part of the HHS Office of the Secretary. In January 2011, the office moved to CMS and was renamed the Center for Consumer Information and Insurance Oversight. This office has overall responsibility for providing guidance and oversight for the federal and state systems supporting the establishment and operation of health insurance marketplaces. The Office of Information Services, headed by the CMS Chief Information Officer (CIO), is responsible for oversight of the development and implementation of federal systems supporting the establishment and operation of the federally facilitated marketplace, including review, selection, implementation, and continual evaluation of these systems.

Several Major CMS Systems Support Enrollment-Related Activities

The federally facilitated marketplace relies on the Healthcare.gov website and several supporting systems to accomplish enrollment-related activities. To do so, these systems interconnect multiple other systems from a broad range of federal agencies, states, and other entities, such as contractors and issuers of qualified health plans, creating a complex system of systems. The CMS Consumer Information and Insurance Systems Group within the Office of Information Services is tasked with technical oversight of the development and implementation of these systems. A description of each of the major systems for which CMS is responsible for implementing follows.

Healthcare.gov Website

Healthcare.gov is the federal website that serves as the user interface for individuals who wish to obtain coverage through the federal marketplace. Individuals can use the website to obtain information about health coverage, set up a user account, select a health plan, and apply for coverage by the selected health plan. The site supports two major functions: (1) providing information about PPACA health insurance reforms and health insurance options (the “Learn” web page), and (2) facilitating enrollment in coverage (the “Get Insurance” web page). The “Learn” page provides basic information on how the marketplace works, available health plans, and how to apply for coverage. It also contains information on plan costs, ways to reduce out-of-pocket costs, and how individuals can protect themselves from fraud. Individuals do not have to provide personal information to access this section of the website. In contrast to the information-oriented “Learn” page, the “Get Insurance” page allows an individual to take steps to apply for health insurance and other associated benefits.

Enterprise Identity Management System

Before an individual can apply for health care coverage or other benefits, CMS must verify his or her identity to help prevent unauthorized disclosure of personal information. The process of verifying an applicant's identity and establishing a login account is facilitated by CMS's Enterprise Identity Management system. This system is intended to provide identity and access management services to protect CMS data while ensuring that users' identities are confirmed, as only authorized users are allowed and capable of accessing CMS resources.[10]

Federally Facilitated Marketplace System

The main system, the Federally Facilitated Marketplace (FFM) system, contains several modules that perform key functions related to obtaining health care coverage. The core of the FFM system is a transactional database that was developed to facilitate the eligibility verification process, enrollment process, plan management, financial management services, and other functions, such as quality control and oversight. From a technical perspective, the FFM leverages data processing and storage resources that are available from private sector vendors over the Internet, a type of capability known as cloud-based services. It consists of three major modules: eligibility and enrollment, plan management, and financial management.

- **Eligibility and enrollment module**. Individuals seeking to apply for health care coverage through the federally facilitated marketplace use the eligibility and enrollment module to guide them through a step-by-step process to determine their eligibility for coverage and financial assistance. Once eligibility is determined, the applicant is then shown applicable coverage options and has the opportunity to enroll.

  Throughout the eligibility and enrollment process, the applicant's information, such as name, address, Social Security number, citizenship status, and employer name, is collected and stored in the FFM system's database. This information is compared with records maintained by other federal agencies and a private entity to determine whether the applicant is eligible to enroll in a qualified health plan and, if so, to receive the advance payment of the premium tax credit and

[10]CMS also uses the Enterprise Identity Management system for other purposes that do not relate to Healthcare.gov.

cost-sharing reductions[11] established through PPACA to defray the cost of this coverage.

The module further allows an applicant to view, compare, select, and enroll in a qualified health plan. Options are displayed to the applicant on the Healthcare.gov webpage, and applicants can use the "Plan Compare" function to view and compare plan details. The applicant can customize and filter the plans according to various factors such as plan type, maximum out-of-pocket expenses, deductible, availability of cost-sharing reductions, or insurance company, among others. Once an applicant has signed up for a qualified health plan on Healthcare.gov, information about the enrollment is sent to the chosen health plan issuer.

- **Plan management module**. The plan management module is intended to interact with and is primarily used by state agencies and issuers of qualified health plans. The module is intended to provide a suite of services used for submitting, certifying, monitoring, and renewing qualified health plans, as well as managing the withdrawal of these health plans. Specifically, using this module, states and issuers submit "bids" detailing proposed health plans to be offered on Healthcare.gov, including rate and benefits information. CMS then uses the module to review, monitor, and certify or decertify the bids submitted by issuers. Once a bid has been certified and approved for inclusion in the marketplace, it is made available for applicants to enroll through Healthcare.gov.

- **Financial management module**. This module is intended to facilitate payments to issuers through electronic transactions. Like plan management, the financial management module is used primarily by issuers of qualified health plans. This module also provides issuers additional services, including payment calculation for reinsurance, risk adjustment analysis, and the data collection required to support these services. Transactions to be supported by the module include

[11]The advance payment of the premium tax credit is generally available to eligible tax filers and their dependents that are (1) enrolled in one or more qualified health plan through a marketplace, (2) not eligible for other types of specified health insurance coverage such as government-sponsored coverage including Medicaid or the CHIP program, and (3) whose incomes are between 100 and 400 percent of the federal poverty level. Cost sharing generally refers to costs that an individual must pay when using services that are covered under the health plan that the person is enrolled in. Common forms of cost sharing include copayments and deductibles.

payments of premiums and cost-sharing reductions subsidies for individual enrollments, reinsurance, and risk adjustments.

Federal Data Services Hub

The federal Data Services Hub (DSH) acts as a single portal for exchanging information between the FFM and CMS's external partners, including other federal agencies and state-based marketplaces, for purposes such as facilitating eligibility determinations and transferring plan enrollment information. The DSH was designed as a "private cloud" service[12] supporting various functions such as real-time eligibility queries, transfer of application information, and exchange of enrollment information with issuers of qualified health plans.

Many External Partners Connect with the FFM and DSH

In conducting Healthcare.gov-related activities, various entities, including federal agencies, a private-sector credit agency, states, issuers of qualified health plans, and agents and brokers connect to and exchange information with the systems supporting the federally facilitated marketplace.

Federal Agencies and a Private Entity

Federal agencies such as the Social Security Administration (SSA), Department of Homeland Security (DHS), and Internal Revenue Service (IRS), along with Equifax, Inc. (a private-sector credit agency that CMS contracts with) provide or verify information used in making determinations of a person's eligibility for coverage and financial assistance.

- **Social Security Administration**. This agency's primary role is to assist CMS in confirming applicant-supplied information by comparing it with information in SSA's records related to individuals' citizenship, Social Security number, incarceration status, and death. SSA also provides CMS information on monthly and annual Social Security benefits paid to individuals under the Old Age, Survivors, and Disability Insurance program,[13] if necessary to determine eligibility.

[12]According to the National Institute for Standards and Technology, cloud computing is a model for enabling on-demand network access to shared computing resources that can be provisioned with minimal management effort or service provider interaction. A private cloud is operated solely for a single organization and the technologies may be on or off the premises.

[13]The Old Age, Survivors, and Disability Insurance program–commonly referred to as Social Security or "Title II"—is one of the nation's largest entitlement programs. Financed by two trust funds, this program provides monthly benefits to retired and disabled workers, their spouses, children, and the survivors of insured workers.

- **Department of Homeland Security**. The department assists CMS by verifying the naturalized, acquired, or derived[14] citizenship or immigration status of applicants seeking eligibility to enroll in a qualified health plan or participate in Medicaid, CHIP, or a state-based health plan using information supplied by each applicant through the website. DHS generally undertakes this role only if CMS is unable to verify an applicant's status with SSA using a Social Security number or if the applicant indicates on the application that he or she is not a U.S. citizen. DHS also assists CMS by verifying the status of noncitizens who are lawfully present in the United States and seeking eligibility to enroll in a qualified health plan or participate in Medicaid, CHIP, or a state-based health plan, as well as current beneficiaries who have had a change in immigration status or whose status may have expired.

- **Internal Revenue Service**. IRS provides federal tax information to be used by CMS in determining or assessing income and family size and determining an applicant's eligibility for insurance affordability programs, including the advance payment of the premium tax credit, cost-sharing reductions, Medicaid, and CHIP.

- **Equifax, Inc**. This entity verifies information about an applicant's current income and employment to assist CMS in making a determination about an applicant's qualification for insurance affordability programs, such as the advance payment of the premium tax credit and cost-sharing reductions.

In addition, several other federal agencies—the Departments of Defense and Veterans Affairs, the Office of Personnel Management, and the Peace Corps—support CMS in determining whether a potential applicant is eligible for or enrolled in minimum essential coverage and therefore may not be eligible to receive the advance payment of the premium tax credit and cost-sharing reductions.[15] For example, applicants that are

[14]Derived citizenship is citizenship conveyed to children through the naturalization of parents or, under certain circumstances, to foreign-born children adopted by U.S. citizen parents, provided certain conditions are met.

[15]Minimum essential coverage that may disqualify an individual from qualifying for advance payment of the premium tax credits and cost-sharing reductions includes eligible employer-sponsored health plans (if they meet affordability and value standards) and certain government-sponsored health coverage such as Medicare, Medicaid, and CHIP. See 26 U.S.C. § 5000A(f).

enrolled in or eligible for coverage under certain government programs such as Medicare or Medicaid, or certain employer-sponsored programs, such as the Federal Employees Health Benefits program, are ineligible for these subsidies.

States

In most states, multiple government systems may need to connect to the FFM system and DSH to carry out a variety of functions related to health care enrollment. For example, most states need to connect their state Medicaid and CHIP agencies to either the FFM system (through the DSH) or their state-based marketplace to exchange data with CMS about enrollment in these programs. In addition, states may need to connect with the IRS (also through the DSH) in order to calculate the maximum amount of advance payments of the premium tax credit. Finally, state-based marketplaces are to send enrollment confirmations to the FFM system so that CMS can administer advance payments of the premium tax credit and cost-sharing reductions and track overall marketplace enrollment.

Further, in certain cases, known as partnership marketplaces, states may elect to perform one or both of the plan management and consumer assistance functions while the FFM system performs the rest. The specific functions performed by each partner vary from state to state.

Issuers of Qualified Health Plans

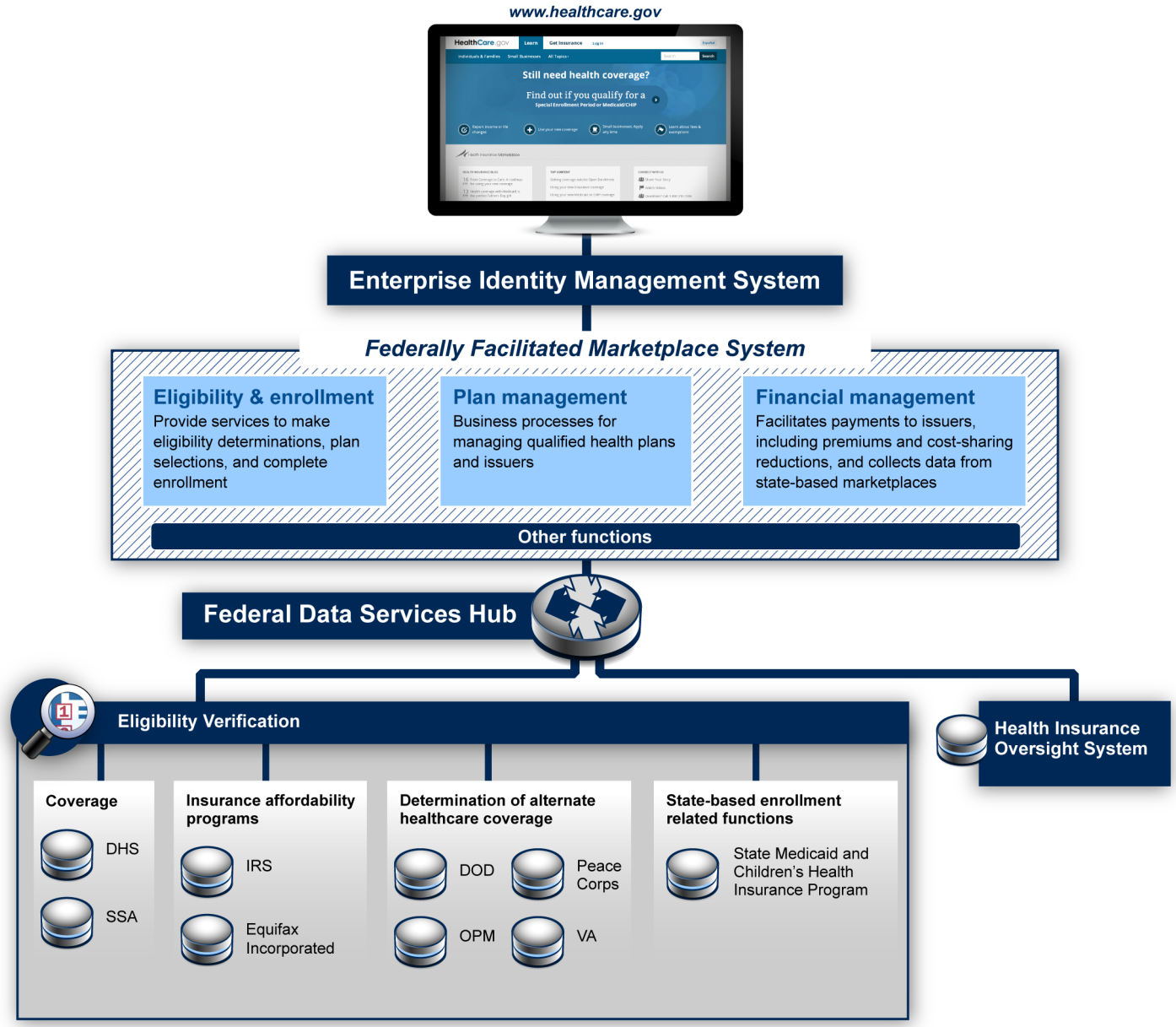
Issuers of qualified health plans receive enrollment information from the FFM system using CMS's Health Insurance Oversight System when an individual completes the application process. In this case, the FFM system transmits the enrollment information to the DSH, which forwards it to the issuer of qualified health plans. The issuer then replies with a confirmation message. Plan issuers also interact with the FFM through the plan management and financial management modules, as previously described.

Agents and Brokers

In addition to applicants themselves, agents and brokers may access the Healthcare.gov website to perform enrollment-related activities on behalf of applicants. It is up to individual states to determine whether to allow agents and brokers to carry out these activities, which can include enrolling in health care plans and applying for the advance payment of the premium tax credit and cost-sharing reductions.

Figure 1 illustrates the systems that make up the federally facilitated marketplace and their connections with each other, as well as with external partners.

Figure 1: Overview of Systems Supporting the Federally Facilitated Marketplace



DHS (U.S. Department of Homeland Security), SSA (Social Security Administration), IRS (Internal Revenue Service), DOD (U.S. Department of Defense), OPM (United States Office of Personnel Management), VA (U.S. Department of Veterans Affairs),

Source: GAO analysis of Centers for Medicare & Medicaid Services data. | GAO-15-238

GAO Has Previously Highlighted Improvements Needed in the IT Management of Healthcare.gov and Related Systems

In 2014, we reported on challenges CMS and its contractor faced in developing, implementing, and overseeing the Healthcare.gov initiative.

- We reported on CMS's efforts to plan and oversee Healthcare.gov-related development contracts, as well as the agency's efforts in addressing contractor performance, in July 2014.[16] We determined that the agency undertook the development of Healthcare.gov and its related systems without effective planning or oversight practices, despite facing a number of challenges that increased both the level of risk and the need for effective oversight. In addition, CMS incurred significant cost increases, schedule slips, and delayed system functionality for the FFM and DSH systems due primarily to changing requirements that were exacerbated by oversight gaps. Lastly, CMS identified major performance issues with the FFM contractor but took only limited steps to hold the contractor accountable. Specifically, CMS declined to pay about $267,000 in requested fees to the FFM contractor, which was about 2 percent of the $12.5 million in fees paid. We recommended that CMS take actions to assess increasing contract costs and ensure that acquisition strategies are completed and oversight tools are used as required, among other actions. CMS concurred with most of the recommendations.

- In September 2014 we reported on the planned exchanges of information between the Healthcare.gov website and other organizations, as well as the effectiveness of the programs and controls implemented by CMS to protect the security and privacy of the information and IT systems used to support Healthcare.gov.[17] We described how many systems and entities exchange information to carry out functions that support individuals' ability to use Healthcare.gov to compare, select, and enroll in private health insurance plans participating in the federal marketplace, as required by the Patient Protection and Affordable Care Act. In addition, we determined that CMS took many steps to protect security and privacy, including developing required security program policies and

[16]GAO, *Healthcare.gov: Ineffective Planning and Oversight Practices Underscore the Need for Improved Contract Management,* GAO-14-694 (Washington, D.C.: July 30, 2014).

[17]GAO, *Healthcare.gov: Actions Needed to Address Weaknesses in Information Security and Privacy Controls*, GAO-14-730 (Washington, D.C.: Sept. 16, 2014) and *Healthcare.gov: Information Security and Privacy Controls Should Be Enhanced to Address Weaknesses*, GAO-14-871T (Washington, D.C.: Sept. 18, 2014).

procedures, establishing interconnection security agreements with its federal and commercial partners, and instituting required privacy protections.

However, Healthcare.gov had weaknesses when it was first deployed, including incomplete security plans, lack of a privacy risk analysis, incomplete security tests, and the lack of an alternate processing site to avoid major service disruptions. Further, we identified weaknesses in the technical controls protecting the confidentiality, integrity, and availability of the FFM. Specifically, CMS had not always required or enforced strong password controls, adequately restricted access to the Internet, consistently implemented software patches, and properly configured an administrative network. We made 28 recommendations to HHS to enhance the protection of systems and information related to Healthcare.gov as well as to resolve technical weaknesses in security controls. HHS partially agreed with 3 of the 28 recommendations, agreed with 25, and described plans to implement our technical recommendations.

Initial Development and Deployment of Healthcare.gov and Its Supporting Systems Faced Problems with System Capacity, Software Code Issues, and Limited Functionality, but CMS Has Taken Steps to Address Them

Several problems occurred in the development and deployment of Healthcare.gov and its supporting systems, which affected their performance. These problems included inadequate system capacity, numerous errors in software code, and limited system functionality. Although CMS was aware of these problems prior to initial launch in October 2013, it proceeded with deployment in order to meet this deadline. Consequently, consumers attempting to enroll in health plans were met with confusing error messages, slow load times for forms and pages, and, in some cases, website outages. Since the initial launch of Healthcare.gov and its supporting systems, CMS has taken a number of steps to address these problems, to include increasing system capacity, outlining a new approach for ensuring the quality of software code, and further developing required system functionality. As a result of these efforts, the performance of Heathcare.gov and its supporting systems has improved significantly.

Healthcare.gov and Its Supporting Systems Were Hindered by Inadequate Capacity, Software Code Errors, and Limited Functionality

Systems supporting Healthcare.gov were initially launched without adequate capacity to accommodate the number of visitors to the website. In particular, when the system was launched on October 1, 2013, the Enterprise Identity Management system was overwhelmed by the number of users attempting to create accounts—nearly half a million in the first 2-and-a-half weeks of open enrollment—preventing the system from functioning as intended.

CMS officials within the Office of Information Services stated that they had incorrectly estimated the number of users that would visit the site during the initial launch of the 2014 enrollment period. As a result, CMS had not planned to provide a level of capacity that would ensure uninterrupted service to users in a cost-effective manner.

Independent assessments conducted in December 2012 and June 2013 also identified weaknesses in CMS's capacity planning in the months prior to launch. Examples of these weaknesses included the following:

- Capacity requirements for hardware for the FFM system were not developed.
- A plan for capacity for the cloud computing environment had not been developed, and thus there were uncertainties as to whether new and existing system hardware configurations and their performance were adequate to meet existing and proposed system requirements.
- Existing capacity in the cloud environment was not adequate, and did not include an adequate number of virtual machines[18] and processors.

Further, in a November 2013 testimony, the CMS Administrator acknowledged that although CMS tried to project demand for the website, the agency underestimated that demand. As a result, consumers attempting to enroll in health plans were met with confusing error messages, slow load times for forms and pages, and in some cases website outages. In particular, due to inadequate system capacity, many consumers experienced difficulty creating accounts, and those that were able to create accounts had difficulty logging into them.

[18]A virtual machine is software that allows a single host to run one or more guest operating systems.

Software Coding Errors

Software code for systems supporting Healthcare.gov contained numerous errors, resulting in difficulties in accessing and using the site. For example, in September 2013 (less than 1 month before launch), an IV&V assessment ordered by CMS identified 45 critical and 324 serious code errors across the plan management, financial management, and eligibility and enrollment FFM system modules, with services relating to the eligibility and enrollment module having the highest numbers of errors. Further, the IV&V assessment team reported that there was no evidence that software coding errors were being addressed.

Other IV&V assessments of the FFM and DSH systems also noted problems in coding practices used by systems development contractors that indicated concerns about system code. For example, in March 2013, the IV&V assessment team reviewing the FFM and DSH systems noted multiple issues with application coding, including undesirable coding practices that were known to potentially cause errors[19] and the inability of the assessment team to locate CMS or contractor coding standards.

CMS also identified concerns with system coding prior to launch. In March 2013, a Director within the Consumer Information and Insurance Systems Group, charged with overseeing the development effort, expressed concerns about the quality of FFM system code during a monthly status meeting. In addition, CMS conducted an assessment of FFM system documentation and development processes in August 2013 and noted that late-stage coding conducted by the FFM system development contractor did not follow expected standards and best practices, resulting in code conflicts between FFM system modules. The assessment further stated that system technical changes and development were being conducted on an ad-hoc basis to resolve production issues rather than being coordinated across development teams.

In September 2013, the FFM system development contractor attributed certain coding errors to the urgency of implementing system fixes as quickly as possible. To mitigate these issues, the contractor stated that it was revisiting its code review process to help identify coding errors.

[19]For example, one coding practice was identified as potentially causing a runtime error, which is a software or hardware problem that prevents a program from working correctly, potentially leading to loss or corruption of information or preventing a user from using a feature.

However, this action was not timely, as open enrollment began shortly thereafter. Further, in November 2013, the FFM system development contractor, in response to a CMS contracting officer's concerns about defects and errors in the FFM system code, stated that it was not possible to ensure that each code release addressed all defects because there was not sufficient time to fix the code and retest it to confirm that issues were resolved. CMS officials agreed that some defects were not addressed prior to system launch due to the urgency in meeting the October 1, 2013, deadline.

As with the capacity problems, these software code errors also contributed to the problems applicants faced in attempting to enroll in health care plans. For example, according to an HHS report summarizing findings from an Obama administration assessment, for some weeks in the month of October 2013, the Healthcare.gov website was down an estimated 60 percent of the time. In the report, HHS noted that the assessment team determined that hundreds of errors in software code contributed to that downtime.

Limited System Functionality

As of initial launch, the functionality provided by the FFM system was limited compared to what was planned, thus hindering users from performing actions needed to compare health plans and small businesses from purchasing plans, as well as requiring the use of a manual process for paying issuers.

In September 2011, CMS issued the first FFM system statement of work, which stated that the federal marketplace would provide all exchange capability in states electing not to establish a state-based marketplace. The statement of work identified system modules that were to encompass all federal exchange requirements, including the eligibility and enrollment, plan management, and financial management modules.

However, at the time of initial open enrollment in 2013, while parts of the eligibility and enrollment module were completed, others were not. Specifically, after creating an account through the website, consumers could apply for health coverage, compare and select a plan for enrollment, and receive an advance payment of the premium tax credit and Medicaid/CHIP eligibility determination through the eligibility and enrollment module. Nonetheless, consumers were not able to perform other intended eligibility and enrollment functions such as (1) "window shopping" (i.e., comparing different plans) for health plans prior to providing personal information to CMS and signing up for coverage, or (2) designating authorized representatives to apply for coverage on their

behalf or change their advance payment of the premium tax credit election. Further, small businesses were unable to purchase health coverage for their employees through the FFM eligibility and enrollment module.

Other planned modules, including the plan management and financial management modules, were also not complete and thus did not provide intended functionality. For example, CMS could not use the system to acquire, certify, and manage issuers offering qualified health plans through the exchange's plan management module. Additionally, the system did not allow payments to be made to health issuers and did not calculate payments for reinsurance through the financial management module.

CMS Has Taken Steps to Address Identified System Problems

Since the troublesome launch of Healthcare.gov, CMS has taken various actions to address the problems that impeded the initial use of the website and its supporting systems. For example, beginning in October 2013, the agency initiated steps to mitigate the lack of adequate system capacity. Specifically, among other things, it doubled the number of servers for systems supporting Healthcare.gov, added virtual machines for the Enterprise Identity Management and FFM systems, and replaced a virtual database with a high-capacity physical database for the Enterprise Identity Management system, allowing more efficient system processing for both the identity management and FFM systems.

By taking these actions, CMS increased overall system capacity to support Internet users—going from 25 to 400 Terabytes of monthly capacity. According to an HHS website, by December 2013, the increased system capacity allowed the system to accommodate more than 1.8 million visits a day from consumers to the website and its supporting systems. According to an HHS progress report issued in December 2013 and other data provided by CMS, Healthcare.gov system availability went from 42.9 percent to just over 93 percent during November 2013, and the FFM system response time went from 8 seconds in late October 2013 to less than 1 second by December 2013.

In addition, in October 2013 CMS took steps to mitigate system coding issues. For example, the agency directed its development contractors to, among other things, modify system software to increase the efficiency in system interactions and implement software fixes to address issues with users logging into their accounts. In December 2013, HHS reported that the number of errors encountered by individuals using the system

decreased by over 5 percent by the end of November 2013, going from a 6 percent error rate to under 1 percent.

Also, CMS documented data quality plans for the Enterprise Identity Management system in March 2014 and the FFM system in June 2014 that outline an approach for improving the quality of the systems' code. The Enterprise Identity Management system plan calls for peer reviews to ensure that contract requirements are met and product reviews are performed on all deliverables. The FFM plan identifies three types of quality reviews—Peer Reviews, Process and Product Quality Assurance Reviews, and Quality Assessment Reviews—that are to be used to ensure work products conform to documented processes and standards.

- **Peer Reviews**. As the primary verification activity, peer reviews are to be conducted to help facilitate early detection of problems, and thus reduce the number of problems discovered in later stages of development, which helps to minimize the cost associated with rework. Peer reviews are to include a review of requirements, design, code, and test planning work products. Peer reviews can be conducted by peer members of the project team or team leads, managers, and design review boards.

- **Process and Product Quality Assurance Reviews**. These reviews are intended to ensure that work products, project management processes, high-level development processes, and day-to-day practices adhere to documented CMS processes and standards. These reviews are to be conducted by contractors not directly responsible for the work product or process being reviewed.

- **Quality Assurance Review**. The primary purpose of the quality assurance review is to verify that the FFM IT program is progressing based on expectations and is providing business value, and that appropriate risks are identified and managed so that solutions can be delivered on time and within budget. This review is conducted by a contractor Managing Director who is also referred to as a quality assurance Director. These directors are external to the FFM system project, with technical and functional expertise in line with the program.

Nonetheless, even with these efforts, IV&V assessments continued to identify issues with software coding practices. For example, in July 2014 the assessment team identified over 11,000 critical code violations in the eligibility and enrollment module of the FFM system which could cause

major issues in production or difficulties in maintaining the code. The assessment team highlighted the need for CMS to ensure the FFM system code is reviewed and that critical and major violations are remediated.

CMS has also taken steps to develop additional system functionality for the FFM system. In order to complete FFM system development and to improve system functionality already provided by the original contractor tasked with developing this system, the agency awarded a new contract in January 2014. According to the statement of work, this new FFM system development contract represents almost exclusively new development and major fixes to software already developed. The contract called for the new contractor to design, develop, test, and implement services supporting the FFM system. This includes the financial management module, the plan management module, and certain eligibility and enrollment module functions that include eligibility verification and determination.

Some FFM system development activities are still in progress, such as the payment service to issuers for subsidy payments to issuers through the financial management module, among others.[20] However, CMS made progress in developing and implementing services related to the FFM eligibility and enrollment and plan management modules. For example, consumers can now "window shop" using the eligibility and enrollment module, and CMS can now use the plan management module to validate plan application information and route the validated information to the appropriate system supporting Healthcare.gov.

[20]Other FFM functionality that was still being developed as of July 2014 included certain eligibility verification services and components of the service to allow small businesses to purchase health coverage for their employees through the FFM eligibility and enrollment module, as well as the verification of qualified health plan enrollment service.

CMS Inadequately Applied Best Practices in Developing Systems Supporting Healthcare.gov, and Needs to Build on Recent Progress

In developing Healthcare.gov and its supporting systems, CMS did not adhere to best practices for managing IT development projects, which contributed to problems with the launch of Healthcare.gov and its supporting systems. Such best practices include managing requirements to ensure that delivered functionality meets the needs of users, conducting adequate system testing to validate that systems function as intended, and providing oversight to ensure that a project is progressing as planned and that corrective actions are taken as needed. Specifically, CMS did not effectively manage requirements of key systems supporting Healthcare.gov, nor did it adequately test the system, or include key information in system test plans and test cases. In addition, CMS's oversight of the initiative was limited by an unreliable schedule, lack of estimates of work needed to complete the project, unorganized and outdated project documentation, and inconsistent reviews of project progress.

CMS program and contracting officials attributed weaknesses in these IT management areas to the complexity of developing a first-of-its-kind federal marketplace, which was exacerbated by changing requirements and compressed time frames for completing and deploying the systems. CMS has taken action to address deficiencies in applying systems development best practices for the FFM system. However, deficiencies in requirements management, systems testing, and oversight remain. By not engaging in effective systems development practices, CMS lacks essential mechanisms to ensure the successful delivery of IT systems such as Healthcare.gov and its supporting systems. In addition, HHS has not provided adequate oversight of the Healthcare.gov initiative through its office of the CIO, while OMB's oversight role was limited to facilitating discussions with federal partners, providing federal policy guidance, and overseeing the project's budget.

Weaknesses in Requirements Management Limited CMS's Ability to Ensure That System Functionality Was Implemented as Intended

Best practices developed by the Software Engineering Institute call for, among other things, ensuring that requirements are understood and approved by system stakeholders, including system owners and system developers.[21] Thus, as a project matures and requirements are derived, the requirements should be clearly defined, agreed upon, and approved by the system stakeholders, including system owners and system developers. Consistent with best practices, CMS guidance also requires this approval. Specifically, the CMS Requirements Management Plan documented specifically for the FFM and DSH systems called for functional requirements[22] to be approved by a CMS official—the Center for Consumer Information and Insurance Oversight business owner—before being sent to the development team. The plan further stated that an agency official within the Office of Information Services[23] was to document this approval in the Collaborative Application Lifecycle Tool (CALT),[24] the agency's project management system and requirements repository. The system records the name of the approver and the date and time at which the requirement was approved.

However, in many instances, functional requirements that had been identified for the FFM and DSH systems were included in the development effort prior to or without clear evidence of required CMS approval. Specifically,

[21]Software Engineering Institute, *CMMI for Development, Version 1.3,* CMU/SEI-2010-TR-033 (November 2010, Hanscom AFB, MA).

[22]Functional requirements define what the proposed system will actually do. Examples of functional requirements for the FFM system include the requirement for an individual to be able to use the system to compare available plans in the exchange or to provide information required to enroll in CHIP.

[23]The Requirements Management Plan states that requirements should be approved by an official within the Office of Information Services, but that this function can be delegated to other CMS responsible officials.

[24]CMS developed the CALT system to support the entire software life cycle, including requirements and release management, code review and defect tracking, and system testing.

- Of the 37 FFM eligibility and enrollment functional requirements that we examined,[25]
  - 9 were designated as having been approved prior to development,
  - 8 were approved after the requirements were sent to development, and
  - 20 were never approved by CMS.
- Of the 67 DSH functional requirements we selected,[26] none were approved by a CMS official.

CMS officials within the Office of Information Services acknowledged that approvals were not always obtained for functional requirements prior to the development of the FFM and DSH systems. The officials stated that they were unable to enforce consistent application of life-cycle processes because they were trying to develop the system in an expedited fashion to meet the October 2013 deadline.

By allowing functional requirements to move to development without approval, CMS did not position itself to ensure that there was a common understanding of requirements between CMS Center for Consumer Information and Insurance Oversight business owners and the contractors tasked with developing these systems, or that expected functionality would be provided.

Since Systems Launch, CMS Has Developed a New Requirements Approval Process, but It Is Not Fully Implemented

After the initial system launch, CMS documented and began implementing a new IT governance process in June 2014[27] that calls for

[25]The FFM system eligibility and enrollment module included a total of 3,779 functional requirements at the time of our review. We selected 95 for review, but only 37 of the requirements selected included attributes indicating that they were developed and as such required approval prior to being sent to development.

[26]The DSH system had 1,038 functional requirements at the time of our review. We selected 88 for review, but only 67 of the requirements selected included attributes indicating that they were developed and as such required approval prior to being sent to development.

[27]CMS issued a new requirements management guide in June 2014 documenting its new IT governance process. The guide is intended to provide a more uniform methodology for the documentation and management of proposed functionalities for the FFM system. The guide is to be used for all development activities for new or redesigned FFM system functionality.

business requirements[28] to be approved by three key stakeholders—the CMS business owner, the CMS approving authority, and the contract organization's approving authority—instead of one CMS official (the business owner). In addition, CMS officials within the Office of Information Services stated that functional and technical requirements also require the same three stakeholders' approval and that these stakeholders' signatures be included on all requirements documentation, indicating their approval.

Even with its new requirements approval process, however, CMS has not consistently and appropriately approved requirements. In particular, 1 of 18 FFM system requirements documents that we examined under the new process contained all the necessary approvals for business, functional, and technical requirements that had been documented as part of the effort to improve and expand system functionality.[29] Specifically:

- Of the 13 business requirements documents, 1 had been fully approved by all three stakeholders. On the other hand, 4 business requirements documents included the signature of the FFM contractor, but did not include the CMS approving authority and business owner signatures; 2 documents were approved by the CMS business owner, but were not approved by the CMS approving authority and the FFM contractor; and the remaining 6 were approved by the CMS approving authority and business owner, but were not approved by the FFM contractor.

- Of the four functional design documents, none were fully approved by the required stakeholders. Two of the four were not approved by the CMS approving authority and the FFM contractor. One was approved by the CMS business owner and the CMS approving authority, but was missing the approval of the FFM contractor. The remaining functional design document was approved by CMS's approving authority, but was missing the approval of the FFM contractor and CMS business owner.

[28]According to the CMS Requirements Management Guide, business requirements address legislative mandates and strategic business goals for each program area.

[29]As of July 2014, CMS had documented a total of 18 requirements documents, including 13 business requirements documents, 4 functional design documents, and 1 technical design document developed under the new FFM systems development contract.

- The one technical design document included the signature of the CMS approving authority, but was missing the signatures of the CMS business owner and FFM contractor.

In addition, it was not always clear what requirements were being approved. Specifically, while pages with approval signatures were scanned and uploaded to CALT, 10 of the 18 signature pages were not electronically attached or linked to documents specifying the requirements being approved, making it difficult to determine what requirements were actually approved. These conditions present uncertainty as to whether CMS and its contractors can readily and always determine if the requirements being developed had received the appropriate approval.

CMS officials in the Office of Information Services acknowledged the lack of approvals and stated that as of mid-October 2014 they had not yet fully implemented the new IT governance process, which is to include the complete documentation of requirements approvals. Specifically, while CMS has documented the approval procedures for business requirements, it has not yet documented procedures for approving functional and technical requirements.

While acknowledging these weaknesses, officials within the Office of Information Services added that CMS is currently tracking approvals through a weekly management report. However, this is inconsistent with the agency's newly developed procedures, which require stakeholders' signatures on requirements documentation to indicate approval. The officials further noted that they intend to review all required documentation to identify any signatures that may be missing after 2015 open enrollment is complete. However, this review would take place after the requirements were developed and would not ensure that they were clearly defined, agreed upon, and approved before development began. Until it fully documents and implements its new requirements approval process, CMS may not establish a shared understanding of requirements with its contractors, potentially resulting in critical system functionally not providing needed capabilities.

Requirements Lacked Traceability Prior to Initial Launch

Best practices developed by the Software Engineering Institute call for, among other things, effectively managing requirements by maintaining bidirectional traceability from the high-level original source, such as the

business and program requirements, to the lower-level more detailed system and technical requirements, and from those lower-level requirements back to their original source.[30] Such bidirectional traceability allows stakeholders to (1) understand any system-wide effects as a result of changes to requirements, (2) determine whether all high-level requirements have been completely addressed and whether all lower-level more detailed requirements can be traced to a valid source (i.e., maintain requirement dependencies to ensure that higher-level requirements are being addressed by lower-level more detailed requirements), and (3) update requirements documentation as necessary for approved changes.

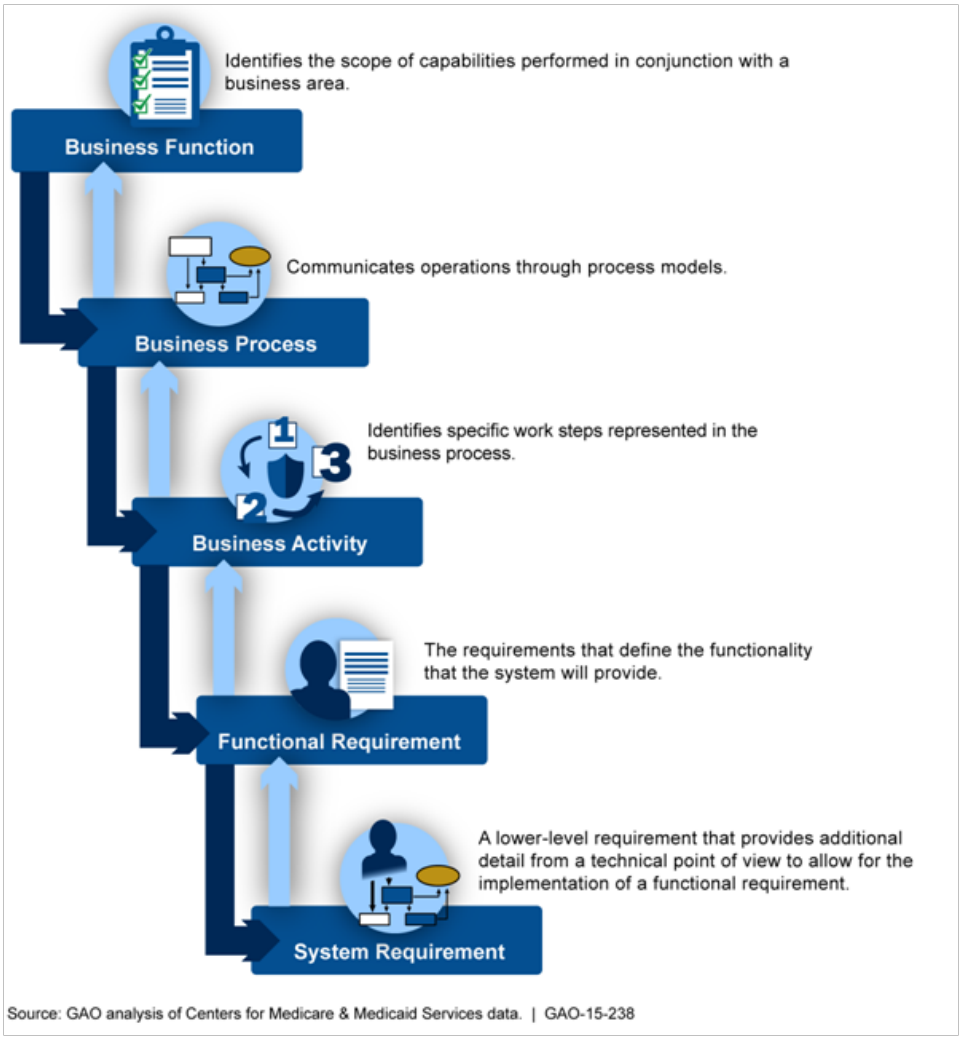
Consistent with best practices, the CMS Requirements Management Plan documented specifically for the FFM and DSH systems requires bidirectional traceability and has established a traceability hierarchy that applies to FFM and DSH system requirements. This hierarchy defines the relationships among business functions, processes, and activities and functional and system requirements. Specifically, the Requirements Management Plan requires bidirectional traceability between higher-level requirements (e.g., business processes[31]), and one or more lower-level requirements (e.g., system requirements[32]). According to the plan, these relationships among requirements are to be reflected in CALT as "dependencies," in order to allow for effective status reporting. Figure 2 provides an overview of the CMS traceability hierarchy.

[30]Software Engineering Institute, *CMMI for Development, Version 1.3*.

[31]Business processes illustrate the interactions and information exchanges among functional activities and stakeholders (e.g., states, federal agencies, insurers, and employers) performing those activities. These associations provide information for stakeholder relationships and information exchanges to facilitate coordination and agreement among stakeholders concerning their respective roles, responsibilities, and information exchange needs.

[32]System requirements are lower-level requirements that provide additional detail from a technical point of view to allow for the implementation of a functional requirement.

Figure 2: Overview of the CMS Traceability Hierarchy for the FFM and DSH Systems



However, while the Requirements Management Plan establishes a traceability hierarchy that applies to FFM and DSH systems, CMS did not always maintain bidirectional traceability for these systems' functional requirements developed prior to initial system launch in October 2013.

Specifically, CMS did not always establish requirement dependencies for FFM and DSH functional requirements.[33] Among those that we reviewed,

- 84 percent[34] of 1,137 of the FFM eligibility and enrollment module functional requirements lacked a documented associated business process;
- nearly 54 percent of all the DSH functional requirements[35] lacked an associated business process;
- nearly 48 percent of all the functional requirements[36] for the FFM system's eligibility and enrollment module were missing the required associated dependencies for business activities and system requirements; and
- approximately 34 percent of all the DSH functional requirements were missing the required associated dependencies for business activities and system requirements.

CMS officials within the Office of Information Services recognized that there were gaps in bidirectional traceability for FFM eligibility and enrollment and DSH requirements. However, as with requirement approval, the officials stated that they had been unable to enforce consistent application of life-cycle processes because they were trying to develop the system in an expedited fashion to meet the October 2013 deadline.

[33]According to CMS's Requirements Management Plan, functional requirements must have one or more higher-level "parent" dependencies (e.g., business processes and business activities) and one or more lower-level "child" dependencies (e.g., system requirements).

[34]FFM eligibility and enrollment business process associations were not documented in CALT as required by the Requirements Management Plan. According to CMS officials within the Office of Information Services, these associations were documented in a separate spreadsheet. However, the spreadsheet only included 1,137 of the 3,779 eligibility and enrollment functional requirements. We reviewed all of the 1,137 functional requirements.

[35]As of July 2014, there were a total of 1,038 DSH functional requirements documented in CALT.

[36]As of May 2014, there were a total of 3,779 FFM eligibility and enrollment functional requirements documented in CALT.

However, by not maintaining bidirectional traceability among requirements, CMS could not ensure that key stakeholders had a clear understanding of system-wide effects as a result of changes to requirements, determine whether all source requirements had been completely addressed and whether all lower-level requirements could be traced to a valid source, and appropriately update requirements documentation for approved changes.

CMS Has Taken Steps to Establish Bidirectional Traceability for Requirements Developed After Initial System Launch

To help improve the bidirectional traceability of requirements, CMS documented and began implementing a new FFM requirements management process in June 2014. This process includes guidance on documenting traceability in a new requirements management system—the Quality Center Application Lifecycle Management tool.

Since the fall of 2014, CMS and its FFM contractors have made a concerted effort to provide bidirectional traceability within the life-cycle management tool for approved business, functional, and technical requirements for development efforts. In November 2014, FFM contractors, along with CMS officials within the Office of Information Services and Office of Legislation, demonstrated to us how the current process is providing bidirectional traceability. Specifically, contractors provided examples of business requirements and their associated functional requirements using the tool. The contractors also provided examples of how functional requirements and their associated business requirements were linked. According to the FFM contractor, as of November 2014, requirements for three increments within the financial management module and nine increments within the eligibility and enrollment module were fully traceable within the life-cycle management tool.

Going forward, effective use of this life-cycle management tool should assist CMS in maintaining bidirectional traceability and, thus, (1) facilitate the understanding of system-wide effects as a result of changes to requirements, (2) help determine whether all source requirements have been completely addressed, and (3) help determine whether all lower-level requirements can be traced to a valid source.

Systems Supporting Healthcare.gov Were Not Fully Tested, and Test Documentation Was Missing Key Elements

Testing an IT system is essential to validate that the system will satisfy the requirements for its intended use and user needs. Effective testing facilitates early detection and correction of software and system anomalies; provides an early assessment of software and system performance; and provides factual information to key stakeholders for determining the business risk of releasing the product in its current state. Best practices developed by the Institute of Electrical and Electronics Engineers (IEEE)[37] suggest that systems testing should be conducted early and often in the life cycle of a systems development project to allow for the modification of products in a timely manner, thereby reducing the overall project and schedule impacts.

In May 2011, CMS documented a testing framework that was to establish a consistent, repeatable CMS testing life-cycle process for business application and infrastructure testing. In statements of work, CMS required its FFM and DSH system development contractors to use this framework and perform testing and validation of all software releases prior to implementation. This was to include integration and end-to-end testing[38] of both the FFM and DSH systems, which would test how, for example, various modules of the FFM system work together. This testing would also assess whether the individual systems that support the federally facilitated marketplace work together as intended. Further, CMS testing documentation stated that any critical defects discovered through the testing process were to be corrected or mitigated before the system was put into production.

However, required testing was not always conducted for systems supporting Healthcare.gov. For example, as of August 2013—2 months

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[38]Integration testing is preliminary testing performed by the system developer to assess the interfaces, data, and interoperability of modules and systems within a single business application. End-to-end testing is a type of integration testing that tests all of the business application's access or touch points, and data, across multiple business applications and systems, front to back (horizontal) and top to bottom (vertical), to ensure business processes are successfully completed. Testing is conducted on a complete, integrated set of business applications and systems to evaluate their compliance with specified requirements, and to evaluate whether the business applications and systems interoperate correctly, pass data and control correctly to one another, and store data correctly.

prior to system launch—integration testing with plan issuers that were expected to connect to the DSH to send health plan information to the FFM plan management module had not been completed, with outstanding defects remaining unaddressed for the FFM system eligibility and enrollment module. In addition, end-to-end testing of Healthcare.gov and its supporting systems did not occur prior to system launch as required. Further, CMS did not always ensure that system defects found during the testing were corrected prior to system launch; thus, many defective system components were placed into production.

CMS staff within the Office of Information Services, including a Deputy Director, as well as representatives of development contractors for the DSH and FFM systems, stated that there was insufficient time to conduct all the needed testing prior to system launch. This was, in part, because requirements were still being defined in mid-2013 and there were delays in developing software that was ready for testing.

Without complete integration and end-to-end testing of the system, CMS lacked a basis for knowing if all Healthcare.gov interconnected systems could operate correctly, pass data correctly to one another, and store data correctly prior to system launch. In addition, without ensuring that defects were corrected prior to placing the system into production, CMS jeopardized its assurance that the system would function as intended.

CMS Has Begun Taking Steps to Improve Systems Testing, but Has Not Documented Its New Processes

According to officials in the Office of Information Services, CMS has taken steps aimed at improving its testing processes since the highly problematic launch of Healthcare.gov. For example, it has implemented a new tool that integrates systems development and systems testing, which is intended to provide the agency and its contractors greater visibility into the development and testing process. In addition, according to CMS officials in the Office of Information Services, business owners and other stakeholders are now to review key testing documentation to ensure proper test coverage and to validate the results.

At the time of our review the agency had not documented this new testing process. Going forward, without a clearly defined and documented process for how CMS will implement the testing tool as well as requirements for stakeholder reviews, CMS may not be able to ensure testing processes are carried out as intended.

System Test Plans Lacked Recommended Elements

A key document needed to ensure that testing is carried out effectively is a test plan. Test plans describe the technical and management approach to be followed for testing a system or a component of a system.[39] Best practices, such as those identified by IEEE,[40] call for test plans to

- identify the test items (software or system) that are the object of testing;
- provide a description of the overall approach for testing;
- identify the set of tasks necessary to prepare for and perform testing;
- identify how testing anomalies will be tracked and resolved;
- identify roles and responsibilities for individuals or groups responsible for testing;
- identify the risk issues that may adversely impact successful completion of the planned testing activities;
- identify the means by which the quality of testing processes will be assured;
- specify the necessary test environment and test data, such as hardware, software, and test support tools; and
- specify the criteria to be used to determine whether each test item has passed or failed testing.

Test plans we examined for the DSH and FFM systems included most, but not all of the recommended key elements. For example, all 19 DSH and 14 FFM system test plans documented prior to the systems launch in October 2013 identified the test items that were the object of testing; the overall approach for testing; the set of tasks necessary to prepare for and perform the testing; how testing anomalies were to be tracked and resolved; and the roles for individuals or groups responsible for testing.

[39]In this case, CMS documented multiple test plans that covered components of the system, rather than documenting a test plan that covered the entire system.

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However, a number of these test plans did not address key elements called for by best practices, relating to the quality of testing and the pass/fail testing criteria. Specifically:

- None of the 19 DSH and 14 FFM system test plans included the means by which quality of testing processes would be assured.
- Eleven of the 19 DSH and all 14 FFM system test plans were missing detailed criteria to be used to determine whether each test item has passed or failed testing.

In addition, these plans varied in the extent to which they addressed risk issues and the test environment information. Specifically:

- While all 14 FFM system test plans identified risk issues that may adversely impact successful completion of the planned testing activities, 8 of 19 DSH test plans included this information.
- While all 14 FFM test plans specified the necessary test environment and test data, such as hardware, software, and test support tools, 8 of the 19 DSH test plans included all of the information recommended by best practices.

These weaknesses existed, in part, because CMS lacked key elements in its framework. For example, the framework did not require test plans to include

- the risk issues that may adversely impact successful completion of the planned testing activities;
- the means by which the quality of testing processes will be assured; or
- the necessary test environment and test data, such as hardware, software, and test support tools.

Further, CMS officials in the Office of Information Services acknowledged the lack of certain key elements in the test plans that existed for systems supporting Healthcare.gov, and attributed this, in part, to an incomplete test plan template. Without including key information in the test plans, CMS had less assurance that testing carried out prior to initial launch was consistently executed and of sufficient quality to validate that systems supporting Healthcare.gov satisfied requirements.

Test Plans Developed After Initial System Launch Still Lacked Key Elements

Since the initial system launch, CMS has continued to develop test plans for additional FFM system functionality, and these included most, but not all, key elements. Specifically, all 11 post-October 2013 FFM system test plans included test items that are the object of testing; the overall approach for testing; the set of tasks necessary to prepare for and perform testing; how testing anomalies will be tracked and resolved; risk issues that may adversely impact successful completion of the planned testing activities; and, for the most part, specified the necessary test environment and test data, such as hardware, software, and test support tools.

Nonetheless, similar to the pre-October 2013 test plans, FFM test plans had not identified all key elements called for by best practices. Specifically, none of the 11 FFM post-October 2013 test plans specified the means by which the quality of testing processes would be assured, and 9 of the 11 test plans lacked criteria to be used to determine whether each test item has passed or failed testing.

In addition, these plans varied in the extent to which they discussed roles and responsibilities of individuals or groups responsible for testing. Specifically, while all 11 FFM test plans included the identification of roles for individuals or groups responsible for testing, 5 of these plans did not include the details regarding what tasks these individuals or groups would perform.

According to an Information Technology Specialist within the Office of Information Services, the test plan template that was used for test plan development was updated in November 2014 to include the missing key elements we identified. While updating the test plan template with missing elements is a positive step, this will not necessarily ensure key information is included in the test plan. Specifically, although the test plans we reviewed for FFM and DSH included a section for roles and responsibilities, for example, the information included was not always comprehensive and did not provide needed information. As a result, CMS may continue to lack assurance that testing is consistently executed and of sufficient quality to ensure that Healtcare.gov-related systems function as intended.

System Test Cases Included Most, but Not All, Key Information

As another key type of testing documentation, test cases describe scenarios that the system must perform to meet intended requirements.[41] Testing teams use these test cases to determine whether an application, system, or a particular system feature is working as intended. Best practices identified by IEEE[42] call for each test case to

- include a unique identifier so that each test case can be distinguished from all other test cases;
- specify all outputs and the expected behavior required of the test items;
- identify dependencies (i.e., other test cases that must be executed before the current test case);
- identify and describe the objective for the test case (e.g., what feature is being tested);
- specify the ordered description of the steps to be taken by each participant for the execution of the test procedure; and
- specify the inputs required to execute each test case (i.e., values, files, databases, etc.).

Best practices also state that test cases should be linked to requirements in order to help stakeholders ensure that there is a valid relationship between a system's requirements and the plans and procedures for testing to ensure they are met.

Test cases for components of systems supporting Healthcare.gov included some, but not all key elements. Specifically, all of the selected test cases (42 DSH and 83 FFM) that were documented prior to system launch in October 2013 included a unique identifier. However, these test cases did not always identify two other key elements called for by best

[41]In this case, a test case is documentation specifying inputs, predicted results, and a set of execution conditions for a test item.

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practices—outputs and the expected behavior and test case dependencies. Specifically:

- One of 42 DSH test cases specified outputs and the expected behavior required of the test items.
- While all 83 of the FFM test cases included expected behavior required of the test items, 12 of the 83 included outputs.
- One of 42 DSH test cases and 4 of 83 FFM test cases included dependencies.

In addition, among the test cases, results were mixed regarding the extent to which they included the objective, the description of steps, and the inputs required. Specifically:

- While all FFM test cases included the identification and description of the testing objective, 29 of 42 DSH test cases included that information.
- All the FFM test cases specified the ordered description of the steps to be taken by each participant for the execution of the procedure, but one of the DSH test cases included this information.
- Among the FFM test cases, 58 of 83 specified all of the inputs required to execute each test case, while none of the DSH test cases did so.

In addition, many of the test cases did not include enough information to allow the project team to determine whether the testing contractor had performed the test and whether or not the system passed testing. Specifically, while all 42 DSH test cases included information about whether or not the test passed or failed, 58 of the 83 FFM system test cases were missing pass/fail information.

Further, although CMS provided documents that were intended to link requirements to their corresponding test cases, in many instances these documents did not correspond to the test cases we reviewed. Specifically, for 24 of 42 DSH system test cases and 50 of 83 FFM system test cases, the documents did not include enough information to link the requirements being tested and the corresponding test cases. For example, certain documents included a list of test case unique identifiers, but did not include any information about the requirements related to those test cases. In other instances, the documents included test case

identifiers that did not use the same naming convention as the test cases we received, so it was unclear as to what test cases those documents were related to.

CMS officials in the Office of Information Services acknowledged that test case documentation for systems supporting the initial rollout of Healthcare.gov had been lacking and that there were gaps in the documentation linking the requirements being tested to the corresponding test cases. They attributed these weaknesses to not having always followed required procedures for appropriately documenting test cases. These officials added that the procedures were being followed for the contract awarded in January 2014 for the implementation of additional and enhanced functionality for the FFM system. However, we determined that test cases documented under the new development contract also lacked key elements (as described below). Without key information included in test cases, CMS was limited in its ability to ensure that documented scenarios were performed and thus that applications, systems, or features supporting Healthcare.gov activities were working as intended.

Improvements Were Made to Test Cases Developed After Initial System Launch, but Many Still Lacked Key Elements

CMS took steps to improve the quality and content of its test cases subsequent to the launch of Healthcare.gov. In particular, all 83 post-October 2013 test cases included a unique identifier, the objective for the test case, the ordered description of steps to be taken by each participant for the execution of the procedure, and expected behavior required of the test items.

However, similar to the pre-October 2013 documentation, these test cases did not always include outputs and exact values; test case dependencies; and required inputs. Specifically:

- 61 of 83 FFM test cases lacked information on outputs and exact values;
- 77 of 83 FFM test cases did not include dependencies; and
- 37 of 83 FFM test cases did not specify all the inputs required to execute each test case.

Further, although the newly developed test case documentation did not contain all recommended information, the majority of the documentation did include information to allow the project team to determine whether the testing contractor had executed the test and whether or not the system passed testing, which is a considerable improvement over the previous process. Specifically, the test procedures for 56 of the 70 newly developed test cases that we review were executed[43] and included information about whether the test case passed or failed, compared with 25 of 83 of the pre-launch test cases.

In addition, in November 2014 CMS officials in the Office of Information Services and the Office of Legislation, along with representatives from the FFM system development contractor, demonstrated that they were documenting the linkage of requirements to their corresponding test cases within the Quality Center Application Lifecycle Management tool. Going forward, use of this tool should assist CMS in ensuring that there is a valid relationship between test plans, test design, test cases, and test procedures. Nonetheless, until CMS begins to standardize and require all key elements in test case documentation, as recommended by best practices, it may continue lack information needed to determine whether an application, system, or one of its features is working as intended.

CMS, HHS, and OMB Did Not Adequately Oversee Healthcare.gov Initiative System Development

Best practices that we and the Software Engineering Institute[44] have identified emphasize the importance of project oversight as a means of ensuring project progress and that appropriate corrective actions can be taken when project performance deviates significantly from the plan. A deviation is significant if, when left unresolved, it precludes the project from meeting its objectives. Best practices call for, among other things, (1) establishing well-constructed schedules that include the entire scope of work activities; (2) estimating the level of effort to be expended by the project team on each task to assist in monitoring the progress of the project; (3) documenting and monitoring activities for managing project documentation; and (4) conducting project progress and milestone

[43]We reviewed a total of 83 test cases, and 70 of them indicated that procedures were executed. The remaining 13 test cases were not executed.

[44]GAO, *GAO Schedule Assessment Guide: Best Practices for Project Schedules–Exposure Draft*, GAO-12-120G (Washington, D.C.: May 2012) and Software Engineering Institute, *CMMI for Development, Version 1.3*.

reviews to address performance shortfalls and understand how well requirements are being met.

However, CMS did not always (1) ensure project schedules for Healthcare.gov and its supporting systems were well-constructed; (2) estimate level of effort for DSH and FFM functional requirements; (3) implement data management and monitoring processes; and (4) conduct all recommended and required project progress and milestone reviews. CMS officials within the Center for Consumer Information and Insurance Oversight and the Office of Information Services attributed these weaknesses, in part, to challenges with enforcing consistent application of life-cycle processes while trying to develop the system in an expedited fashion to meet the October 2013 deadline. As a result, without adequate and comprehensive information that would be key for understanding the project's progress, CMS and other oversight agencies may not have the data necessary to appropriately evaluate the project and take corrective actions.

Healthcare.gov Schedules Were Not Well-Constructed

A project schedule is a fundamental management tool that specifies when work will be performed in the future and allows for measuring project performance against an approved plan. To this end, our Schedule Assessment Guide states that a project should be guided by an integrated master schedule[45] that reflects the entire scope of work activities. An integrated master schedule may be made up of several or several hundred individual schedules that represent portions of work within a program. These individual schedules are "subprojects" within the larger program.

CMS did not always have a comprehensive integrated master schedule prior to system launch in October 2013. For example, IV&V assessment reports issued in December 2012, February 2013, and May 2013 identified weaknesses in project scheduling throughout the Healthcare.gov development process. For example:

[45]An integrated master schedule constitutes a program schedule as a network of logically linked sequences of activities that includes the entire required scope of effort, including the effort necessary from the government, contractors, and other key parties for a program's successful execution from start to finish. The integrated master schedule includes all government, contractor, and external effort; and the government program management office is ultimately responsible for its development and maintenance. See GAO-12-120G.

- Activities related to FFM and DSH system implementation and the timeline for the design of the DSH database were not included in the integrated master schedule.
- Certain key development activities were not included in the FFM integrated project schedule.
- The FFM testing schedule and the DSH planning schedule did not contain resource assignments needed to complete the work as planned.

Therefore, management's ability to monitor productivity or make effective decisions on the allocation of resources was severely limited.

CMS Took Steps to Improve Project Schedules after Initial Launch, but Schedules Were Not Always Well-Constructed

After awarding the new FFM development contract in January 2014, CMS re-evaluated project schedules for systems supporting Healthcare.gov. However, project schedules developed since then were not always well-constructed.

Best practices identified by us[46] for developing well-constructed schedules include the following:

- **Logically sequencing all work activities**. The schedule should be planned so that critical project dates can be met. To do this, activities need to be logically sequenced—that is, listed in the order in which they are to be carried out. In particular, activities that must be completed before other activities can begin (predecessor work activities), as well as activities that cannot begin until other activities are completed (successor work activities), should be identified. Date constraints and lags[47] should be minimized and justified to help ensure that the interdependence of activities that collectively lead to the completion of events or milestones can be established and used to guide work and measure progress.

[46]GAO-12-120G.

[47]A date constraint predefines the start, finish, or both dates of an activity. A lag in a schedule denotes the passage of time between two activities. Lags have a specific use in scheduling but may be misused to force activities to begin on specific dates.

- **Confirming that the critical path is valid**. The schedule should identify the program critical path[48]—the path of longest duration through the sequence of work activities. Establishing a valid critical path is necessary for examining the effects of any activity's slipping along this path. The program critical path determines its earliest completion date and focuses the project team's energy and management's attention on the activities that will lead to the project's success. Because a critical path defines a project's earliest completion date, it must be a continuous sequence of activities from the schedule's status date to the finish milestone.

- **Ensuring reasonable total float**. The schedule should identify reasonable total float[49] so that the schedule's flexibility can be determined. Large total float on a work activity indicates that the work activity can be delayed without jeopardizing the finish date. The length of delay that can be accommodated without the finish date's slipping depends on a variety of factors, including the number of date constraints within the schedule and the amount of uncertainty in the duration estimates, but the work activity's total float provides a reasonable estimate of this value. As a general rule, activities along the critical path have the least total float.

CMS has made an effort to tie all subprojects into an integrated master schedule and to capture all of the required effort for the Healthcare.gov initiative. Specifically, the agency had documented at least 26 subproject schedules within the integrated master schedule. However, our review of schedules for 4 of 17 FFM subprojects[50] determined that these schedules did not always include key characteristics of a well-constructed schedule.

CMS did not always logically sequence all work activities. For example, the Plan Management subproject schedule lacked successor or predecessor work activities on 12 percent of its remaining activities, and the Eligibility Business Operations project schedule lacked successor or

[48]The critical path represents a true model of the activities that drive the project's earliest completion date and total float accurately depicts schedule flexibility.

[49]Total float is the amount of time by which a predecessor work activity can slip before the delay affects the project's estimated finish date.

[50]The FFM integrated master schedule contained 17 subproject schedules. We selected 4 schedules that relate to the Plan Management, Small Business Health Options Program, Financial Management, and Eligibility and Enrollment modules of the Federally Facilitated Marketplace System.

predecessor activities for 9 percent of its remaining activities. In addition, a significant number of date constraints were reflected in the project schedules, and for the majority of them the agency did not provide a justification. For example, we identified date constraints on 26 percent of the remaining work activities in both the Financial Management and Small Business Health Options Program[51] schedules.

CMS did not always ensure that project schedules had a valid critical path. For example, two of the four selected schedules—for the Eligibility Business Operations and the Financial Management projects—did not have valid critical paths because there were several gaps of time where no critical activities were scheduled. Specifically, the critical path for the Eligibility Business Operations schedule had four gaps, ranging from 8 to 15 days, where no critical activities were scheduled. The Financial Management schedule had a gap of nearly 6 months with no critical activities scheduled.

In addition, the other two schedules—for the Small Business Health Options Program and Plan Management projects—did not have valid critical paths because the paths were determined by long-duration support and management activities rather than discrete, well-defined work. For example, the Small Business Health Options Program schedule includes management activities such as “Operations Management” and “Deployments Management” that appear in the schedule as critical activities. However, a critical path cannot include these types of activities because, by their very nature, they do not represent discrete effort.

CMS did not always ensure reasonable total float. Each of the four project schedules we reviewed appeared to be overly flexible, allowing for many activities to slip a significant number of days before impacting the dates of key events. For example, the Plan Management schedule allowed 50 percent of its remaining activities to slip more than 98 working days before impacting the key finish milestone. Additionally, according to the schedules, remaining activities in the Small Business Health Options Program, Financial Management, and Eligibility Business Operations schedules could be delayed an average of 49 to 50 days before causing the project finish dates to be delayed. Inaccurate values of total float

[51]PPACA requires the creation of Small Business Health Options Program exchanges, where small businesses can shop for and purchase health coverage for their employees.

falsely depict true project status, which could lead to decisions that may jeopardize the project.

Table 1 below summarizes how well the current subprojects' schedules met best practices.

Table 1: Extent to Which FFM System Project Schedules Met Best Practices

Best practice	Financial Management	Eligibility Business Operations	Plan Management	Small Business Health Options Program
Sequence all activities	◑	◑	◑	◑
Confirm that the critical path is valid	◔	◑	◔	◔
Ensure reasonable total float	◑	◑	◑	◑

Key:
◑ The best practice was partially met. "Partially met" means the program provided evidence that satisfies about half of the elements of the best practice.
◔ The best practice was minimally met. "Minimally met" means the program provided evidence that satisfies a small portion of the elements of the best practice.

Source: GAO analysis of agency provided data. | GAO-15-238

Because these project schedules did not fully meet key practices for ensuring that they are well-constructed, they are limited as tools for gauging progress and providing reliable estimates of project timelines. In addition, because the reliability of an integrated master schedule depends in part on the reliability of its subordinate schedules, the weaknesses in these schedules will be reflected in the overall schedule for the Healthcare.gov effort.

Level of Effort Was Not Consistently Estimated

Level-of-effort estimates are used to estimate the amount of time a project will take to develop. According to the Software Engineering Institute,[52] this involves estimating the amount of time and resources to be spent on each work item, such as developing functional requirements for a system. These estimates can then be compared to the actual time and resources expended on each work item. This allows the project's stakeholders to determine how well the project is progressing and whether schedules should be adjusted or additional resources need to be applied.

Consistent with best practices, the CMS Requirements Management Plan documented specifically for the FFM and DSH systems required system

[52]Software Engineering Institute, *CMMI for Development, Version 1.3*.

development teams to estimate the level of effort for each functional requirement and those estimates to be recorded in CALT. The level-of-effort estimates, according to the plan, were to be used to inform velocity—that is, how quickly the project was being developed.

However, CMS and its contractors rarely documented levels of effort for the FFM and DSH functional requirements prior to initial system launch in October 2013. Specifically, nearly 100 percent of the FFM eligibility and enrollment functional requirements and nearly 84 percent of the DSH functional requirements documented prior to initial launch were missing the estimated levels of effort.

According to agency officials in the Office of Information Services, contractor earned value management[53] and other financial reports were used in the place of level of effort estimates to track contractor progress. However, the officials agreed that, while these reports would allow them to track the progress made on total project cost estimates, these reports would likely not provide the full insight necessary on how project development was progressing as could be provided with level-of-effort estimates.

Due to the lack of level-of-effort estimation, all subsequent monitoring mechanisms that depended on these estimates, including velocity reports, would have provided minimal guidance to CMS and its contractors in monitoring work status and the remaining time needed to complete projects.

CMS Has Taken Steps to Estimate Level of Effort for Major System Modules and Supporting Projects, but Has Not Developed or Documented This Policy or Procedures

As part of CMS's efforts to improve project management processes after initial launch of Healthcare.gov and its supporting systems, agency officials stated in August 2014 that they had begun the process of estimating levels of effort and including that information in a system that they historically used to track software defects. They stated that CMS planned to use this system to track further FFM software development

[53]Earned value management is a project management tool that integrates project scope with cost, schedule and performance elements for purposes of project planning and control.

efforts, in order to provide more visibility into progress being made by the systems' development contractors. In addition, the agency provided documentation to demonstrate its progress in estimating level of effort for the FFM system. Specifically, the documentation showed that FFM contractors had begun estimating levels of effort for major system modules and supporting projects.

However, current CMS policy does not address estimating level of effort, including how it should be calculated and applied. Specifically, neither CMS's eXpedited Life Cycle (XLC) process nor its newly developed Requirements Management Guide addresses estimating level of effort at any level. As a result, it will be difficult for agency officials to have reasonable assurance that level-of-effort estimates are developed and calculated and applied in a consistent manner and, therefore, it may be limited as a tool for accurately monitoring progress.

CMS Lacked Effective Data Management Monitoring Practices

Best practices identified by the Software Engineering Institute[54] state that explicit specifications should be made concerning what, how, where, and when data should be collected and stored to ensure their validity and to support later use for analysis and documentation purposes. In this case, data are forms of documentation required to support a project in various areas (e.g., administration, configuration management, and quality). These documents, among other things, are then used by project stakeholders to conduct project oversight. Best practices further call for activities for managing these data to be documented and monitored to ensure that data management requirements are being satisfied. Depending on the results of monitoring and changes in project requirements, situation, or status, it may be necessary to re-plan the project's data management activities.

To facilitate a consistent process for managing documents, including those that define requirements, CMS developed a guide in April 2012 for internal and external stakeholders (e.g., other federal agencies providing eligibility determination information).[55] This guide requires the use of

[54]Software Engineering Institute, *CMMI for Development, Version 1.3*.

[55]CMS, *Business Architecture Baseline Reconciliation: CALT & Process Updates*, Apr. 18, 2012.

CALT[56] for managing project data and functional requirements. Specifically, the guide calls for updates to the status of each requirement as development progresses to help facilitate project oversight. In addition, the guide provides and defines specific status designations, such as "system requirement approved" and "ready for development." Further, the agency's Requirements Management Plan documented specifically for the FFM and DSH systems required that CALT be used for storing various project management documentation, including requirements; source code; network, hardware, and infrastructure descriptions; test cases; test results; and system defects.

However, CMS and its contractors did not effectively implement data management processes. For example, they used status designations that were not standardized or defined, which would have hindered CMS's ability to analyze project progress and effectively oversee the development for the FFM and DSH systems. Specifically:

- seven undefined status designations, such as "grooming in progress," were used for the DSH functional requirements; and
- two undefined status designations, "artifact confirmed" and "planned development completed," were used for the FFM eligibility and enrollment module functional requirements.

Further, key project management documentation was not always stored in CALT as required, which impeded reviews of the development effort. For example, documents needed for reviews by the IV&V assessment team in September 2012 and December 2012, such as quality assurance testing results and hardware and software requirements documents, were located on a contractor's SharePoint site and were not uploaded to CALT. This would have made it difficult for the assessment team to conduct their review.

CMS officials in the Office of Information Services stated that project owners of each individual effort, to include the DSH and the FFM systems, were given autonomy in managing the status of functional requirements within CALT. Consequently, it was difficult for CMS officials responsible for overseeing the entire project to ensure consistency in

[56]The purpose of CALT was to facilitate communication, collaboration, management, and governance within the project.

managing project documentation across each individual project team, of which there were over 200 during the initial development of Healthcare.gov and its supporting systems. The CMS Deputy Chief Information Officer added that because project teams were receiving new requirements well into the development process, required documentation was not always a high priority.

This lack of a consistent process for managing project data prior to initial system launch increased the risk that CMS would not have been able to appropriately and effectively (1) monitor the progress of functional requirements as they were being developed, (2) ensure all key documentation needed for overseeing project development activities was documented and updated, and (3) monitor data management.

Weaknesses in Data Management Practices Continued after Initial Launch, but CMS Has Plans to Address Them

Subsequent to initial system launch, problems in CMS's data management practices persisted. For example, contractor staff stated that several documents we requested for our review had not yet been uploaded to CALT. Instead, these documents were stored on contractor systems, and thus were not readily available for project oversight. In addition, folders within CALT were not always well-organized, making locating relevant documentation difficult and time consuming. For example, many of the folders were similarly named, or the names of the folders were too vague to determine what documents were included within them. To illustrate, three sub-folders within the same folder were named "UAT." In addition, while certain software release folders were named by software release number, others were named using a calendar date, making it difficult to know what documentation was relevant to each release.

To help mitigate weaknesses in data management monitoring, CMS developed a document management reference guide for the FFM system in July 2014 to establish a process for managing documents created by the FFM development contractor. The guide specified necessary steps for uploading and tracking documents in CALT. In addition, CMS has revised its procedures for tracking the status of requirements through design and testing, and no longer uses undefined status designations.

CMS officials in the Office of Information Services stated that, once open enrollment for 2015 has ended, they intend to perform a review of all required CALT documentation, identify missing documents, and locate

and upload those documents into CALT. The officials said they expect this effort to be completed by April 2015.

CMS Does Not Always Conduct Progress and Milestone Reviews

According to best practices outlined by the Software Engineering Institute, the purpose of a progress review is to provide relevant stakeholders the results and impacts of a project's activities and to determine whether there are significant issues or performance shortfalls to be addressed. Milestone reviews are pre-planned events or points in time at which a thorough review of status is conducted to understand how well stakeholder requirements are being met.[57] These reviews are important to ensure that a project is progressing as planned and to identify corrective actions needed.

Consistent with best practices, CMS requires progress and milestone reviews for each newly developed system. According to the CMS XLC—its system development life-cycle process—the purpose of these reviews is to provide management and stakeholders with the opportunity to assess project work to date and identify any potential issues. The CMS XLC calls for a project process agreement, which is to serve as an agreement between CMS and its development contractors on the progress and milestone reviews and artifacts (i.e., documentation) required for a project. The agency has identified 11 different progress and milestone reviews which vary depending on the complexity of the project. These reviews are to be conducted by CMS governance boards, which are to approve the project to continue with the next phase of the systems development life cycle. Table 2 describes the progress and milestone reviews documented in the CMS XLC.

[57]Software Engineering Institute, *CMMI for Development*, version 1.3.

Table 2: Progress and Milestone Reviews Identified in CMS System Life-Cycle Guidance

Review	Description
Architecture Review	Determines whether the proposed project potentially duplicates, interferes, contradicts, or can leverage another investment that already exists, is proposed, under development, or planned for near-term disposition. The business need is assessed to determine if the IT project is sound and conforms to the CMS enterprise architecture. The XLC does not recommend any project management artifacts for the architecture review.
Investment Selection Review	Determines if the IT project is sound and viable, among other things. The business need and objectives are reviewed to ensure the effort supports CMS's overall mission and objectives. This is an outward-focused review designed to ensure that funding and approval proceed from senior leadership. Among the artifacts required for this review are the project charter and project process agreement. According to the XLC, the project charter authorizes the existence of a project and provides the authority to proceed and apply organizational resources. Additionally, the project process agreement is a key XLC artifact that authorizes and documents the justifications for using, not using, or combining specific reviews and the selection of specific work products. The XLC recommends the project charter and project process agreement as project management artifacts for the investment selection review.
Project Baseline Review	Obtains management approval that the scope, cost, and schedule that have been established for the project are adequately documented and that the project management strategy is appropriate for moving the project forward in the life cycle. The project baseline review includes review of the budget, risk, and user requirements for the investment; emphasis should be on the total cost of ownership and not just development or acquisition costs. The XLC recommends project management artifacts such as the project management plan, project schedule, action items, decision log, issues list, and lessons learned for the project baseline review.
Requirements Review	Verifies that the requirements are complete, accurate, consistent, and problem-free; evaluates the responsiveness to the business requirements; ensures that the requirements are a suitable basis for subsequent design activities; ensures traceability between the business and system requirements; and affirms final agreement regarding the content of the requirements document by the business owner. The XLC recommends project management artifacts such as the action items, decision log, issues list, and lessons learned for the requirements review.
Preliminary Design Review	Verifies that the preliminary design satisfies the functional and nonfunctional requirements and conforms with the CMS Technical Reference Architecture; determines the technical solution's completeness and consistency with CMS standards; and raises and resolves any technical and/or project-related issues to identify and mitigate project, technical, security, and/or business risks affecting continued detailed design and subsequent development, testing, implementation, and operations and maintenance activities. The XLC recommends project management artifacts such as the action items, decision log, issues list, and lessons learned for the preliminary design review.
Detailed Design Review	Verifies that the final design satisfies the functional and nonfunctional requirements and conforms with the CMS Technical Reference Architecture; determines the technical solution's completeness and consistency with CMS standards; and raises and resolves any technical and/or project-related issues to identify and mitigate project, technical, security, and/or business risks affecting continued detailed design and subsequent development, testing, implementation, and operations and maintenance activities. For highly complex projects, the detailed design review is a governance review with the technical review board. The XLC recommends project management artifacts such as the action items, decision log, issues list, and lessons learned for the detailed design review.

Review	Description
Validation Readiness Review	Ensures that the system/application has completed thorough development testing and is ready for turnover to the formal, controlled test environment for validation testing. The XLC recommends project management artifacts such as the action items, decision log, issues list, and lessons learned for this review.
Implementation Readiness Review	Ensures that the system/application has completed thorough integration testing and is ready for turnover to the formal, controlled test environment for production readiness. The XLC recommends project management artifacts such as the action items, decision log, issues list, and lessons learned for this review.
Production Readiness Review	Ensures that the infrastructure contractor's operational staff has the appropriate startup and shutdown scripts, accurate application architecture documentation, application validation procedures, and valid contact information to ensure operability of infrastructure applications. The XLC recommends project management artifacts such as the action items, decision log, issues list, and lessons learned for this review.
Operational Readiness Review	Ensures that the system/application completed its implementation processes according to plan and that it is ready for turnover to the operations & maintenance team and operational release into the production environment. The XLC recommends project management artifacts such as the action items, decision log, issues list, and lessons learned for the Operational Readiness Review.
Post-Implementation Review	Assesses how well the system/application performance meets its goals and recommends continued operations, changes to operations, or retirement. The XLC recommends project management artifacts such as the project closeout report for the Post-Implementation Review.

Source: CMS eXpedited Life Cycle Process. | GAO-15-238

The FFM, DSH, and Enterprise Identity Management systems were all deemed highly complex[58] by CMS; as such, CMS guidance recommends, but does not require, that they undergo all of the reviews discussed above. However, the three systems did not undergo all the recommended reviews. CMS documented a project process agreement for the Enterprise Identity Management system in January 2012 which stated that it should undergo 10 of the 11 progress and milestone reviews (all but the Investment Selection Review) and specified the required artifacts for each review. However, the agency could not demonstrate that 5 of these reviews were held. CMS officials stated that 4 of these 5 reviews had been performed, but they could not provide any evidence to show this performance. For the DSH and FFM systems, the agency did not document project process agreements, and it provided evidence that some, but not all, of the recommended reviews were held for each. Table 3 shows the recommended reviews for a highly complex system and whether or not those reviews were held for each system.

[58]CMS's highest complexity level applies to projects that either (1) require a new, one-of-a-kind design and development effort to support an enterprise-, center-, or department-specific IT solution or (2) have or will have significant security and risk implications.

Table 3: Progress and Milestone Reviews Held for Systems Supporting Healthcare.gov Launched on October 1, 2013 Based on Available Evidence

Reviews	Enterprise Identity Management system	DSH	FFM
Architecture Review	●	●	●
Investment Selection Review	n/a[1]	○	○
Project Baseline Review	○[2]	●	○
Requirements Review	○[2]	●	○
Preliminary Design Review	●	●	●
Detailed Design Review	●	●	●
Validation Readiness Review	●	●	○
Implementation Readiness Review	○[2]	○	○
Production Readiness Review	○[2]	○	●
Operational Readiness Review	●	●	●
Post-Implementation Review	○	○	○

Key:
● The review was held.
○ The review was not held.
Table Notes:
[1]The review was waived in the project process agreement.
[2]CMS officials could not demonstrate that this review was held; however, they indicated that it was performed.
Source: GAO analysis of agency-provided data. | GAO-15-238

In addition to the lack of progress and milestone reviews, CMS did not always ensure required artifacts for each review were developed. For example, for FFM system reviews, the agency could not provide such recommended artifacts as action items, decision logs, and lessons learned, which are to be used by stakeholders for decision making and assigning tasks.

CMS officials in the Office of Information Services told us not all the reviews recommended by the XLC were held for DSH because they followed a customized review process, which included reviews that were not defined by the XLC. However, the documentation CMS provided that was to detail this customized process did not clearly state what reviews were required nor describe what these reviews were to accomplish.

The Office of Information Services officials acknowledged gaps in required FFM system reviews and quality assurance plans as well as delays in completion of required documentation as the cause. The officials also stated that the agency's ability to schedule and conduct gate

reviews was compromised due to slippages in scheduled deliverables. However, it is unclear whether or not the contractors were aware of the required reviews since the FFM and DSH systems both lacked project process agreements.

Regarding the missing review artifacts, the officials further stated that all critical artifacts for each gate review were developed and that the missing artifacts were non-critical. However, the CMS life-cycle framework does not designate artifacts as critical or non-critical, nor does it define these terms. By not ensuring that required progress and milestone reviews took place and that all required artifacts were developed, CMS stakeholders lacked full awareness of the results and impacts of the project's activities and significant issues or performance shortfalls to be addressed.

CMS Has Taken Steps to Improve Processes for Project and Milestone Reviews, but All Required Reviews Have Not Been Held

In January 2014, CMS began taking steps to improve its oversight processes for conducting progress and milestone reviews. These improvements, according to officials in the Office of Information Services, included requiring greater collaboration between CMS and its contractors; increasing the number and frequency of contract deliverables, which would include key artifacts provided during the reviews; and placing greater emphasis on progress and milestone reviews as well as formal signoffs prior to the next life-cycle phase. Additionally, in May 2014 and June 2014, CMS documented project process agreements for the portions of the FFM system that were to be developed under the new contract.

Despite these efforts, CMS had not documented a project process agreement for DSH as of December 2014. In addition, although Office of Information Services officials stated that they had held all the required reviews for the portions of the FFM system that had been placed into production at the time of our review,[59] they were unable to provide evidence for 5 of 20 required reviews. Table 4 below shows the required reviews for the FFM system and whether or not those reviews were held

[59]These portions of the FFM system are (1) Eligibility and Business Operations, which is part of the Eligibility and Enrollment module; (2) EDGE Server, which is part of the Financial Management module; and (3) the Plan Management module.

for newly developed portions of the FFM system that were in production as of July 2014.

Table 4: Progress and Milestone Reviews Held for FFM Releases in Production as of July 2014 Based on Available Evidence

Reviews	Eligibility and Business Operations[1]	EDGE Server[2]	Plan Management[3]
Architecture Review	n/a[4]	n/a[4]	n/a[4]
Investment Selection Review	n/a[4]	n/a[4]	n/a[4]
Project Baseline Review	n/a[4]	○[5]	n/a[4]
Requirements Review	○[5]	n/a[4]	○[5]
Preliminary Design Review	●	●	●
Detailed Design Review	●	●	●
Validation Readiness Review	●	●	●
Implementation Readiness Review	●	●	●
Production Readiness Review	●	○[5]	●
Operational Readiness Review	○[5]	n/a[4]	●
Post-Implementation Review	n/a[4]	n/a[4]	n/a[4]

Key:
● The review was held.
○ The review was not held.
Notes:
[1]This includes increments 1 and 2.
[2]This includes increment 1.
[3]This includes increments 1, 2, and 3.
[4]The review was either waived in the project process agreement, or the review would not yet have occurred for new development releases in 2014.
[5]According to CMS this review was held, but evidence of the review was not provided.
Source: GAO analysis of agency-provided data. | GAO-15-238

In addition, CMS was not always following the FFM project process agreement. For example, Office of Information Services officials stated that production readiness reviews and operational readiness reviews were combined for certain increments. However, these reviews have different purposes, and the project process agreements stated that they should occur separately.

This approach to conducting reviews puts CMS at continued risk that stakeholders may not be provided sufficient information on the results and impacts of Healthcare.gov-related activities, identify significant issues or performance shortfalls that need to be addressed, and understand how well requirements are being met. In addition, inconsistent application of

the project process agreements may lead to key reviews continuing to be missed and approvals not being obtained.

We previously reported the lack of certain progress and milestone reviews in a report on Healthcare.gov contract management.[60] We recommended that HHS direct CMS to ensure that information technology projects adhere to requirements for governance board approvals before proceeding with the next phase of the systems development life cycle. HHS agreed with and had begun to take actions to address our recommendation.

HHS Had a Limited Role in Overseeing the Development and Implementation of Healthcare.gov and Its Supporting Systems

The Secretary of HHS is required by law and OMB guidance to designate a CIO to be responsible for the management of agency information and information technology.[61] CIO responsibilities include providing advice and other assistance to agency heads and other senior management personnel on IT acquisition and management, monitoring the performance of IT programs (including whether to continue, modify, or terminate a program or project), and ensuring compliance with information security requirements. More recently, Congress has reaffirmed the importance of CIOs having a strong role in overseeing IT at executive branch agencies. Specifically, in December 2014, new federal information technology acquisition reform requirements were included in the National Defense Authorization Act, to ensure that the CIO has a significant role in the management, governance, and oversight processes related to their agency's IT investments.[62]

[60]GAO, *HeathCare.gov: Ineffective Planning and Oversight Practices Underscore the Need for Improved Contract Management*, GAO-14-694 (Washington, D.C.: July 30, 2014).

[61]44 U.S.C. § 3506(a), as amended by Pub. L. No. 104-106, § 5125 (Feb. 10, 1996), and 40 U.S.C. § 11315 (Paperwork Reduction Act of 1995 and the Clinger-Cohen Act of 1996); 44 U.S.C. 3501 note (E-Government Act of 2002, Pub. L. No. 107-347, § 202), and 44 U.S.C. § 3544(a)(3) (Federal Information Security Management Act of 2002), which as of Dec. 18, 2014, was superseded by 44 U.S.C. § 3554(a)(3) (Federal Information Security Modernization Act of 2014, Pub. L. No. 113-283); and OMB, *Memorandum for Heads of Executive Departments and Agencies*, M-11-29 (Washington, D.C.: Aug. 8, 2011).

[62]See Carl Levin and Howard P. 'Buck' McKeon National Defense Authorization Act for Fiscal Year 2015, Pub. L. No. 113-291, Div. A, Title VIII, Subtitle D—Federal Information Technology Acquisition Reform, § 831 (Dec. 19, 2014), adding 40 U.S.C. § 11319.

In March 1996, the Secretary of HHS delegated the Secretary's IT-related authorities under the Clinger-Cohen Act to the HHS CIO. The CIO in turn requested that operating division heads designate a CIO for their respective divisions, and that the operating division CIOs serve as members of the department's IT Investment Review Board. This board, which is chaired by the HHS CIO, is to review, validate, and approve selected IT investments in the department's portfolio.[63] An IT investment may be selected for review at any time during its life cycle if it is high risk and high value, is a high-visibility initiative, or is performing poorly, among other criteria. This is consistent with key practices outlined in our IT investment management guide, which call for the establishment of an enterprise-wide investment review board to be composed of senior executives from IT and business units, who are to be given the responsibility for defining and implementing the organization's IT investment governance process.[64]

Beyond the actions taken by CMS, in August 2011, OMB issued a memorandum[65] to all agency heads, stating that the role of the CIO should be moved away from just policymaking and infrastructure maintenance to true portfolio management for all IT. The memo was intended to clarify the primary responsibility for agency CIOs, to include responsibility over the entire IT portfolio for the agency and for terminating or turning around underperforming investments.

Although the Secretary of HHS appointed a CIO, this official had a limited role in overseeing the development and implementation of Healthcare.gov and its supporting systems. The HHS CIO stated that his office did not conduct oversight of the initial design and development for Healthcare.gov and its supporting systems. The CIO further stated that the status of the Healthcare.gov development project was occasionally discussed at regular monthly meetings with senior leadership from each operating division. However, the CIO stated that no issues with

[63]These responsibilities are outlined in the HHS policy for capital planning and investment control.

[64]GAO, *Information Technology Investment Management: A Framework for Assessing and Improving Process Maturity (Supersedes AIMD-10.1.23),* GAO-04-394G (Washington, D.C.: March 2004).

[65]M-11-29.

Healthcare.gov and its supporting systems were raised in these meetings prior to initial system launch.

In addition, although HHS established a process through its IT Investment Review Board that may have revealed technical issues with Healthcare.gov and its supporting systems, the CIO stated that the board has not been active for 2 to 3 years. The CIO also stated that the department is large and federated[66] and his office's ability to oversee its operating divisions, such as CMS, is limited. He added that oversight reviews are conducted within the operating divisions by their own investment review boards.

By not effectively monitoring the performance of the Healthcare.gov initiative prior to the initial launch in October 2013, the HHS CIO was not appropriately positioned to advise the Secretary on actions that should be taken to improve the program.

The Office of the CIO Expanded Its Oversight Role after Initial Launch, but a Key Review Board Is Still Not Active

The HHS Office of the CIO (OCIO) has expanded its oversight role for the Healthcare.gov initiative since initial launch by convening regular meetings and briefings discussing the Healthcare.gov initiative with officials at various levels. The CIO stated that CMS now regularly shares project documentation with OCIO, which allows them to have better insight as to the status of the project and its development activities.

The HHS CIO also stated that although he now has greater insight into the project's development progress, he does not believe he has the authority to manage IT investments at the operating division level, which includes the Healthcare.gov initiative. However, as previously noted, federal law and OMB guidance place responsibility for overseeing and managing the department's IT investments with the CIO. Thus, the CIO should be positioned within the department to successfully exercise his authority.

Further, the department-wide investment review board called for by HHS policy would provide a mechanism for carrying out these responsibilities,

[66]A federated agency is one where divisions within the agency are responsible for governance within their respective organizations.

although it has not met for the past 2 to 3 years, according to the CIO. Until the department-wide investment review board carries out its assigned duties, the oversight that HHS provides for Heathcare.gov-related projects may continue to be limited, potentially resulting in missed opportunities to take timely corrective actions on poorly performing projects.

OMB Had a Limited Role in Overseeing the Development and Implementation of Healthcare.gov and Its Supporting Systems

By law, OMB oversees the management by federal agencies of information and information technology.[67] OMB's responsibilities include establishing processes to analyze, track, and evaluate the risks and results of major capital investments in information systems made by executive agencies, as well as issuing guidance on processes for selecting and overseeing agency privacy and security protections for information and information systems. OMB's guidance under these authorities has included directions to agencies on the roles and responsibilities of CIOs and the establishment of IT investment management processes.[68]

In June 2009, OMB launched the Federal IT Dashboard as a public website that reports performance and supporting data for major IT investments. The dashboard is to provide transparency for these investments in order to facilitate public monitoring of government operations and accountability for investment performance by the federal CIOs who oversee them. According to OMB, it began using the dashboard to identify at-risk investments with its launch in June 2009. These investments became the focus of joint OMB-agency TechStat Accountability Sessions (TechStats)—evidence-based reviews intended to increase accountability and transparency and to improve investment performance through concrete actions.

In January 2010, OMB began conducting TechStat sessions to enable the federal government to intervene by turning around, halting, or terminating IT projects that are failing or are not producing results. OMB has identified

[67]40 U.S.C. §§ 11302, 11303 (Clinger-Cohen Act); 44 U.S.C. § 3504 (Paperwork Reduction Act); 44 U.S.C. § 3602 (E-Government Act); 44 U.S.C. § 3543 (Federal Information Security Management Act of 2002), which, as of Dec. 18, 2014, was superseded by 44 U.S.C. § 3553 (Federal Information Security Modernization Act of 2014); 5 U.S.C. § 552a (Privacy Act).

[68]See, e.g., OMB Circular No. A-130, Management of Federal Information Resources, sec. 9(a) (65 Fed. Reg. 77677, Dec. 12, 2000).

factors that may result in an investment being selected for a TechStat session, such as—but not limited to— evidence of (1) poor performance, (2) unmitigated risks, and (3) misalignment with policies and best practices. Although OMB called for agencies to work with their CIOs to conduct TechStat sessions at the agency level beginning in December 2010, OMB may still select investments for review. Agency CIOs or OMB select these high-risk projects for evaluation, and conduct a review of the proposed improvement plans, revised schedules, and potential changes to budget requests.

Although OMB plays a key role in overseeing the implementation and management of federal IT investments, its involvement in overseeing the development efforts of Healthcare.gov and its supporting systems was limited prior to the initial launch in October 2013. According to officials within OMB's Office of E-Government and Information Technology, headed by the Federal CIO, OMB's role in overseeing the development of Healthcare.gov and its supporting systems was limited to bringing CMS and its federal partners together to work across technical teams, clarifying federal policy guidance, and overseeing the project's budget.

In particular, OMB facilitated monthly meetings of an IT steering committee consisting of CMS and other key stakeholders (e.g., other federal agencies providing eligibility determination information) that were held to coordinate inter-agency efforts on broader federal marketplace IT work. The meetings, which began in March 2012 and ended in September 2013, primarily focused on addressing key federal marketplace information-sharing policies and identifying barriers to implementation as well as working with federal departments and agencies as necessary on the implementation and execution of the Patient Protection and Affordable Care Act.

However, although the Healthcare.gov initiative was considered a high-risk project and independent evaluations and the IT Dashboard identified problems well before its deployment, OMB officials did not select this investment for a TechStat review. Specifically, the dashboard indicated a high-risk evaluation status of Healthcare.gov in March 2013. Officials in the Office of E-Government and Information Technology stated that it was HHS's responsibility to select the investment for TechStat, but agreed that

they retained the right to select investments themselves for review.[69] However, in the case of the Healthcare.gov initiative, OMB did not do so although the IT Dashboard indicated problems 7 months prior to the initial launch of Healthcare.gov and its supporting systems.

We reported in 2011 that the Federal IT Dashboard has enhanced OMB's oversight of federal IT investments.[70] Among other things, we noted that performance data from the dashboard were being used to identify poorly performing investments for executive leadership review sessions. However, in taking steps to oversee the management of the Healthcare.gov IT investment, OMB did not effectively use information provided by this mechanism to analyze, track, and evaluate the risks of this major investment.

OMB Took Additional Steps to Provide Oversight by Establishing the U.S. Digital Service

Shortly after initial system launch on October 1, 2013, OMB, along with the Federal CIO, assisted HHS and CMS with addressing the technical issues that existed with Healthcare.gov and its supporting systems. Officials in the Office of E-Government and Information Technology stated that after technical issues were reported during initial launch of the system, the role of the Federal CIO was primarily to explore ways to improve the customer experience with the website.

In addition, in August 2014, the administration established the U.S. Digital Service,[71] in part to respond to issues with Healthcare.gov and its supporting systems. This service is to collaborate with federal agencies to

[69]We previously recommended that OMB require agencies to conduct TechStats for each IT investment rated with a moderately high- or high-risk CIO rating on the IT Dashboard, unless there is a clear reason for not doing so. OMB generally concurred with our recommendation. See GAO, *Information Technology: Additional Executive Review Sessions Needed to Address Troubled Projects*, GAO-13-524 (Washington, D.C.: June 13, 2013).

[70]GAO, *Information Technology: OMB Has Made Improvements to Its Dashboard, but Further Work Is Needed by Agencies and OMB to Ensure Data Accuracy,* GAO-11-262 (Washington, D.C.: Mar. 15, 2011).

[71]The U.S. Digital Service is a small team of digital experts that collaborate with other government agencies to make federal websites more consumer friendly, to identify and fix problems, and to help upgrade the government's technology infrastructure.

identify and correct problems with government websites, among other things. OMB's Deputy Federal CIO serves as the Administrator of the U.S. Digital Service. The mission of this service is to improve and simplify the online experience that people and businesses have with the federal government by

- establishing standards to bring the government's digital services in line with the best private sector services;
- identifying common technology patterns that will help effectively scale services;
- collaborating with federal agencies to identify and address gaps in their capacity to design, develop, deploy and operate public-facing services; and
- providing accountability to ensure agencies see results.

According to OMB officials in the Office of E-Government and Information Technology, the service is working closely with the CMS systems team charged with developing systems supporting Healthcare.gov. For example, in August 2014, the administration, in conjunction with the U.S. Digital Service, released a set of best practices for effective digital service delivery[72] that are intended to serve as a guide for CMS in further improving systems supporting Healthcare.gov. CMS is working with the service to implement these practices.

In addition to its role in assisting CMS with improving the Healthcare.gov initiative through the U.S. Digital Service, OMB's Office of E-Government and Information Technology continues its role in working with HHS and CMS to oversee the project's budget. Additionally, the Consolidated and Further Continuing Appropriations Act, 2015[73] provides for funding to

[72]The U.S. Digital Services Playbook serves as a guide to federal agencies to implement best practices for effective digital services such as websites, e-mail, and mobile applications. This guide created a playbook of 13 key "plays," such as "assign one leader and hold that person accountable," which were drawn from successful best practices from the private sector and government.

[73]House of Representatives Explanatory Statement, 160 Cong. Rec. H9307, 9736 (daily ed., Dec. 11, 2014), accompanying the Consolidated and Further Continuing Appropriations Act, 2015, Pub. L. No. 113-235, 128 Stat. 2130 (Dec. 16, 2014).

support the Digital Service's enhanced oversight and guidance for major IT investments.

Conclusions

Problems related to insufficient capacity planning, coding errors, and incomplete implementation of planned functionality resulted in numerous performance issues with Healthcare.gov and its supporting systems upon initial launch in October 2013. Consequently, individuals faced significant challenges when attempting to enroll for health insurance coverage. CMS has addressed many of the initial problems by increasing capacity and taking steps to reduce software code errors. Moreover, the agency has been developing additional functionality for the FFM system.

Nevertheless, many of the issues arose from the inadequate implementation of key practices for managing IT projects, and these weaknesses had not yet been fully corrected. Specifically, by not managing requirements to ensure that they addressed all needed functionality and not fully documenting and executing key testing activities, CMS did not have reasonable assurance that Healthcare.gov and its supporting systems would perform as intended. In addition, because it did not develop reliable project schedules, measure levels of effort, effectively manage project data, and conduct progress and milestone reviews, CMS had diminished visibility into the project's status and may have missed opportunities to take corrective actions and avoid problems that occurred upon launch.

With the issuance of a new development contract for the FFM system, CMS has taken the opportunity to make improvements in several of these areas. However, until it ensures that it is fully implementing these best practices for managing the development of Healthcare.gov and its supporting systems, it increases the risk that future development will experience additional problems.

Further, opportunities exist for HHS to strengthen the involvement of the department's CIO in conducting oversight of the management of Healthcare.gov and its supporting systems. Until HHS does so it cannot be assured that the implementation and ongoing operation of this high-risk IT investment will continue to provide adequate and sufficient support to millions of Americans seeking to enroll in health care plans through the federally facilitated marketplace.

While we previously made recommendations to OMB addressing the use of dashboard ratings for overseeing IT projects' performance,[74] we found that OMB had a limited role in overseeing the management of the Healthcare.gov IT investment, along with investments in the website's supporting systems.

Recommendations for Executive Action

To improve requirements management for future development covering systems supporting Healthcare.gov, we recommend that the Secretary of Health and Human Services direct the Administrator of the Centers for Medicare & Medicaid Services to direct the Chief Information Officer to take the following two actions:

1. Document the approval process for functional and technical design requirements documentation.
2. Implement the CMS procedure to obtain signatures from the three key stakeholders—the CMS business owner, the CMS approval authority, and the contractor organization approving authority—to ensure that stakeholders have a shared understanding of all business, functional, and technical requirements for systems supporting Healthcare.gov prior to developing them.

To improve systems testing processes for future development covering systems supporting Healthcare.gov, we recommend that the Secretary of Health and Human Services direct the Administrator of the Centers for Medicare & Medicaid Services to direct the Chief Information Officer to take the following three actions:

3. Document and approve systems testing policy and procedures, including (1) the use of the system testing tool designed to integrate systems development and systems testing and (2) requirements for stakeholder review of systems test documentation that is intended to ensure proper test coverage and to validate the results.
4. Require key information in system test plans, as recommended by best practices, including the means by which the quality of testing processes will be assured, and the identification of responsibilities for individuals or groups carrying out testing.

[74] GAO-11-262.

5. Require and ensure key information is included in test cases, as recommended by best practices, such as all outputs and exact values; test case dependencies; inputs required to execute each test case; and information about whether each test item has passed or failed testing.

To improve oversight processes for systems development activities related to systems supporting Healthcare.gov, we recommend that the Secretary of Health and Human Services direct the Administrator of the Centers for Medicare & Medicaid Services to direct the Chief Information Officer to take the following two actions:

6. Ensure schedules for the Healthcare.gov effort are well constructed by, among other things, (1) logically sequencing activities, (2) confirming the critical paths are valid, and (3) identifying reasonable total float.

7. Develop and implement policy and procedures for estimating level of effort to ensure effort is estimated at the appropriate level (requirements or program area), and define how levels of effort will be used to monitor system development progress.

To improve oversight for Healthcare.gov and its supporting systems, we recommend that the Secretary of Health and Human Services direct the HHS Chief Information Officer to carry out authorized oversight responsibilities. Specifically, the Chief Information Officer should ensure the department-wide investment review board is active and carrying out responsibilities for overseeing the performance of high-risk IT investments such as those related to Healthcare.gov.

Agency Comments and Our Evaluation

In written comments on a draft of our report (reprinted in appendix II), HHS stated that it concurred with all of the recommendations and identified actions being taken or planned to implement them. Among others, these actions include instituting a process to ensure functional and technical requirements are approved, developing and implementing a unified standard set of approved system testing documents and policies, and providing oversight for Healthcare.gov and its supporting systems through the department-wide investment review board. If the department ensures that these and other actions it identified are effectively implemented, then CMS should be better positioned to more effectively manage current and future systems development efforts for Healthcare.gov and its supporting systems.

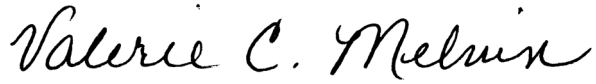
In addition, the HHS audit liaison provided technical comments from CMS via e-mail. In the comments, CMS disagreed with our characterization of the 11,000 FFM critical code violations that were identified by the IV&V assessment team in July 2014. CMS stated that these code violations were identified very early on in the development phase of building the eligibility and enrollment module and that most of the risk represented by these code violations is to the cost of maintaining the code over time, rather than to its successful functionality. The agency added that any defects which could cause problems with the functionality of the Healthcare.gov system would have been identified and addressed during subsequent testing. However, the IV&V assessment stated that the review was based on a "snapshot of the production code" and not code that was in development. In addition, while the assessment team noted that 328 of the code violations may result in maintainability issues, the team stated that the remaining violations could cause issues in production if not corrected. Other technical comments provided by HHS were incorporated as appropriate.

The Chief of Policy, Budget, and Communications within OMB's Office of E-Government & Information Technology also provided technical comments via e-mail. In the comments, OMB took issue with our statement that it did not conduct a TechStat review when the IT Dashboard indicated problems 7 months prior to the initial launch of Healthcare.gov and its supporting systems. According to the OMB official, a brief dip in the risk rating, such as the one experienced in March 2013, did not necessitate a formal TechStat. The official further stated that the tech surge that OMB instituted shortly after the launch of the system, which included an assessment of its problems, effectively represented a large-scale and comprehensive TechStat session and replaced the need for a separate OMB- or agency-led review. Nevertheless, had such an assessment or a TechStat been conducted earlier in the system development process, the results could have been used to identify and correct deficiencies prior to system launch.

We are sending copies of this report to the Secretary of Health and Human Services, the Director of the Office of Management and Budget, and other interested parties. In addition, the report is available at no charge on the GAO website at http://www.gao.gov.

Should you or your staffs have questions on matters discussed in this report, please contact me at (202) 512-6304. I can also be reached by e-mail at melvinv@gao.gov. Contact points for our Offices of Congressional

Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix II.



Valerie C. Melvin
Director, Information Management and
Technology Resources Issues

List of Congressional Requesters

The Honorable Orrin Hatch
Chairman
The Honorable Ron Wyden
Ranking Member
Committee on Finance
United States Senate

The Honorable Lamar Alexander
Chairman
Committee on Health, Education, Labor and Pensions
United States Senate

The Honorable Ron Johnson
Chairman
The Honorable Thomas R. Carper
Ranking Member
Committee on Homeland Security and Governmental Affairs
United States Senate

The Honorable Charles E. Grassley
Chairman
Committee on the Judiciary
United States Senate

The Honorable Claire McCaskill
Ranking Member
Permanent Subcommittee on Investigations
Committee on Homeland Security and Governmental Affairs
United States Senate

The Honorable Fred Upton
Chairman
Committee on Energy and Commerce
House of Representatives

The Honorable Jason Chaffetz
Chairman
The Honorable Elijah E. Cummings
Ranking Member
Committee on Oversight and Government Reform
House of Representatives

The Honorable Paul Ryan
Chairman
The Honorable Sander M. Levin
Ranking Member
Committee on Ways and Means
House of Representatives

The Honorable Greg Walden
Chairman
Subcommittee on Communications and Technology
Committee on Energy and Commerce
House of Representatives

The Honorable Joseph R. Pitts
Chairman
Subcommittee on Health
Committee on Energy and Commerce
House of Representatives

The Honorable Tim Murphy
Chairman
Subcommittee on Oversight and Investigations
Committee on Energy and Commerce
House of Representatives

The Honorable Mark Meadows
Chairman
Subcommittee on Government Operations
Committee on Oversight and Government Reform
House of Representatives

The Honorable Jim Jordan
Chairman
Subcommittee on Health Care, Benefits, and Administrative Rules
Committee on Oversight and Government Reform
House of Representatives

The Honorable William Hurd
Chairman
Subcommittee on Information Technology
Committee on Oversight and Government Reform
House of Representatives

The Honorable Mike Coffman
Chairman
Subcommittee on Oversight and Investigations
Committee on Veterans' Affairs
House of Representatives

The Honorable Charles Boustany, Jr.
Chairman
Subcommittee on Human Resources
Committee on Ways and Means
House of Representatives

The Honorable Peter Roskam
Chairman
The Honorable John Lewis
Ranking Member
Subcommittee on Oversight
Committee on Ways and Means
House of Representatives

The Honorable Michael Bennet
United States Senate

The Honorable Richard Blumenthal
United States Senate

The Honorable Robert P. Casey, Jr.
United States Senate

The Honorable Al Franken
United States Senate

The Honorable Tim Kaine
United States Senate

The Honorable Amy Klobuchar
United States Senate

The Honorable Joe Manchin III
United States Senate

The Honorable Jeffrey A. Merkley
United States Senate

The Honorable Bill Nelson
United States Senate

The Honorable Jeanne Shaheen
United States Senate

The Honorable Jon Tester
United States Senate

The Honorable John Thune
United States Senate

The Honorable Mark R. Warner
United States Senate

The Honorable Ron Barber
House of Representatives

The Honorable Tulsi Gabbard
House of Representatives

The Honorable Duncan Hunter
House of Representatives

The Honorable Darrell Issa
House of Representatives

The Honorable Mike Kelly
House of Representatives

The Honorable Ann McLane Kuster
House of Representatives

The Honorable Daniel W. Lipinski
House of Representatives

The Honorable Patrick E. Murphy
House of Representatives

The Honorable Scott Peters
House of Representatives

The Honorable Kyrsten Sinema
House of Representatives

The Honorable Filemon Vela
House of Representatives

Appendix I: Objectives, Scope, and Methodology

The objectives of this study were to (1) describe the problems encountered in developing and deploying Healthcare.gov and its supporting systems, and determine the status in addressing these deficiencies; and (2) determine the extent to which the Centers for Medicare & Medicaid Services (CMS) oversaw the development effort and applied disciplined systems development practices to manage requirements and conduct systems testing, as well as the extent to which the Department of Health and Human Services (HHS) and the Office of Management and Budget (OMB) provided oversight of the effort.

To address the first objective, we reviewed data from project management documentation, including independent verification and validation reports[1] dating from September 2012 to September 2013, to determine if the problems identified by CMS officials had been identified prior to system launch. We also reviewed written testimony by CMS officials. To determine the status in correcting the deficiencies we identified, we obtained and reviewed documentation describing the status of identified weaknesses to determine the extent to which CMS had taken action to address them. Further, we obtained and reviewed data from relevant documentation such as system monitoring metrics, technical direction letters,[2] and independent verification and validation reports issued after initial system launch, dated November 2013 to July 2014. Lastly, we interviewed key program officials in the Center for Consumer Information and Insurance Oversight and Office of Information Services, including the Deputy Chief Information Officer at CMS, to identify the key problems causing the system to fail shortly after system launch in October 2013 and the actions they took to address those problems.

To address the second objective, we compared CMS's efforts to recognized industry best practices documented by the Software

[1]The Department of Health and Human Services' Enterprise Performance Life-Cycle Framework defines IV&V as a rigorous independent process that evaluates the correctness and quality of a project's business product to ensure that it is being developed in accordance with customer requirements and is well-engineered.

[2]Technical direction letters provide supplementary guidance to contractors regarding tasks contained in their statements of work or change requests.

Engineering Institute, [3] the Institute of Electrical and Electronics Engineers, and us for (1) system requirements management, (2) systems testing, and (3) project oversight.

With respect to requirements management, we reviewed the CMS Requirements Management Plan for the Data Services Hub (DSH) and the Federally Facilitated Marketplace (FFM) System, as well as data related to requirements management for those systems. Further, we reviewed and analyzed relevant data from requirements management documentation stored in CMS's authoritative system for managing requirements—the Collaborative Application Lifecycle Tool (CALT).[4]

We focused our review of requirements management on whether requirements had been approved and were traceable, in accordance with best practices identified by the Software Engineering Institute.

- To determine whether functional requirements had been approved, we analyzed a non-generalizable random sample of 88 functional requirements for the DSH from a population of 1,038. Similarly, we analyzed a non-generalizable random sample of 95 functional requirements for the eligibility and enrollment module of the FFM system from a population of 3,779. For each requirement, documented prior to January 2014, we determined whether it was approved in CALT by a CMS official within the Office of Information Services[5] prior to being developed. For requirements documented after January 2014, when CMS awarded a new FFM system development contract in order to enhance system functionality and improve on functionality already provided, we determined whether requirements had been approved by means of a physical signature, as required by CMS policy.

[3]Software Engineering Institute, *CMMI for Development, Version 1.3,* CMU/SEI-2010-TR-033 (November 2010, Hanscom AFB, MA). The Software Engineering Institute is a federally funded research and development center operated by Carnegie Mellon University. Its mission is to advance software engineering and related disciplines to ensure the development and operation of systems with predictable and improved cost, schedule, and quality.

[4]CALT is CMS's project management system and requirements repository.

[5]The Requirements Management Plan states that requirements should be approved by an official within the Office of Information Services, but that this function can be delegated to other CMS responsible officials.

- To determine whether requirements maintained bidirectional traceability, we analyzed data extracts of all DSH and eligibility and enrollment module functional requirements from CALT and interdependencies between higher-level and lower-level requirements. We also analyzed requirements documentation developed under the new systems development contract to identify CMS's current process for maintaining bidirectional traceability. In addition, we interviewed CMS officials as well as DSH system development contractors to obtain an understanding of the requirements management processes, including a live demonstration.

With respect to systems testing, we reviewed the CMS testing framework, contract statements of work for the DSH and FFM systems, independent verification and validation reports from September 2012 to July 2014, and system test documentation for these systems. We focused our review on the extent to which CMS applied selected key best practices for software and system (1) test plans and (2) test cases.[6]

- We assessed all 14 FFM and 19 DSH system test plans documented prior to system launch in October 2013 against best practices identified by the Institute of Electrical and Electronics Engineers that describe key elements that should be included in test plans. In addition, we assessed the 11 FFM system test plans CMS had documented after the new development contract to determine the extent to which these test plans included the key elements identified in best practices.

- We also assessed DSH and FFM system test cases against best practices identified by the Institute of Electrical and Electronics Engineers that describe key elements that should be included in test cases. In doing so, we analyzed and evaluated all DSH system test cases provided from CMS and documented prior to system launch in October 2013. In addition, we reviewed a non-generalizable random sample of 83 test cases for the FFM system from a population of 585 test cases provided from CMS and documented prior to system launch in October 2013. To determine the extent to which CMS included key elements in test cases developed after the new FFM systems development contract, we reviewed a non-generalizable

[6]Adapted and reprinted with permission from © Institute of Electrical and Electronics Engineers, IEEE Standard for Software and System Test Documentation, IEEE Standard 829™-2008 (New York, NY: July 18, 2008). All rights reserved.

random sample of 83 test cases from a population of 388. Lastly, we interviewed CMS officials, as well as DSH and FFM system testing contractors, to obtain an understanding of the system testing process.

To determine the extent to which CMS, HHS, and OMB oversaw the systems development effort, we obtained and analyzed documentation, such as project schedules, the CMS eXpedited Life Cycle policy, the HHS Enterprise Performance Life Cycle, as well as technical review board presentations and summary letters. We also reviewed project management documentation in CMS's CALT system. Lastly, we reviewed pertinent oversight laws such as the Clinger-Cohen Act of 1996[7] and key practices for providing investment oversight that are outlined in GAO's IT investment management framework.[8]

In evaluating the effectiveness of oversight, we focused on (1) project schedules, (2) level-of-effort estimates, (3) data management, and (4) progress and milestone reviews.

- To determine whether reliable schedules were available to assist with project oversight, we reviewed and analyzed four key subproject schedules for the FFM system, since these subprojects were a major focus of 2014 systems development efforts. Three of the schedules relate to the Plan Management, Small Business Health Options Program, and Financial Management modules of the FFM system, which were planned for initial open enrollment, but had been postponed in August 2013. The fourth schedule related to the eligibility and enrollment module of the FFM system, which is for enrolling individuals for health care coverage. We evaluated the extent to which these schedules were well-constructed as defined in our Schedule Assessment Guide.[9] Our methodology to determine the extent to which project schedules were well-constructed included five levels of compliance. "Fully met" means the program office provided complete evidence that satisfied the elements of the best practice.

[7]Pub. L. No. 104-106, Div. E, 110 Stat. 186, 679 (Feb. 10, 1996); 40 U.S.C. §§ 11101, et seq.

[8]GAO, *Information Technology Investment Management: A Framework for Assessing and Improving Process Maturity (Supersedes AIMD-10.1.23),* GAO-04-394G (Washington, D.C.: March 2004).

[9]GAO, *GAO Schedule Assessment Guide: Best Practices for Project Schedules (Exposure Draft),* GAO-12-120G (Washington, D.C: May 2012).

"Substantially met" means the program office provided evidence that satisfied a large portion of the elements of the best practice. "Partially met" means the program office provided evidence that satisfied about half of the elements of the best practice. "Minimally met" means the program office provided evidence that satisfied a small portion of the elements of the best practice. "Not met" means the program office provided no evidence that satisfied any of the elements of the best practice.

- To determine the extent to which CMS monitored the project against levels of effort, we reviewed the CMS Requirements Management Plan dated August 2012, and analyzed and evaluated, against the plan, levels of effort documented in the CALT system for all DSH and FFM eligibility and enrollment module functional requirements. For functional requirements developed after the new FFM contract was awarded, we interviewed CMS officials and obtained documentation regarding their efforts in estimating levels of effort for new development.

- To determine the extent to which CMS monitored data management activities, we reviewed CMS plans and procedures, such as Project Management Plans and the Requirements Management Plan, for managing key project files and functional requirements, and evaluated the extent to which they adhered to CMS plans and procedures within the CALT system. In addition, we reviewed all DSH and FFM eligibility and enrollment module functional requirements contained in CALT to determine the extent to which CMS and its contractor documented key information used for overseeing development progress, such as requirements status fields.

- To determine whether progress and milestone reviews were conducted in accordance with CMS and HHS policy, we reviewed the eXpedited Life Cycle Process and available project process agreements, and analyzed and evaluated all documentation pertaining to CMS's progress and milestone reviews for its DSH, FFM, and Enterprise Identity Management systems prior to the October 2013 enrollment. In addition, we reviewed and analyzed progress and milestone reviews held for FFM software releases that were in production as of July 2014 and conducted after the new FFM systems development contract was awarded.

Finally, to determine the extent to which CMS, HHS, and OMB provided oversight in the development and implementation of Healthcare.gov and its supporting systems, we interviewed knowledgeable officials, including

the CMS Deputy Chief Information Officer, the HHS Chief Information Officer, and officials from OMB's Office of e-Government and Information Technology.

We also obtained documentation and interviewed officials at the Department of Defense, the Department of Homeland Security, the Internal Revenue Service, the Office of Personnel Management, the Peace Corps, the Social Security Administration, and the Department of Veterans Affairs to determine the extent of their role in developing and implementing Healthcare.gov and its supporting systems.

To determine the reliability of the data provided from CMS information systems, we performed basic steps to ensure the data provided were valid, and we reviewed relevant information describing these systems. Specifically, we interviewed knowledgeable agency officials within the CMS Office of Information Services about these systems and asked specific questions to understand the controls in place for ensuring the integrity and reliability of the data contained within them. We did not assess the reliability of the systems used to maintain these data or the processes used in extracting the data for our engagement purposed. Based on the results of these efforts, we found the data to be sufficiently reliable for our work.

We conducted this performance audit from December 2013 to March 2015 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: Comments from the Department of Health and Human Services

DEPARTMENT OF HEALTH & HUMAN SERVICES

OFFICE OF THE SECRETARY

Assistant Secretary for Legislation
Washington, DC 20201

FEB 2 0 2015

Valerie C. Melvin
Director, Information Management
and Technology Resources Issues
U.S. Government Accountability Office
441 G Street NW
Washington, DC 20548

Dear Ms. Melvin:

Attached are comments on the U.S. Government Accountability Office's (GAO) report entitled, "HEALTHCARE.GOV: CMS Has Taken Steps to Address Problems, but Needs to Further Implement Systems Development Best Practices" (GAO-15-238).

The Department appreciates the opportunity to review this report prior to publication.

Sincerely,

Jim R. Esquea
Assistant Secretary for Legislation

Attachment

GENERAL COMMENTS OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES (HHS) ON THE GOVERNMENT ACCOUNTABILITY OFFICE'S DRAFT REPORT ENTITLED: HEALTHCARE.GOV: CMS HAS TAKEN STEPS TO ADDRESS PROBLEMS, BUT NEEDS TO FURTHER IMPLEMENT SYSTEMS DEVELOPMENT BEST PRACTICES

The Department appreciates the opportunity to review and comment on this draft report. The Centers for Medicare & Medicaid Services (CMS) is focused on providing consumers a consumer-friendly online Marketplace. As of February 12, 2015, 7.75 million consumers selected a plan or were automatically re-enrolled through the Federally-Facilitated Marketplace (FFM)for coverage in 2015 as a result of the thousands of software fixes and hardware upgrades, along with countless hours of hard work.

The site has continued to perform well through the second open enrollment period, including handling capacity. From the beginning of the second open enrollment period through January 28, 2015, Healthcare.gov has handled over 125,000 users at the same time, over 200,000 requests per minute, and nearly 1.4 million unique log-ins on a single day. In comparison, during last Open Enrollment, Healthcare.gov set the goal to improve the site so it could handle 50,000 users on the site at the same time and handle 800,000 unique visits on a single day from consumers.

As we continue our relentless efforts to enhance Healthcare.gov – and as we continue to adapt and improve based on the feedback we are getting from customers, issuers, and independent groups such as the Government Accountability Office (GAO) –we must take concrete action to prevent problems in the future. HHS and CMS thank the GAO for the recommendations to help us with the goal of continuous improvement for Healthcare.gov. CMS is pleased that it has already begun or has completed instituting the process improvements recommended by the GAO.

GAO Recommendation
GAO recommends that the Administrator of CMS document the approval process for functional and technical design requirements documentation.

HHS Response
HHS concurs with GAO's recommendation. CMS has instituted a process with the Federally-facilitated Marketplace (FFM) development team that requires review and approval of the Business Requirements Documents and the design documents (Functional Design Documents, System Design Documents, and Technical Design Documents). This process includes the primary developer contractor Accenture, as well as other key stakeholders.

GAO Recommendation
GAO recommends that the Administrator of CMS implement the CMS procedure to obtain signatures from the three key stakeholders – the CMS business owner, the CMS approval authority, and the contractor organization approving authority – to ensure that stakeholders have a shared understanding of all business, functional, and technical requirements for systems supporting Healthcare.gov prior to developing them.

HHS Response
HHS concurs with GAO's recommendation. CMS has completed instituting a process that requires CMS to obtain signatures from CMS business owners, as well as from the CMS system owners, or other approving authority. We also now require signatures from the contractor-approving authority.

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GENERAL COMMENTS OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES (HHS) ON THE GOVERNMENT ACCOUNTABILITY OFFICE'S DRAFT REPORT ENTITLED: HEALTHCARE.GOV: CMS HAS TAKEN STEPS TO ADDRESS PROBLEMS, BUT NEEDS TO FURTHER IMPLEMENT SYSTEMS DEVELOPMENT BEST PRACTICES

GAO Recommendation
GAO recommends that the Administrator of CMS document and approve systems testing policy and procedures, including the use of the system testing tool, designed to integrate systems development and systems testing, and requirements for stakeholder review of systems test documentation that is intended to ensure proper test coverage and to validate the results.

HHS Response
HHS concurs with GAO's recommendation. Although not yet complete, CMS has already begun to address this recommendation. The Marketplace Testing PMO (TPMO) team is working with each of the development and testing teams to gather all documented processes, procedures, and Standard Operation Procedures for testing, including test plans. The TPMO will synthesize them into a single unified, standard set of Office of Technology Services-approved systems testing documents and policies. The unified policies will incorporate Information Technologist best practices, and require testing documents to identify the specific individuals or groups responsible for testing activities.

GAO Recommendation
GAO recommends that the Administrator of CMS require key information in system test plans, as recommended by best practices, including the means by which the quality of testing processes will be assured, and the identification of responsibilities for individuals or groups carrying out testing.

HHS Response
HHS concurs with GAO's recommendation. The standard set of systems testing documents and policies being developed, as described in the response to the previous recommendations, will fully address these specific actions as well.

GAO Recommendation
GAO recommends that CMS require and ensure key information is included in test cases, as recommended by best practices, including all outputs and exact values; test case dependencies; inputs required to execute each test case; and information about whether each test item has passed or failed testing.

HHS Response
HHS concurs with GAO's recommendation. The standard set of systems testing documents and policies being developed, as described in the response to the previous recommendations, will fully address these specific actions as well.

GAO Recommendation
GAO recommends that the Administrator of CMS ensure schedules for the Healthcare.gov effort are well constructed by, among other things, (1) logically sequencing activities, (2) confirming the critical paths are valid, and (3) identifying reasonable total float.

GENERAL COMMENTS OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES (HHS) ON THE GOVERNMENT ACCOUNTABILITY OFFICE'S DRAFT REPORT ENTITLED: HEALTHCARE.GOV: CMS HAS TAKEN STEPS TO ADDRESS PROBLEMS, BUT NEEDS TO FURTHER IMPLEMENT SYSTEMS DEVELOPMENT BEST PRACTICES

HHS Response
HHS concurs with GAO's recommendation. CMS has completed instituting a process that addresses these recommendations. For the development of 2015 Open Enrollment, for example, CMS identified the sequencing of activities among all stakeholders and systems, and while making the path to Open Enrollment the top priority, identified the critical path with the help of the System Integrator.

GAO Recommendation
GAO recommends that the Administrator of CMS develop and implement policy and procedures for estimating level of effort to ensure levels of effort are estimated at the appropriate level (requirements or program area) and include how levels of effort will be used to monitor system development progress.

HHS Response
HHS concurs with GAO's recommendation. CMS has completed some actions to address this recommendation, and has begun others. CMS has completed instituting a process for gathering detailed requirements and performing Level of Effort (LOE) estimation by the development contractor for the planning of new development work. For changes and defects, CMS now follows a process for obtaining the LOE from the development contractor and using the LOE for decision-making in the Change Control Board, as well as other prioritization exercises.

Other actions to address this recommendation have begun. For example, to improve the oversight processes for development activities related to systems supporting the FFM, CMS has begun to develop an integrated cross-program process to better estimate LOE during the schedule development process, and to require that LOEs be provided prior to the approval of all proposed changes to a baseline. The new process further requires that once requirements have been approved and baselined, developed schedules must detail all tasks related to the development of the specified system requirement. As a result, LOEs will be associated with the tasks and the schedule baselined. As part of the schedule management process, the status and actual effort for all scheduled tasks will be captured regularly and reported in comparison to the baselined schedule and LOE. As part of the change management process, LOE will also be required to be captured for all approved changes.

GAO Recommendation
To improve oversight for Healthcare.gov and its supporting systems, we recommend that the Secretary for HHS direct the HHS Chief Information Officer to carry out authorized oversight responsibilities. Specifically, the Chief Information Officer should ensure the department-wide investment review board is active and carrying out responsibilities for overseeing the performance of high-risk IT investments such as those related to Healthcare.gov

HHS Response
HHS concurs with this recommendation. HHS will provide oversight through several mechanisms including the Department-wide investment review board and the increased

GENERAL COMMENTS OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES (HHS) ON THE GOVERNMENT ACCOUNTABILITY OFFICE'S DRAFT REPORT ENTITLED: HEALTHCARE.GOV: CMS HAS TAKEN STEPS TO ADDRESS PROBLEMS, BUT NEEDS TO FURTHER IMPLEMENT SYSTEMS DEVELOPMENT BEST PRACTICES

responsibilities articulated within the Federal Information Technology Acquisition Reform Act (FITARA).

Appendix III: GAO Contact and Staff Acknowledgments

GAO Contact

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Staff Acknowledgments

In addition to the contact named above, Christie Motley (assistant director), Teresa Tucker (assistant director), James Ashley, Christopher Businsky, Juana Collymore, Nicole Jarvis, Kendrick Johnson, Jason Lee, Jennifer Leotta, Lee McCracken, Thomas Murphy, Constantine Papanastasiou, Andrew Stavisky, and Christy Tyson made key contributions to this report.

United States Government Accountability Office

Report to Congressional Committees

March 2015

PRIVATE HEALTH INSURANCE

Early Evidence Finds Premium Tax Credit Likely Contributed to Expanded Coverage, but Some Lack Access to Affordable Plans

GAO-15-312

GAO Highlights

Highlights of GAO-15-312, a report to congressional committees

March 2015

PRIVATE HEALTH INSURANCE

Early Evidence Finds Premium Tax Credit Likely Contributed to Expanded Coverage, but Some Lack Access to Affordable Plans

Why GAO Did This Study

The number of uninsured individuals and the rising cost of health insurance have been long-standing issues. PPACA mandated that most individuals have health insurance that provides minimum essential coverage or pay a tax penalty. To make health insurance more affordable and expand access, PPACA created the APTC to subsidize the cost of exchange plans' premiums for those eligible. PPACA used two standards for defining affordability of health insurance: 8 percent of household income for the purposes of minimum essential coverage and 9.5 percent for APTC eligibility for individuals offered employer-sponsored plans.

PPACA mandated that GAO review the affordability of health insurance coverage. GAO examined (1) what is known about the effects of the APTC and (2) the extent to which affordable health benefits plans are available and individuals are able to maintain minimum essential coverage. GAO conducted a structured literature search to identify studies on the rate of uninsured individuals, among other topics, and interviewed experts from HHS, the Internal Revenue Service (IRS), and 11 research and industry organizations to understand factors affecting affordability. GAO also analyzed the variation in the affordability of exchange plan premiums nationwide using 2014 data—the most recent data available at the time of GAO's analysis.

GAO received technical comments on a draft of this report from HHS and IRS and incorporated them as appropriate.

View GAO-15-312. For more information, contact John E. Dicken at (202) 512-7114 or dickenj@gao.gov.

What GAO Found

Early evidence suggests that the advance premium tax credit (APTC)—the refundable tax credit that can be paid on an advance basis—likely contributed to an expansion of health insurance coverage in 2014 because it significantly reduced the cost of exchange plans' premiums for those eligible. Although there are limitations to measuring the effects of the APTC using currently available data, surveys GAO identified estimated that the uninsured rate declined significantly among households with incomes eligible for the APTC. For example, one survey found that the rate of uninsured among individuals with household incomes that make them financially eligible for the APTC fell 5.2 percentage points between September 2013 and September 2014.This expansion in health insurance coverage is likely partially a result of the APTC having reduced the cost of health insurance premiums for those eligible. Among those eligible for the APTC who the Department of Health and Human Services (HHS) initially reported selected a plan through a federally facilitated exchange or one of two state-based exchanges, the APTC reduced premiums by 76 percent, on average. As of January 2015, data were not yet available on the extent to which the APTC reduced 2015 premiums, although studies have found that, on average, premiums (before applying the APTC) changed only modestly from 2014 to 2015, though some areas saw significant increases or decreases.

Most nonelderly adults had access to affordable health benefits plans—as defined by the Patient Protection and Affordable Care Act (PPACA)—but some may face challenges maintaining coverage. Most nonelderly adults had access to affordable plans through their employer, Medicaid, the exchanges, or other sources as of March 2014, although about 16 percent of nonelderly adults remained uninsured. While there are many reasons people remain uninsured, some people may not have access to affordable coverage, including (1) low-income nonelderly adults—those with household income below 100 percent of the federal poverty level—who live in one of the 23 states that chose not to expand Medicaid and (2) some nonelderly adults who do not have affordable employer-sponsored insurance and who were not eligible for the APTC. For those with incomes too high to qualify for the APTC, the affordability of health insurance coverage available in the individual exchanges in 2014 varied by age, household size, income, and location. For example, a 60-year-old with an income of 450 percent of the federal poverty level would have had to spend more than 8 percent of their household income for the lowest-cost plan in 84 percent of all health insurance rating areas in the United States, but a 27-year-old had access to an affordable plan in all but one. Regardless of the affordability of premiums, some may face challenges in maintaining coverage that qualifies under PPACA as minimum essential coverage; for example, changes in income can result in changes in APTC eligibility.

This report provides an early look at the effect of the APTC and the affordability of health insurance under PPACA. However, it is important to note that these findings about the first year of the exchanges cannot be generalized to future years. Numerous factors, including additional data and changes in trends in health care costs, could affect the affordability of health insurance going forward.

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Abbreviations

AHRQ	Agency for Healthcare Research and Quality
APTC	Advance Premium Tax Credit
CBO	Congressional Budget Office
CMS	Centers for Medicare & Medicaid Services
ESI	employer-sponsored insurance
FPL	federal poverty level
HCERA	Health Care and Education Reconciliation Act of 2010
HHS	Department of Health and Human Services
IRS	Internal Revenue Service
KFF	The Henry J. Kaiser Family Foundation
MEPS	Medical Expenditure Panel Survey
PPACA	Patient Protection and Affordable Care Act
SHOP	Small Business Health Option Programs

U.S. GOVERNMENT ACCOUNTABILITY OFFICE
441 G St. N.W.
Washington, DC 20548

March 23, 2015

Congressional Committees

The number of uninsured individuals and the rising cost of health insurance have been long-standing issues. From 1997 through 2013, the number of nonelderly uninsured in the United States fluctuated between about 30 and 42.5 million and was about 20.4 percent of the nonelderly population in 2013.[1] Many of these uninsured individuals were not eligible for public insurance, such as Medicaid—the joint federal-state health coverage program for certain low-income individuals—nor were they offered employer-sponsored insurance (ESI). Before 2014, their remaining option was to purchase a plan on the private, individual market, but these plans were often difficult to afford given that the uninsured typically have low incomes. In 2013, 85 percent of the uninsured were in households earning less than about 400 percent of the federal poverty level (FPL).[2]

The Patient Protection and Affordable Care Act (PPACA) included a number of provisions to address these challenges. Among other things, PPACA mandated that, with some exceptions, individuals must have health insurance that provides "minimum essential coverage" or pay a tax penalty, a requirement many refer to as the individual mandate.[3] Health

[1]M. E. Martinez and R. A. Cohen, *Health Insurance Coverage: Early Release of Estimates from the National Health Interview Survey, January–June 2014* (Hyattsville, Md.: National Center for Health Statistics, 2014); and *Health Insurance Coverage: Early Release of Estimates from the National Health Interview Survey, January – March 2009,* (Hyattsville, Md.: National Center for Health Statistics, 2009).

The "nonelderly" refers to adults under age 65. In this report, we refer to nonelderly adults when we discuss those who are uninsured.

[2]The Henry J. Kaiser Family Foundation, *Distribution of the Nonelderly Uninsured by Federal Poverty Level*, accessed Jan. 5, 2015, http://kff.org/uninsured/state-indicator/distribution-by-fpl-2.

The FPL is an amount updated annually by the Department of Health and Human Services (HHS) to set eligibility for various means-tested programs.

[3]Pub. L. No. 111-148, §§ 1501, 10106, 124 Stat. 119, 242, 907 (2010), as amended by the Health Care and Education Reconciliation Act of 2010 (HCERA), Pub. L. No. 111-152, §§ 1002, 1004, 124 Stat. 1029, 1032, 1034 (2010) (codified at 26 U.S.C. § 5000A). In this report, references to PPACA include any amendments made by HCERA.

insurance that meets the minimum essential coverage standard includes certain types of government-sponsored coverage (such as Medicare Part A or Medicaid) as well as most types of private insurance plans (such as ESI) that provide health benefits consistent with the law.[4]

To expand access to health insurance that qualifies as minimum essential coverage, PPACA created the premium tax credit to subsidize premium costs for plans purchased by eligible individuals and families through the exchanges—marketplaces where participating private issuers offer consumers a variety of qualified health plans that constitute minimum essential coverage.[5] Certain low- and moderate-income individuals and families may be eligible for this credit, which is refundable and can be paid to insurance companies in advance to reduce enrollees' premium

[4]Health insurance coverage that provides limited benefits, such as dental-only coverage, or Medicaid coverage that provides less than full benefits, such as Medicaid plans that cover only family planning, does not constitute minimum essential coverage.

Medicare is a federal health insurance program for individuals aged 65 and older, individuals under age 65 with certain disabilities, and individuals diagnosed with end-stage renal disease. Medicare Part A covers inpatient medical benefits. Other Medicare programs cover different goods and services.

[5]PPACA required the establishment of exchanges in each state by Jan. 1, 2014. In states that did not elect to operate their own state-based exchange, PPACA required the federal government to establish and operate an exchange in the state, known as federally facilitated exchanges. Pub. L. No. 111-148, §§ 1311(b), 1321(c), 124 Stat. 119 at 173, 186.

Our report assumed that individuals in all states could potentially be eligible for the premium tax credit, regardless of whether they purchased insurance through a state-based exchange or a federally facilitated exchange, consistent with the final rule issued by the Internal Revenue Service. *See* Health Insurance Premium Tax Credit, preamble 1.f and regulations to be codified at 26 C.F.R. §§ 1.36B-0 et seq.; 77 Fed. Reg. 30377, 30378, 30385 (May 23, 2012). The U.S. Supreme Court will consider whether PPACA authorizes the premium tax credit for individuals who purchase coverage through federally facilitated exchanges. *See* King v. Burwell, 759 F.3d 358 (4th Cir. 2014), *cert. granted*, 135 S. Ct. 475 (Nov. 7, 2014) (No. 14-114).

costs for exchange plans. In this report, we refer to advance payments of the credit as advance premium tax credits (APTC).[6]

In addition, PPACA required the establishment of small business health option programs (SHOP) in each state to allow small employers to compare available health insurance options in their states and facilitate the enrollment of their employees in qualifying coverage. To provide an incentive for them to do so, PPACA established the small employer health insurance tax credit (referred to in this report as the small employer tax credit).[7] It subsidizes the share of the premiums small employers pay for their employees' health insurance.

Individuals are exempt from the requirement to have minimum essential coverage when such coverage is not "affordable," as defined by PPACA. In general, plans are considered affordable if their cost does not exceed 8 percent of household income. In addition, for purposes of determining eligibility for the APTC, PPACA considers ESI affordable if an employee's share of a qualifying self-only plan costs no more than 9.5 percent of household income.[8] Individuals with an offer of ESI that meets or is below this threshold are not eligible to receive the APTC.

[6]Individuals who receive APTC must file federal income tax returns to reconcile the amount of the premium tax credit allowed based on reported income with the amount of the premium tax credit received in advance (APTC). An individual whose premium tax credit for the taxable year exceeds the individual's APTC payments may receive the excess as an income tax refund. An individual whose APTC payments for the taxable year exceed the individual's premium tax credit owes the excess as an additional income tax liability, subject to certain caps. 26 C.F.R. § 1.36B-4.

[7]Pub. L. No. 111-148, §§ 1421, 10105, 124 Stat. 119 at 237, 906 (codified at 26 U.S.C. § 45R).

[8]PPACA adjusts the thresholds at which premiums become unaffordable to reflect the excess of the rate of premium growth over the rate of income growth for the preceding calendar year. In 2015, the threshold at which premiums are unaffordable for purposes of determining an exemption from the requirement to have minimum essential coverage rose from 8 percent of household income to 8.05 percent. Similarly, the threshold at which an employee's share of ESI premiums are considered unaffordable for purposes of APTC eligibility rose from 9.5 percent to 9.56 percent.

PPACA mandated that GAO review the affordability of health insurance coverage 5 years after enactment.[9] Specifically, in this report we examine

1. what is known about the effects of the APTC and the small employer tax credit on health insurance coverage; and
2. the extent to which affordable health benefits plans are available and individuals are able to maintain minimum essential coverage.

To examine what is known about the effects of the APTC and the small employer tax credit on health insurance coverage, we conducted a structured literature search to identify relevant studies.[10] To conduct this review, we searched over 30 reference databases for studies published on these topics. Two analysts independently reviewed each of the results for relevance. To supplement this search, we performed further Internet searches and asked experts we interviewed to recommend literature. We interviewed experts from 11 research or industry organizations as well as officials from the Department of Health and Human Services' (HHS) Center for Consumer Information and Insurance Oversight, Assistant Secretary of Planning and Evaluation, and the Chief Actuary; and from the Internal Revenue Service (IRS). We identified the experts through their published or other work, and we asked them about how the tax credits were likely to affect health insurance coverage. We also reviewed laws, regulations, and guidance related to PPACA's individual mandate, the APTC, the small employer tax credit, individual exchange regulation, and the ESI affordability threshold. To further analyze the effects of the small employer tax credit on health insurance coverage, we incorporated summary data from our previous report on this topic and requested updated summary data from the IRS on claims for tax years 2011 and

[9]PPACA also mandated that GAO review what is known about the effects of lowering the employer-sponsored insurance (ESI) affordability threshold. We discuss this topic in appendix I.

[10]This report discusses the advance premium tax credit rather than the premium tax credit because complete information on the premium tax credit was not available during the period of our review. In particular, individuals who received the APTC must, when filing their 2014 federal income tax returns, reconcile the amount of the premium tax credit allowed based on their reported income with the amount of the premium tax credit received in advance based on their anticipated income at the time of enrollment. Because our work preceded the reconciliation process, the only data available for our analysis was APTC data, not the reconciled amounts.

2012, the most current years available at the time of our analysis.[11] To assess the reliability of the data, we reviewed the data and supporting documentation for obvious errors, as well as IRS's internal controls for producing the data. We found the data to be sufficiently reliable for our purposes.

To examine the extent to which affordable health benefits plans are available and individuals are able to maintain minimum essential coverage, we reviewed studies resulting from our literature review, as well interviewed experts as described above. We asked experts about the types of individuals that may have more or less difficulty accessing affordable coverage and maintaining minimum essential coverage. In addition, we analyzed 2014 premium data—the most recent data available at the time of our analysis—from the federally facilitated exchanges and state-based exchanges to determine the percent of household income that households would have had to spend on premiums for the lowest-cost plans available. We obtained these premium data from The Henry J. Kaiser Family Foundation (KFF) and from the state of New York. To assess these data for reliability, we interviewed key officials, checked the data for outliers and validated selected data. We found both datasets to be reliable for our purposes. A more extensive discussion of our scope and methodology appears in appendix II.

We conducted this performance audit from July 2014 through March 2015 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

[11]GAO, *Small Employer Health Tax Credit: Factors Contributing to Low Use and Complexity*, GAO-12-549 (Washington, D.C.: May 14, 2012).

Background

PPACA Health Insurance Requirements and Subsidies

Beginning January 1, 2014, PPACA required most citizens and legal residents of the United States to maintain health insurance that qualifies as minimum essential coverage for themselves and their dependents or pay a tax penalty. Individuals are exempt from this requirement if they would have to pay more than 8 percent of their household income for the lowest-cost self-only health plan that is available to the individual.[12]

Beginning October 1, 2013, individuals were able to shop for private health insurance coverage that qualifies as minimum essential coverage through marketplaces, also referred to as exchanges, which offer choices of qualified health plans.[13] In 34 states, the federal government operated the individual exchanges, known as federally facilitated exchanges, while 17 states operated state-based exchanges in 2014.[14] Individuals can purchase self-only plans, or they can purchase family plans for themselves, their spouses, and their dependents.

[12]Similarly, families are exempt when the lowest-cost health plan available to the family exceeds 8 percent of household income. For purposes of the individual mandate, household income is the taxpayer's modified adjusted gross income, plus that of every other individual in a family for whom an individual can properly claim a personal exemption deduction and who is required to file a federal income tax return. Modified adjusted gross income is a tax-based definition of income established in PPACA. See 26 U.S.C. § 5000A(c)(4)(B). Other exemptions may be available for certain eligible individuals, such as those determined to have suffered certain hardships, members of Native American tribes, and those who qualify for an exemption for religious reasons.

[13]PPACA requires the insurance plans offered under an exchange, known as qualified health plans, to provide a package of essential health benefits—including coverage for specific service categories, such as ambulatory care, prescription drugs, and hospitalization. In addition to these categories, states may require or restrict coverage of other benefits by qualified health plans. Pub. L. No. 111-148, §§ 1311(d), 10104(e)(1), 124 Stat. 119 at 176, 900.

[14]Some states that elected not to establish a state-based exchange entered into a partnership with the Department of Health and Human Services' (HHS) Centers for Medicare & Medicaid Services in which HHS establishes and operates the exchange while states assist HHS in carrying out certain functions of the exchange. Because a partnership exchange is a variation of a federally facilitated exchange, we include partnership states as federally facilitated exchange states in this report. In addition, in 2014, two states—Idaho and New Mexico—operated their own exchange, but enrollees signed up for health insurance through the federal website, http://www.healthcare.gov. The term "state" in this report includes the District of Columbia.

Qualified health plans on the exchanges may provide minimum essential coverage at one of four levels of coverage that reflect out-of-pocket costs that may be incurred by an enrollee. The four levels of coverage correspond to a plan's actuarial value—the percentage of the total average costs of allowed benefits paid by a health plan—and are designated by metal tiers: 60 percent (bronze), 70 percent (silver), 80 percent (gold), and 90 percent (platinum).[15] For example, a gold plan with an 80 percent actuarial value would be expected to pay, on average, 80 percent of a standard population's expected medical expenses for the essential health benefits. The individuals covered by the plan would be expected to pay, on average, the remaining 20 percent of the expected cost-sharing expenses in the form of deductibles, copayments, and coinsurance.[16]

Under PPACA, issuers are allowed to adjust premium rates within specified limits for plans, based on the number of people covered under a particular policy and the covered individuals' age, tobacco use, and area of residence.[17] Each state must divide its state into one or more rating areas that all issuers must use in setting premium rates. The rating area is the lowest geographic level by which issuers can vary premiums.

Individuals obtaining insurance through the exchanges may be eligible for the APTC under PPACA if they meet applicable income requirements and are not be eligible for coverage under another qualifying plan or program, such as ESI or Medicaid. To meet the APTC's income requirements,

[15]42 U.S.C. § 18022(d). In addition to these metal tiers, catastrophic plans are available to those under 30 years of age or to those who are exempt from the requirement to have minimum essential coverage because of a hardship or because the lowest-cost plan available would cost more than 8 percent of one's household income. Catastrophic plans' actuarial value must be lower than that of a bronze plan, so these plans have the highest level of cost sharing, although they cover preventive care at no cost. Enrollees are not eligible for the APTC.

[16]These cost-sharing provisions apply only to the essential health benefits and other goods and services that insurers cover. Goods and services that are not covered may cause additional expenses to be incurred.

[17]In 2013 in most states, applicable laws allowed broader variation for age and also allowed variation for other factors, such as health status and gender, which PPACA prohibited in 2014. See GAO, *Private Health Insurance: The Range of Base Premiums in the Individual Market by County in January 2013* (Washington D.C., Sept. 5, 2014) GAO-14-772R.

individuals must have household incomes between 100 and 400 percent of the FPL (see table 1).[18]

Table 1: 2013 Federal Poverty Level (FPL) for an Individual and a Family of Four in the 48 Contiguous States

Percentage of Poverty	Poverty level for single person	Poverty level for family of four
100	$11,490	$23,550
133	$15,282	$31,322
200	$22,980	$47,100
300	$34,470	$70,650
400	$45,960	$94,200

Source: Department of Health and Human Services. | GAO-15-312

Note: The U.S. Department of Health and Human Services publishes separate FPL guidelines for Alaska and Hawaii that are higher than for the 48 continuous states, reflecting higher cost-of-living allowances.

The amount of the APTC is calculated based on an eligible individual's household income relative to the cost of premiums for the "reference plan," even if the individual chooses to enroll in a different plan. The reference plan is the second-lowest-cost silver plan available.[19] The APTC in effect caps the maximum amount of income that an individual would be required to contribute to the premiums for the reference plan. The capped amount varies depending on the enrollee's household income relative to the FPL and is less for enrollees with lower household income. Table 2 shows the maximum percentage of household income a qualifying enrollee would have to pay if they enrolled in the reference plan. If the enrollee chooses a more expensive plan, such as a gold or

[18]Household income is the taxpayer's modified adjusted gross income, plus that of every other individual in a family for whom an individual can properly claim a personal exemption deduction and who is required to file a federal income tax return. For purposes of the premium tax credit, and in contrast to the individual mandate, modified adjusted gross income includes nontaxable Social Security benefits. See 26 U.S.C. § 36B(d)(2)(B); 26 U.S.C. § 5000A(c)(4)(C).

Certain lawfully present immigrants with incomes below 100 percent of FPL who would eligible for Medicaid but for their immigration status are eligible for the APTC.

[19]The second-lowest-cost silver plan available is the plan that applies to a taxpayer's "coverage family." Members of the coverage family are those for whom a taxpayer claims a personal exemption and who are enrolled in a qualified health plan through an exchange and not eligible for other minimum essential coverage.

platinum plan, they would pay a higher percentage of their income. If the enrollee chooses a less expensive plan, such as a bronze plan, they would pay less.[20] The amount of the APTC is determined based on an enrollee's family size and anticipated household income for the year, which is subject to adjustment—or reconciliation—the following year. Specifically, the final amount of the credit is determined when the enrollee files an income tax return for the taxable year, which may result in a tax liability or refund if the enrollee's actual, reported household income amount is greater or less than the anticipated income on which the amount of APTC was based.

Table 2: Percentage of Household Income Enrollee Is Required to Contribute for Reference Plan Premiums, after Applying the APTC

Percentage of the FPL	Premium contribution as a percentage of income
0 to less than 100%	Generally does not qualify for APTC
At least 100 but less than 133%	2%
At least 133 but less than 150%	3-4%
At least 150 but less than 200%	4-6.3%
At least 200 but less than 250%	6.3-8.1%
At least 250 but less than 300%	8.1-9.5%
At least 301 but less than 400%	9.5%
Over 400%	Does not qualify for APTC

Source: IRS and 26 C.F.R. §§ 1.36B-2(b), 1.36B-3(g)(2) (2012). | GAO-15-312

To further improve access to care, certain low-income individuals may also be eligible for an additional type of income-based subsidy established by PPACA, known as cost-sharing subsidies, which reduce out-of-pocket costs for such things as copayments for physician visits or prescription drugs.[21] To be eligible for these cost-sharing subsidies, individuals must have household incomes between 100 and 250 percent of the FPL, not be eligible for coverage under another qualifying plan or program such as Medicaid or ESI, and be enrolled in a silver plan through

[20]If the amount of the credit is larger than the premium itself, the enrollee pays no premium. Conversely, if the premium cost is less than the percentage of household income an individual is required to contribute based on FPL, then the individual will not receive a tax credit.

[21]42 U.S.C. § 18071.

an exchange.[22] Cost-sharing subsidies effectively raise the actuarial value of the silver plan.

As a practical matter, because individuals eligible for Medicaid are not eligible for the APTC, the minimum income level for these subsidies differs between states that chose to expand Medicaid under PPACA and those that did not.[23] In states that chose to expand Medicaid under PPACA, nonelderly adults are eligible for Medicaid when their household income is less than 138 percent of the FPL. Because those eligible for Medicaid are not eligible for the APTC, the minimum income level for the APTC in Medicaid expansion states is effectively 138 percent of the FPL. In states that chose not to expand Medicaid, the minimum income level for individuals to qualify for APTC and cost-sharing subsidies is 100 percent of the FPL, as specified in PPACA, assuming the state's Medicaid eligibility threshold is at or below this level.[24] As of January 2015, 27 states and the District of Columbia opted to expand Medicaid under PPACA.

Employer-Sponsored Insurance under PPACA

Under PPACA, employers that meet certain conditions must offer health insurance to some employees. Employers with at least 50 full-time equivalent employees—which includes employees whose hours average at least 30-hours per week—must offer qualifying health insurance to their

[22]American Indians and Alaska Natives are eligible for cost-sharing assistance up to 300 percent of the FPL.

[23]Specifically, PPACA authorizes states to expand eligibility for Medicaid to most non-elderly adults whose income is at or below 133 percent of the FPL. PPACA also specifies that an income disregard in the amount of 5 percent of the FPL be deducted from an individual's income when determining Medicaid eligibility, which effectively raises the income eligibility threshold for newly eligible Medicaid recipients in expansion states to 138 percent of the FPL.

[24]See 26 U.S.C. § 36B(c)(1)(A). The minimum income levels applicable to APTC also apply to federal cost-sharing subsidies, which reduce out-of-pocket costs for such things as copayments for physician visits or prescription drugs. See 42 U.S.C. § 18071(b)(2).

full time employees or face tax penalties if at least one full-time employee receives the APTC.[25]

In contrast to PPACA's affordability threshold of 8 percent of household income for the purpose of assessing penalties for failure to maintain minimum essential coverage, PPACA requires ESI to meet two different affordability tests for the purposes of determining eligibility for the APTC. First, the employee's share of the ESI premiums covering an individual, also referred to as a self-only plan, must not exceed 9.5 percent of the employee's household income. Second, the insurance offered must cover 60 percent of the actuarial value of health care for the average person to qualify as affordable for purposes of the APTC. Employees who are offered ESI that meets both of these tests are not eligible for the APTC. Some employees may be offered qualifying ESI that costs between 8 and 9.5 percent of household income. If these individuals do not have access to insurance on an individual exchange that costs less than 8 percent of household income, they are exempt from the individual mandate and will not have to pay a tax penalty if they forgo coverage. However, these individuals are not eligible for the APTC.

Small Employer Tax Credit

Because small employers are not required to offer health insurance and have been less likely to offer health insurance than large employers, PPACA established a small employer tax credit as an incentive for them to provide insurance by making it more affordable.[26] The credit is available to certain employers—small business and tax-exempt entities—with employees earning low wages and that pay at least half of their employees' health insurance premiums. To qualify for the credit, employers must employ fewer than 25 full-time equivalent employees (excluding certain employees, such as business owners and their family

[25]26 U.S.C. § 4980H. These requirements are being phased in over time. In 2015, employers with between 50 to 99 full-time equivalent employees are exempt from the requirement. Employers with more than 100 full-time equivalent employees must offer qualifying health insurance coverage to 70 percent of full-time employees in 2015. In 2016, employers with 50 or more full-time equivalent employees will be required to offer qualifying coverage to 95 percent of their full-time employees. Employers out of compliance will be subject to an annual tax penalty of $2,000 times the number of full-time employees minus 30, if one of their full-time employees receives the APTC to purchase health insurance through the individual exchanges. See *Shared Responsibility for Employers Regarding Health Coverage*, 79 Fed. Reg. 8544 (Feb. 12, 2014).

[26]26 U.S.C. § 45R.

members), and pay average annual wages per employee of less than $50,800 per year in 2014. The amount of the credit depends on several factors, such as the number of full-time equivalent employees and their total annual wages. In addition, the amount of the credit is limited if the premiums paid by an employer are more than the state's average small group market premiums, as determined by HHS.

Employers may claim the small employer tax credit for up to 6 years—the initial 4 years from 2010 through 2013 and, starting in 2014, any 2 consecutive years if they buy insurance through the Small Business Health Option Programs (SHOP). PPACA required the establishment of SHOPs in each state by January 1, 2014, to allow small employers to compare available health insurance options in their states and facilitate the enrollment of their employees in coverage. In states electing not to establish and operate a state-based SHOP, PPACA required the federal government to establish and operate a federally facilitated SHOP in the state.[27] Starting in 2014, employers that wanted to claim the small employer tax credit had to enroll their employees through the SHOP exchanges.

Early Evidence Suggests That While the APTC Likely Contributed to an Expansion of Coverage, the Small Employer Tax Credit Has Had Little Effect

Early evidence suggests that the APTC likely contributed to an expansion of health insurance coverage because it significantly reduced the cost of premiums for those eligible, though there are limitations to measuring the effects of the APTC using currently available data. In contrast, few employers claimed the small employer tax credit, limiting its effect on health insurance coverage.

[27]In 2014, 18 states chose to operate state-based SHOPs while 33 states opted for a federally facilitated SHOP.

The APTC Likely Contributed to an Expansion of Coverage by Reducing the Cost of Health Insurance Premiums to Those Eligible

Early evidence suggests that the APTC likely contributed to an expansion in health insurance coverage. We identified three surveys that estimated the uninsured rate by household income. Although limitations exist in measuring the direct, causal effects of the APTC on health insurance coverage using currently available data, these surveys can be used to make early observations about changes in the rate of uninsured. They found that the uninsured rate declined among households with incomes between 139 and 400 percent of the FPL—that is, households financially eligible for the APTC in all states (see table 3). For example, one study found that the rate of uninsured among individuals with household incomes between 139 and 400 percent of the FPL fell 9 percentage points between January 1, 2012, and June 30, 2014, in Medicaid expansion states.[28] Further, the results from this survey found that gains in insurance coverage were statistically significant for individuals in this income bracket regardless of the states' Medicaid expansion decisions.

[28]B. D. Sommers, T. Musco, K. Finegold, M. Z., Gunja, et al. "Health Reform and Changes in Health Insurance Coverage in 2014," *The New England Journal of Medicine,* vol. 371, no. 9 (Aug. 28, 2014).

Table 3: Survey Estimates of the Change in the Percent of Uninsured Nonelderly Adults by Household Income As a Percent of the Federal Poverty Level (FPL)

Survey	States covered	Time period	Income categories, as a percent of the FPL	Percentage point change in the rate of uninsured
Gallup-Healthways Well-Being Index[a]	Medicaid nonexpansion states	January 1, 2012, to June 30, 2014	Less than 139 percent of the FPL	-3.1
			139 to 400 percent of the FPL	-5.5
			Greater than 400 percent of the FPL	-1.0
	Medicaid expansion states	January 1, 2012, to June 30, 2014	Less than 139 percent of the FPL	-6.0
			139 to 400 percent of the FPL	-9.0
			Greater than 400 percent of the FPL	-0.7
The Commonwealth Fund Affordable Care Act Tracking Survey[b]	All states	July 15 to September 8, 2013, versus April 9 to June 2, 2014	Less than 138 percent of the FPL	-11.0
			138 to 249 percent of the FPL	-10.0
			250 to 399 percent of the FPL	-2.0
			400 percent of the FPL or greater	-1.0
The Urban Institute Health Reform Monitoring Survey[c]	All states	September 2013 to September 2014	Less than 139 percent of the FPL	-12.0
			139 to 399 percent of the FPL	-5.2
			400 percent of the FPL or greater	-0.2

Source: GAO analysis. | GAO-15-312.

Notes: The three surveys cannot be compared directly because each survey covered different time periods, categorized respondents in slightly different income categories, and asked questions about individuals' health insurance coverage slightly differently.

[a]B. D. Sommers, T. Musco, K. Finegold, M. Z. Gunja, et al., "Health Reform and Changes in Health Insurance Coverage in 2014," *The New England Journal of Medicine*, vol. 371, no. 9 (2014).

[b]S. R. Collins, P. W. Rasmussen, and M. M. Doty. *Gaining Ground: Americans' Health Insurance Coverage and Access to Care after the Affordable Care Act's First Open Enrollment Period* (New York: The Commonwealth Fund, 2014).

[c]S. K. Long, M. Karpman, A. Shartzer, D. Wissoker, et al., *Taking Stock: Health Insurance Coverage under the ACA as of September 2014* (Washington, D.C.: The Urban Institute, 2014).

This expansion in health insurance coverage is likely partially a result of the APTC having reduced the cost of health insurance premiums for those deemed eligible.[29] As of April 19, 2014, HHS initially estimated that 8 million individuals (including dependents) had selected a health plan through either a state-based exchange or a federally facilitated exchange,

[29]Other factors or provisions in the PPACA could have also affected changes in the rate of uninsured, including the requirement to maintain minimum essential coverage or pay a tax penalty (i.e., the individual mandate), the requirement that some large employers offer health insurance to full-time employees, or individual market reforms that prohibited issuers from denying individuals coverage and setting rates based on individuals' health status.

and most of them (85 percent) were deemed eligible for the APTC at the time that they selected a health plan.[30] Among those who selected a plan through 1 of the 34 federally facilitated exchanges or the 2 state-based exchanges that used the federal website for enrollment in 2014 and were deemed eligible for the APTC (4.7 million individuals), the APTC reduced premiums by 76 percent, on average (see table 4).[31] For those who selected a silver plan through these 36 exchanges and were deemed eligible for the APTC, the APTC reduced premiums the most—an 80 percent reduction.[32] Overall, most individuals who selected a plan through these 36 exchanges and received the APTC (69 percent) saw their premiums reduced to $100 per month or less ($1,200 annually or less), and nearly half (46 percent) had their monthly premiums reduced to

[30]Department of Health and Human Services (HHS), Office of the Assistant Secretary for Planning and Evaluation, *Health Insurance Marketplace: Summary Enrollment Report for the Initial Open Enrollment Period* (Washington, D.C.: May 1, 2014). As of November 2014, HHS reported that 6.7 million individuals had enrolled in a health plan through the individual exchanges, after accounting for effectuated enrollment—that is, individuals who had selected a plan and paid their premiums—and excluding enrollment in dental plans. Of these individuals, 85 percent were deemed eligible for the APTC. As of January 2015, however, HHS had not revised its summary statistics on the amount of APTC that eligible individuals had received or the amount that the APTC reduced premiums for those eligible.

[31]Department of Health and Human Services, *Health Insurance Marketplace*; and Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation, *Premium Affordability, Competition, and Choice in Health Insurance Marketplace, 2014* (Washington, D.C.: June 18, 2014). In its analysis of the amount of APTC that individuals received and the extent to which it reduced premiums, HHS included data from the 34 federally facilitated exchanges as well as 2 state-based exchanges—Idaho and New Mexico—that used the federal website, http://www.healthcare.gov, for exchange enrollment in 2014.

[32]Department of Health and Human Services, *Premium Affordability*. Of those who were deemed eligible for an APTC when they selected a health plan through 1 of the 34 federally facilitated exchanges or 1 of the 2 state-based exchanges that used the federal website, http://www.healthcare.gov, for enrollment in 2014, most (76 percent) selected a silver plan, followed by 15 percent who selected a bronze plan, 6 percent who selected a gold plan, and 3 percent who selected a platinum plan. Department of Health and Human Services, *Health Insurance Marketplace*. Individuals with household incomes between 100 and 250 percent of the FPL—those eligible to receive both the APTC and the cost-sharing reduction subsidies—may have been encouraged to select silver because, by selecting a bronze plan, they would have become ineligible to receive the cost-sharing reduction subsidies.

$50 or less ($600 annually or less).[33] However, results from an early survey and experts we interviewed suggested that the APTC may have been less effective in expanding health insurance coverage for individuals financially eligible for a smaller APTC amount and ineligible for cost-sharing reduction subsidies than for individuals eligible for a larger APTC amount as well as for cost-sharing reduction subsidies.[34]

[33]Thirteen percent of individuals who selected a health plan through 1 of the 34 federally facilitated exchanges or 1 of the 2 state-based exchanges that used the federal website, http://www.healthcare.gov, for enrollment in 2014 and were deemed eligible for the APTC had their monthly premiums reduced to between $101 and $150 ($1,212 to $1,800 annually), and 18 percent had an after-APTC monthly premium amount greater than $150 (greater than $1,800 annually). Department of Health and Human Services, *Premium Affordability*.

[34]The survey examined changes in the rate of nonelderly uninsured adults by income and found that, between 2013 and 2014, the uninsured rate declined by 2 percentage points among those with household incomes between 250 and 399 percent of the FPL—individuals eligible for a smaller APTC amount and ineligible for cost-sharing reduction subsidies. By comparison, the uninsured rate declined by 10 percentage points among those with household incomes between 138 and 249 percent of the FPL—individuals eligible for a larger APTC amount as well as cost-sharing reduction subsidies. S. R. Collins, P. W. Rasmussen, and M. M. Doty, *Gaining Ground: Americans' Health Insurance Coverage after the Affordable Care Act's First Open Enrollment Period* (New York: The Commonwealth Fund, 2014).

Table 4: Average Monthly Advance Premium Tax Credit (APTC) Amount and Percent Reduction in Premiums after APTC for Individuals Who Selected a Plan through a Federally Facilitated Exchange or a State-Based Exchange that Used the Federal Website for Enrollment in 2014 and Were Deemed Eligible for the APTC in 2014, by Metal Tier

Metal tier	Average monthly premium amount before APTC	Average monthly APTC	Average monthly premium amount after APTC	Average percent reduction in premiums after APTC
Bronze	$289	$221	$68	76
Silver	$345	$276	$69	80
Gold	$428	$220	$208	51
Platinum	$452	$232	$220	51
All metal tiers	**$346**	**$264**	**$82**	**76**

Source: Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation, *Premium Affordability, Competition, and Choice in the Health Insurance Marketplace, 2014* (Washington, D.C.: June 18, 2014). | GAO-15-312

Notes: In its analysis of the amount of APTC that individuals received and the extent to which it reduced premiums, HHS included data from the 34 federally facilitated exchanges as well as 2 state-based exchanges—Idaho and New Mexico—that used the federal website, http://www.healthcare.gov, for exchange enrollment in 2014. Depending on the portion of health care costs expected to be paid by the health plan, qualified health plans are categorized into one of the following "metal tiers": bronze, silver, gold or platinum. Bronze plans cover an average of 60 percent of health care costs, silver plans cover 70 percent, gold plans cover 80 percent, and platinum plans cover 90 percent.

As of January 2015, data were not available on the extent to which the APTC reduced 2015 premiums for enrollees. Studies that examined changes in premiums between 2014 and 2015 found that, on average, premiums changed modestly. For example, HHS reported that premiums for the reference plan (before applying the APTC) increased by 2 percent, on average, between 2014 and 2015, and premiums for the lowest-cost silver plan increased by an average of 5 percent.[35] However, studies found variation across rating areas, and some rating areas had significant increases or decreases in average premiums.[36] Further, premiums are

[35]Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation, *Health Plan Choice and Premiums in the 2015 Health Insurance Marketplace* (Washington, D.C.: Dec. 4, 2014).

[36]For example, one study that measured the change in premiums between 2014 and 2015 found that, while premiums for the lowest-cost bronze plan increased by an average of 4 percent, they increased by up to 43 percent in western counties of Minnesota and declined by at most 40 percent in Summit County, Colorado. C. Cox, L. Levitt, G. Claxton, R. Ma, and R. Duddy-Tenbrunsel, *Analysis of 2015 Premium Changes in the Affordable Care Act's Health Insurance Marketplaces* (Menlo Park, Calif.: Jan. 6, 2015).

likely to continue to change in future years as issuers gain more data about enrollees in the exchanges and how they compare to enrollees previously purchasing individual insurance or ESI.[37] In addition, while the APTC helps protect eligible individuals from large increases in premiums by capping the amount of household income individuals have to pay for the reference plan, some who reenrolled in their health plan in 2015, rather than shopping for and switching to a lower cost plan, may find that their premiums, after accounting for the APTC, increased substantially. HHS estimated that more than 7 in 10 current exchange enrollees could find a lower-cost plan within the same metal level as they selected in 2014 if they selected the new lowest-cost plan in 2015, rather than reenroll in their same 2014 plan, but the extent to which this occurred was not yet known as of January 2015.[38]

According to results from four early surveys of nonelderly adults and one group of experts we interviewed, lack of awareness of the APTC may have limited take-up of health insurance coverage among some individuals likely eligible for the APTC. Three of the four surveys estimated that, of those who remained uninsured in 2014, between 59 and 60 percent cited affordability or the cost of premiums as the reason for not purchasing health insurance coverage.[39] However, less than half—between 38 and 47 percent—of the uninsured surveyed were aware of

[37]Also, as premiums are influenced by underlying costs of health care, there remains uncertainty as to whether lower than historical trends in health care cost growth in recent years will continue in future years.

[38]For 78 percent of individuals who selected a silver plan in 2014, the lowest-cost silver plan in 2015 cost less than their 2014 plan. Similarly, for 78 percent of who selected a bronze plan in 2014, the lowest-cost bronze plan in 2015 was cheaper than their 2014 plan. Department of Health and Human Services, *Health Plan Choice*.

[39]L. Hamel, B. DiJulio, J. Firth, M. Brodie, *Kaiser Health Tracking Poll: November 2014* (Menlo Park, Calif.: The Henry J. Kaiser Family Foundation, 2014); A. Bhardwaj, E. Coe, J. Cordina, and R. Saha, *Individual Market: Insights Into Consumer Behavior at the End of Open Enrollment* (New York: McKinsey Center for U.S. Health System Reform, 2014); and A. Schatzer, G. M. Kenney, S. K. Long, K. Hemstead, et al. *Who Are the Remaining Uninsured As of June 2014?* (Washington, D.C.: The Urban Institute, 2014). In addition, publicly available summary results from the fourth survey showed that of all nonelderly adults surveyed who reported that they shopped on an exchange for a health insurance plan, 54 percent said that it was “very difficult or impossible” or “somewhat difficult” to find a plan they could afford. P. W. Rasmussen, S. R. Collins, M. M. Doty, and S. Beutel, *Are Americans Finding Affordable Coverage in the Health Insurance Marketplaces? Results from the Commonwealth Fund Affordable Care Act Survey* (New York: The Commonwealth Fund, September 2014).

the availability of financial assistance to purchase insurance through the individual exchanges.[40]

When interpreting data on the effect of the APTC on changes in health insurance coverage, there are several limitations to consider:

- Large-scale, rigorous survey data are needed to more accurately measure the direct, causal effect of the APTC on changes in health insurance coverage. While early survey data provide some indications of the effect of the APTC on coverage, these surveys generally have lower response rates and smaller sample sizes, which could cause large margins of error when examining changes in health insurance coverage by subgroups, such as by household income.[41] However, results from larger, more rigorous surveys are not expected to be available until the summer of 2015 at the earliest.[42]
- Available summary data from HHS on those who received the APTC are limited and subject to change because the data:
    - Did not account for effectuated enrollment—that is, whether those who initially selected a health plan paid their premium—nor did it account for individuals who did not submit required documentation

[40]Collins et al., *Gaining Ground*; L. Hamel, J. Firth, B. DiJulio, and K. Brodie, *Kaiser Health Tracking Poll: October 2014* (Menlo Park, Calif.: The Henry J. Kaiser Family Foundation, 2014); and Schatzer et al., *Who Are the Remaining Uninsured*. In addition, publicly available summary results from the fourth survey found that 44 percent of the uninsured surveyed who were likely eligible for financial assistance were aware of the APTC. Bhardwaj et al., *Individual Market*.

[41]See appendix II for additional information about the response rates, sample sizes, and margins of error of early surveys cited in this report.

[42]The first large data set that covers the full first year of enrollment in the exchanges will become available in June 2015 with the release of complete 2014 National Health Interview Survey data, though precise income data in this survey will not become available until August 2015.

to verify their eligibility for the exchanges or the APTC, or those who may have selected a plan after open enrollment ended.[43]

- Did not include the amount of APTC that individuals in 15 state-based exchanges received.[44] Although 15 state-based exchanges reported to HHS's Centers for Medicare & Medicaid Services (CMS) the number of individuals who were deemed eligible for the APTC at the time that they selected a plan, CMS officials we spoke with stated that voluntary reporting on the amount of APTC individuals received was limited and variable across states.
- Did not account for adjustments to the amount of APTC that may occur when the amount of APTC received is reconciled against enrollees' actual income reported in their 2014 income tax returns, which will begin to occur when individuals start to file their income tax returns in 2015.[45]

[43]As of September 15, 2014, HHS officials reported that at least 363,000 individuals who selected a health plan through the exchanges had not yet submitted required documentation. Department of Health and Human Services, Centers for Medicare and Medicaid Services (CMS), *CMS Update on Consumers Who Have Data Matching Issues,* Press Release (Washington, D.C.: Sept. 15, 2014). Individuals may enroll in coverage through an exchange during a special enrollment period outside of open enrollment due to a qualifying life event, such as a change in family status (e.g., marriage or birth of a child) or the loss of other health coverage, such as ESI.

[44]HHS included data from 2 of the 17 state-based exchanges—Idaho and New Mexico—in its summary data on the amount of APTC received by individuals who selected a health plan and were deemed eligible for the APTC. These two state-based exchanges used the federal website, http://www.healthcare.gov, for their 2014 exchange enrollment.

[45]Individuals who receive APTC must file federal income tax returns in order to reconcile the amount of the premium tax credit allowed based on reported income with the amount of the premium tax credit received in advance (APTC). An individual whose premium tax credit for the taxable year exceeds the individual's APTC payments may receive the excess as an income tax refund. An individual whose APTC payments for the taxable year exceed the individual's premium tax credit owes the excess as an additional income tax liability, subject to certain caps. 26 C.F.R. § 1.36B-4.

Few Employers Claimed the Small Employer Tax Credit, Limiting Its Effect on Health Insurance Coverage

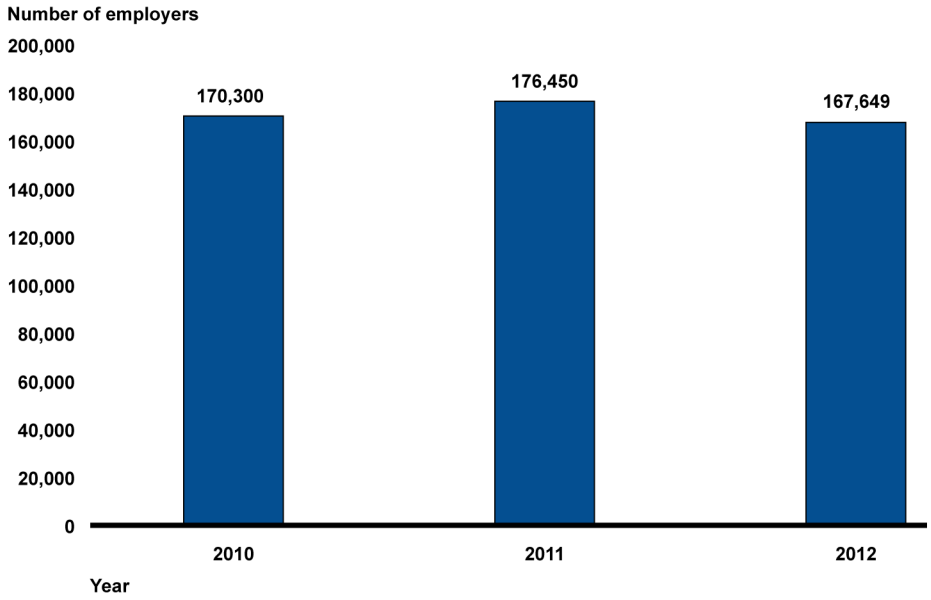
Take-up of the small employer tax credit has continued to be lower than anticipated, limiting the effect of the credit on expanding health insurance coverage. About 167,600 employers claimed the credit in 2012 (the most recent year for which data were available), slightly fewer than the 170,300 employers that claimed the credit in 2010 (see fig. 1).[46] These figures are low compared to the number of employers eligible for the credit. In 2012, we found that selected estimates of the number of employers eligible ranged from about 1.4 million to 4 million.[47] Although about the same number of small employers claimed the credit in 2012 as in 2010, these employers paid all or some of the premiums for more employees in 2012 (900,800 employees) than in 2010 (770,000 employees).[48]

[46]Complete data on the number of entities that claimed a tax credit are generally not available until sometime after the tax year in question because of the complex nature of filing and reconciling taxes.

[47]Data limitations made these estimates necessarily rough. See GAO-12-549, 9.

[48]The total amount of credit claimed by employers continued to be lower than experts had projected. In March 2012, the Congressional Budget Office (CBO) and the Joint Committee on Taxation estimated that the cost of the credit would be $1 billion in 2012. This estimate was previously $5 billion in 2012. In 2012, employers claimed about $507 million in credits compared to $645 million in 2011 and $468 million in 2010.

Figure 1: Number of Employers That Claimed the Small Employer Tax Credit, 2010-2012



Source: IRS. | GAO-15-312

As we found in 2012, experts we interviewed for this report generally told us that features of the small employer tax credit did not provide a strong enough incentive to employers to begin to offer or to continue offering health insurance.[49] First, experts explained that the maximum amount of the credit is targeted to very small employers, most of which do not offer health insurance, and experts told us the size of the credit is not large enough to be an incentive to employers to offer or maintain insurance. The maximum amount of the small employer tax credit is available to for-profit employers with ten or fewer full-time equivalent employees that pay an average of $25,400 or less in wages.[50] Such an employer could be eligible for a credit worth up to 50 percent of the employer contributions to

[49]See GAO-12-549, 12. In addition, we found no peer reviewed studies that examined whether or not the small employer tax credit affected employers' decisions to offer health insurance or lowered the costs of ESI in the last four years.

[50]The average annual wages were $25,000 or less through 2013. The maximum average wage limit is indexed for inflation beginning in 2014.

premiums in 2014.[51] The credit amount "phases out" to zero as employers employ up to 25 full-time equivalent employees at higher wages—up to an average of $50,000. For example, employers with 24 full-time equivalent employees are only eligible for the credit if they paid wages that averaged $25,400 or less; such employers may be eligible for a credit worth up to 2.2 percent of employer contributions to premiums.[52] Second, the limited availability of the credit—employers can claim it for only two consecutive years after 2013—further detracts from any potential incentive for small employers that do not offer coverage to begin offering coverage. Experts we interviewed told us that employers are reluctant to provide a benefit to employees that would be at risk of being taken away later when the credit is no longer available.[53] Finally, experts told us that the complexity of applying for the credit outweighed its benefit. According to tax preparers and other stakeholders we interviewed for this and our previous report, the complexity of the paperwork required to claim the credit was significant, and small employers likely did not view the credit as a sufficient incentive to begin offering health insurance, given the time required to claim it.[54]

The trend in low take-up of the small employer tax credit is likely to continue given the low enrollment in SHOPs, and thus it is unlikely that its effects on coverage will change in the near future. This is because employers were required to offer health insurance coverage through SHOP exchanges to be eligible for the small employer tax credit

[51]Through 2013, small for-profit employers could receive up to 35 percent (nonprofit entities up to 25 percent) of their base payments for employee health insurance premiums. These portions rose to 50 percent and 35 percent, respectively, starting in 2014.

[52]The Medical Expenditure Panel Survey (MEPS) estimated that in 2013, 86 percent of employers who may otherwise be eligible for the full credit did not offer health insurance. This MEPS statistic is based on employers—both for profit and nonprofit—with fewer than 10 employees that pay annual wages of $24,000 or less to over half of their employees. Further, 76 percent of employers that may be eligible for the partial credit did not offer insurance. This MEPS statistic is based on employers—both for profit and nonprofit—with 10 to 24 employees that pay annual wages of $24,000 or less to over half of their employees. Because the employers eligible for the partial credit can pay up to $50,000 in wages, this is a less precise estimate than using MEPS to estimate insurance offerings for the full credit.

[53]See also GAO-12-549, 12.

[54]See GAO-12-549, 12-13.

beginning in 2014.[55] We previously found that 2014 enrollment in SHOP was significantly below expectations. Specifically, we found that as of June 2014, the 18 state-based SHOP exchanges had enrolled about 76,000 employees through nearly 12,000 small employers,[56] although not all of these employers were eligible for the credit.[57] Enrollment in states with federally facilitated SHOPs was not known as of January 2015, although CMS officials said they did not have reason to expect significant differences in enrollment trends for 2014 between the state-based SHOPs and the federally facilitated SHOPs.[58] In comparison, the Congressional Budget Office (CBO) had estimated that, in 2014, 2 million employees would enroll in coverage through either state-based or federally facilitated SHOP exchanges.[59]

[55]The IRS has stated that in 2014, small employers in certain counties in Wisconsin and Washington where SHOP plans are not offered may be eligible for the tax credit if they offer coverage that would have qualified for the credit prior to January 1, 2014. See Internal Revenue Service, Section 45R – *Transition Relief with Respect to the Tax Credit for Employee Health Insurance Expenses of Certain Small Employers*, Internal Revenue Bulletin: 2014-2 (Washington, D.C.: Jan. 6, 2014). Similarly, the IRS has stated that in 2015, small employers in certain counties in Iowa where SHOP plans are not offered may be eligible for the tax credit if they offer coverage that would have qualified for the credit prior to January 1, 2014. See Internal Revenue Service, Section 45R-2015 – *Guidance with Respect to the Tax Credit from Employee Health Insurance Expenses of Certain Small Employers*, Internal Revenue Bulletin: 2015-6 (Washington, D.C.: Feb. 9, 2015).

[56]GAO, *Small Business Health Insurance Exchanges: Low Initial Enrollment Likely due to Multiple, Evolving Factors*, GAO-15-58 (Washington, D.C.: Nov. 13, 2014), 12.

[57]Until 2016, states have the option to define small employers either as employers with 100 or fewer full-time equivalent employees or employers with 50 or fewer full-time equivalent employees. In contrast, to qualify for the small employer tax credit, employers must employ fewer than 25 full-time equivalent employees in the tax year (excluding certain employees, such as business owners and their family members).

[58]GAO-15-58, 15.

[59]In a previous report, we found that the reasons for the low enrollment included the delay of some expected SHOP features. For example, online enrollment was not available for states with federally facilitated SHOP exchanges, and few SHOP exchanges offered employees a choice of plans. In addition, we reported that the small employer tax credit provided an insufficient incentive for employers to sign up. GAO-15-58, 20.

While Most Nonelderly Adults Had Access to Affordable Health Insurance Coverage, Maintaining Minimum Essential Coverage May Be Challenging for Some

Most nonelderly adults had access to affordable minimum essential coverage through their employer, Medicaid, the exchanges, or other sources, although about 16 percent of nonelderly adults remained uninsured as of March 2014. While there are many reasons people remain uninsured, some—including certain families or individuals not eligible for the APTC—may not have access to affordable coverage. The affordability of health insurance coverage obtained through the exchanges varied depending on one's age, household size, income, and place of residence. Regardless of the affordability of premiums, some may face challenges in maintaining their insurance.

Most Nonelderly Adults Had Access to Affordable Coverage

Most nonelderly adults had access to affordable minimum essential coverage through their employer, Medicaid, the exchanges, or other sources. While specific data on individuals' access to affordable coverage is not available, estimates of the number of nonelderly adults who are insured through various types of coverage indicate that most have access to coverage that would be considered affordable under PPACA. For example, one survey estimated that, as of March 2014, 59 percent of nonelderly adults had obtained coverage through an employer.[60] For most individuals with ESI, the coverage would be considered affordable under PPACA—that is, premiums for the self-only ESI plan offered cost less

[60]K.G. Carman and C. Eibner, *Changes in Health Insurance Enrollment Since 2013: Evidence from the RAND Health Reform Opinion Study* (Santa Monica, Calif.: RAND Corporation, 2014).

ESI generally qualifies as minimum essential coverage. However, according to experts we interviewed, some employers may offer plans with few benefits that do not meet the requirement that ESI cover 60 percent of the actuarial value of health care for the average person. Such plans generally cover only preventive services, according to these experts. Employees and their families who enroll in such plans are not subject to the penalty for failing to maintain minimum essential coverage. However, ESI plans that do not cover the minimum 60-percent actuarial value of health care costs are not affordable for purposes of determining eligibility for the APTC, and employers offering only these plans may be subject to a penalty if an employee obtains health insurance through an exchange and receives the APTC.

than 9.5 percent of their household income.[61] Individuals who are offered ESI that does not meet this affordability threshold may be eligible, depending on their household income, to receive the APTC to instead purchase an affordable exchange plan.[62] As of March 2014, an estimated 2 percent of nonelderly adults purchased coverage through an exchange—an estimated 85 percent of whom received the APTC. An additional 9 percent of nonelderly adults were enrolled in Medicaid coverage, which requires either no or minimal premiums.[63] Finally, an estimated 14 percent of nonelderly adults had other sources of coverage, such as TRICARE for certain members of the armed forces, or health plans sold off the exchanges.[64]

[61]CBO estimated that up to 500,000 of an estimated 156 million individuals were offered unaffordable ESI in 2014 and enrolled in plans through the exchanges, suggesting that most with access to ESI are offered affordable coverage. Congressional Budget Office, *Updated Estimates of the Effects of the Insurance Coverage Provisions of the Affordable Care Act* (Washington, D.C., April 2014). Other researchers have reported similar estimates. See appendix I for more information.

[62]With financial assistance from the APTC, the cost of health insurance premiums for those eligible is reduced to an amount considered affordable—that is, the cost of premiums for the second lowest-cost silver plan are capped at between 2 and 9.5 percent of household income, depending on one's income.

[63]Carman and Eibner, *Changes in Health Insurance*; and Department of Health and Human Services, *Health Insurance Marketplace*. Minimum essential coverage generally includes Medicaid. However, some Medicaid enrollees may have had coverage under limited benefit plans that do not qualify as minimum essential coverage, such as Medicaid plans that cover only family planning. In addition, minimum essential coverage generally includes health plans offered through the exchanges with the exception of catastrophic plans.

[64]Carman and Eibner, *Changes in Health Insurance*. TRICARE plans require no premiums or up to $548 annually for a family plan, depending on the individuals' military status, type of TRICARE plan, and where they choose to receive their care. Four percent of nonelderly adults—which is included in the 14 percent of nonelderly adults who were insured through other sources—obtained their coverage through the individual market outside the exchanges. Information about the affordability of such plans is not available.

Some Groups of Nonelderly Adults May Lack Access to Affordable Health Insurance Coverage

An estimated 16 percent of nonelderly adults (31.4 million) were uninsured as of March 2014, according to one early survey.[65] CBO estimated that, in 2016, most of those who will remain uninsured—at least 77 percent—will likely be exempt from the requirement to maintain minimum essential coverage because, for example, they are undocumented immigrants or lack access to health insurance coverage that is considered affordable under PPACA.[66] While there are many reasons people remain uninsured, some individuals may not have access to affordable health insurance coverage.[67] For example, some may be low-income and live in a Medicaid nonexpansion state or they may lack access to affordable ESI yet are also ineligible for the APTC to instead purchase affordable coverage through the individual exchanges.

Low-Income Individuals Living in Medicaid Nonexpansion States

Nonelderly adults with household incomes less than 100 percent of the FPL are not eligible for the APTC and, if their state chose not to expand Medicaid to low-income adults, they may not be eligible for Medicaid.[68] Without financial assistance from an APTC, coverage available through

[65]Carman and Eibner, *Changes in Health Insurance*. Results from early surveys have estimated that between 12.4 and 17.0 percent of nonelderly adults were uninsured as of early 2014, though all surveys consistently show that the rate of uninsured has declined since 2013, ranging from a decline of 3.4 to 5.3 percentage points. See Long et al., *Taking Stock*; Collins, et al., *Gaining Ground*; Sommers et al., *Health Reform and Changes*; and Martinez and Cohen, *Health Insurance Coverage*.

[66]Individuals qualify for the affordability exemption if the required amount that they would have to contribute for the lowest-cost, self-only plan available to them costs more than 8 percent of their household income. Individuals could also be exempt from the requirement to maintain minimum essential coverage because they were members of Native American tribes, individuals with qualifying religious exemptions, or received a hardship exemption. In addition to those exempt, CBO also estimated that some people who lack minimum essential coverage will try to avoid penalties when filing their income tax returns. Congressional Budget Office, *Payments of Penalties for Being Uninsured Under the Affordable Care Act: 2014 Update* (Washington, D.C.: June 2014).

[67]Some of the uninsured may have access to affordable coverage but chose not to take-up that coverage. For example, one study estimated that 3 percent of the uninsured (8.1 million) were eligible for Medicaid and 4 percent (10.9 million) were eligible for the APTC. Another 2 percent (7.3 million), though they had access to affordable coverage, would have to pay a penalty for failing to maintain minimum essential coverage. L. J. Blumberg, M. Buettgens, J. Feder, *The Individual Mandate in Perspective: Timely Analysis of Immediate Health Policy Issues* (Washington, D.C.: The Urban Institute, 2012). In addition, some people who were insured in 2014 may have had coverage that did not qualify as minimum essential coverage, such as Medicaid partial-benefit coverage.

[68]Some states permit certain nonelderly adults with incomes greater than 100 percent of the FPL to enroll in Medicaid, such as those who are pregnant or disabled.

the individual exchanges was likely unaffordable for these uninsured individuals. For example, an individual age 27 with household income at 99 percent of the FPL in a Medicaid nonexpansion state would have had to spend between 10 and 32 percent of their household income on the lowest-cost bronze plan, depending on their place of residence.[69] One study estimated that roughly 4 million nonelderly adults with household incomes below 100 percent of the FPL living in a Medicaid nonexpansion state were uninsured in 2014.[70]

Some Families with ESI

Although some families have access to ESI that is considered affordable under PPACA, they may have to spend more than 9.5 percent of their household income on such coverage. The ESI affordability threshold is based on the cost of a self-only plan even though premiums for a family plan are typically more expensive, requiring them to spend more than they would on a self-only plan. Because the family would be considered to have access to affordable ESI under PPACA based on the self-only plan, it would not be eligible to receive financial assistance through the APTC to purchase a family plan through the individual exchanges. This has created a situation that some have referred to as "the family glitch," where families offered ESI may find that coverage to be unaffordable yet they are ineligible for the APTC. The Agency for Healthcare Research and Quality (AHRQ) recently estimated that 10.5 million adults and children may be in this situation.[71]

[69]Individuals are eligible to purchase a catastrophic plan if they are under age 30 or the lowest-cost bronze plan available costs more than 8 percent of their household income. In Medicaid nonexpansion states where a catastrophic plan was available, a 27-year-old individual with household income at 99 percent of the FPL would have had to spend between 8.4 and 27.5 percent of household income on the cheapest catastrophic plan. A 27-year-old individual with lower household income would have had to spend an even larger percentage of their household income on such a plan. In addition, insurers are permitted to charge higher premiums based on age and family size, so older individuals or individuals with a larger family would have had to spend an even larger percentage of their household income on either the lowest-cost catastrophic or bronze plan.

[70]R. Garfield, A. Damico, J. Stephens, and S. Rouhani, *The Coverage Gap: Uninsured Poor Adults in States that Do Not Expand Medicaid—An Update* (Menlo Park, Calif.: The Henry J. Kaiser Family Foundation, 2014).

[71]Medicaid and CHIP Payment and Access Commission, *Report to the Congress on Medicaid and CHIP* (Washington, D.C.: March 2014). AHRQ's estimate was conducted at the request of the Medicaid and CHIP Payment and Access Commission and published in its report.

Some Individuals without Affordable ESI Who Are Not Financially Eligible for the APTC

Some nonelderly adults who lack access to affordable coverage elsewhere, such as through an employer, and instead shop for health insurance coverage on the individual exchanges may find this insurance unaffordable without financial assistance from the APTC—those with household incomes greater than 400 percent of the FPL.[72] Results from one early survey suggest that about 6 percent of nonelderly adults were uninsured in 2014 and had household income greater than 400 percent of the FPL.[73] In addition, based on nine household scenarios we examined, the affordability of the lowest-cost bronze plans available in the individual exchanges for such individuals varied by age, household size, income, and location in 2014.[74] For example, in most rating areas in 2014 the lowest-cost bronze plan available would have been considered unaffordable to older individuals with household income between, for example, 401 and 500 percent of the FPL. However, in nearly all rating areas such coverage was likely affordable for younger individuals regardless of their household income.[75] The affordability of the lowest-

[72]In addition, for some individuals, even with financial assistance from the APTC, premiums for the lowest-cost bronze plan available in the individual exchanges may have exceeded 8 percent of household income in 2014, depending on the difference in the cost of premiums from the reference plan. However, this may have only occurred in some rating areas. For example, in just 8 out of the 501 rating areas (2 percent), a 60-year-old individual with household income at 400 percent of FPL would have had to pay greater than 8 percent of their household income on the lowest-cost bronze plan after accounting for the APTC. And, in 52 of 501 rating areas (10 percent), a family of four with two parents aged 40 years old and two children under 21 years of age with household income at 400 percent of the FPL would have had to spend greater than 8 percent of its household income on the lowest-cost bronze plan after accounting for the APTC.

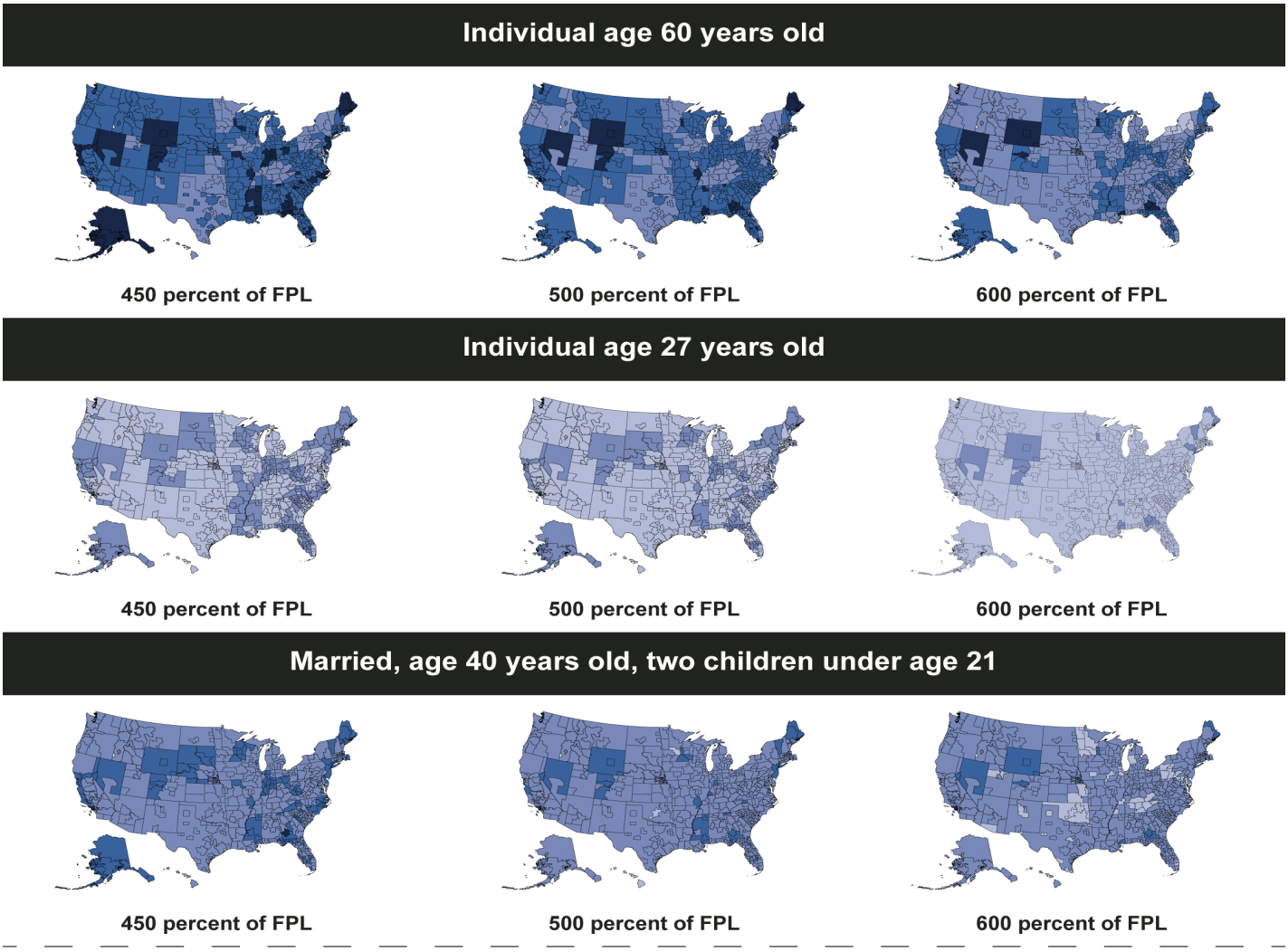
[73]Shartzer et al., *Who Are the Remaining Uninsured*. Some individuals without affordable ESI who have household incomes greater than 400 percent of the FPL may have been able to afford health insurance coverage but chose instead to pay the penalty.

[74]Among individuals who selected a health plan without financial assistance from the APTC through 1 of the 34 federally facilitated exchanges or the 2 state-based exchanges that used the federal website, http://www.healthcare.gov, for enrollment in 2014, they were most likely to select a bronze plan than any other metal tier. For example, 33 percent of those who selected a health plan without financial assistance from the APTC through these 36 exchanges selected a bronze plan while 25 percent selected a silver plan and 12 percent selected a catastrophic plan. Of those who selected a catastrophic plan through these 36 exchanges, most (85 percent) were under age 35. Department of Health and Human Services, *Health Insurance Marketplace*.

[75]Under PPACA, issuers are prohibited from setting premium rates based on an individual's health status. However, issuers are permitted to set rates based on one's age, though rates based on age cannot vary by more than a 3:1 ratio under PPACA. States may have additional restrictions. For example, New York and Vermont have a 1:1 age rating ratio.

cost bronze plans also varied by location and income for a family of four with two parents aged 40 years old and two children under 21 years of age. (See fig 2. For a more detailed version of the maps included in fig. 2, see appendix III.)

Figure 2: Percentage of Household Income That Would Have to Be Spent on Premiums for the Lowest-Cost Bronze Plan by Household Characteristics and Income As a Percent of the Federal Poverty Level (FPL) (2014)



Sources: GAO analysis of The Henry J. Kaiser Family Foundation data and New York state individual exchange data (data); Map Resources (map). | GAO-15-312

Note: Depending on the portion of health care costs expected to be paid by the health plan, qualified health plans are categorized into one of the following "metal tiers": bronze, silver, gold or platinum. Bronze plans cover an average of 60 percent of health care costs, silver plans cover 70 percent, gold plans cover 80 percent, and platinum plans cover 90 percent. The boundary lines in each of the maps depict the rating areas within each state except for Alaska. In Alaska, the boundary lines depict the three-digit zip codes in the state. In addition, due to how two zip codes are defined in Idaho, there are two areas in the state that were not assigned to a rating area and thus were left blank.

Based on nine household scenarios we examined, the affordability of the lowest-cost bronze plans available varied across different demographic subsets in the United States, for example:

- **Individual age 60-years-old**: A 60-year-old individual with household income at 450 percent of the FPL would have had to spend greater than 8 percent of their household income for the lowest-cost bronze plan in most (84 percent) of the 501 rating areas in the United States.[76] Specifically, in 17 percent of rating areas such an individual would have had to spend greater than 12 percent of their household income, in nearly two-thirds (67 percent) of rating areas they would have had to spend greater than 8 through 12 percent, and in 16 percent of all rating areas they would have had to spend from 4 through 8 percent of their household income on the lowest-cost bronze plan.[77] Even with somewhat higher household income at 500 percent of the FPL, the lowest-cost bronze plan would be considered unaffordable for older individuals in most rating areas (72 percent). Moreover, in the most expensive rating area for a 60-year-old individual (counties near Albany, GA), the lowest-cost bronze plan had an annual premium of $9,487. Among those with income too high to receive the APTC, this plan would have been considered unaffordable for a 60-year-old individual if they earned between $46,797 (401 percent of the FPL) and $118,588 (1,016 percent of the FPL) in that rating area.[78]

[76]Under PPACA, the rating area is the lowest geographic level by which health insurance premiums are permitted to vary. However, according to one expert we interviewed, plans may not be offered in all service areas throughout a rating area. For example, a health insurer could offer a health plan in all but one or two counties within a rating area. As a result, the lowest-cost plan available could vary within a rating area.

[77]Early survey data has shown the largest declines in the rate of uninsured between 2013 and early 2014 occurred among younger adults. See Martinez and Cohen, *Health Insurance Coverage*; Collins et al., *Gaining Ground*; Sommers et al., *Health Reform and Changes*; and Long et al., *Taking Stock*. However, most of the uninsured in 2014 were age 18 to 34 (42 percent) followed by individuals aged 35 to 44 (19 percent) and individuals age 45 to 64 (12 percent). Martinez and Cohen, *Health Insurance Coverage*.

[78]In contrast, in the least expensive rating area for a 60-year-old individual (counties near Rochester, NY), the annual premium for the lowest-cost bronze plan was $2,575, which would have been considered affordable for a 60-year-old individual at any income level over 400 percent of the FPL.

- **Individual age 27-years-old**: The lowest-cost bronze plan would have been considered affordable in all but one rating area for a 27-year-old with income too high to receive the APTC. In nearly half (47 percent) of all rating areas, such individuals with household income at 450 percent of the FPL, for example, would have had to spend from 4 through 8 percent of their income on the lowest-cost bronze plan, and in 53 percent of rating areas they would have had to spend less than 4 percent of their income. There is only one rating area where 27-year-olds with household income greater than 400 percent of the FPL would have had to spend greater than 8 percent of their household income on the lowest-cost bronze plan. In the most expensive rating area for a 27-year-old (the state of Vermont), the lowest-cost bronze plan had an annual premium of $4,032. Among those with income too high to receive the APTC, this plan would have been considered unaffordable for a 27-year-old individual if they earned between $46,797 (401 percent of the FPL) and $50,400 (432 percent of the FPL) in that rating area.[79]
- **Married couple age 40-years-old with two children under 21-years-old**: In 75 percent of all rating areas such a family with household income at 450 percent of the FPL would have had to spend from 4 through 8 percent of its household income on the lowest-cost bronze plan, and in 25 percent of all rating areas it would have had to spend greater than 8 through 12 percent of its household income. In one rating area such a family would have had to spend greater than 12 percent of its household income. In the most expensive rating area for a married couple aged 40 with two children and household income too high to receive the APTC (counties near Albany, GA), the lowest-cost bronze plan had an annual premium of $13,374, which would have been considered unaffordable for such a family if it earned between $95,639 (401 percent of the FPL) and $167,176 (701 percent of the FPL) in that rating area.[80]

[79]In contrast, in counties near Minneapolis and St. Paul, MN, the least expensive rating area for such an individual, the annual premiums for the lowest-cost bronze plan were $1,132, which would have been affordable for such a family any income level.

[80]In contrast, in Comanche County, OK, the least expensive rating area for such a family, the annual premiums for the lowest-cost bronze plan were $4,397, which would have been affordable for such a family at any income level greater than 400 percent of the FPL.

Changes in premiums for plans offered on the individual exchanges between 2014 and 2015 likely affected variation in the affordability of lowest-cost bronze plans by rating area in 2015. Studies have estimated that, while the average cost of premiums for the reference or lowest-cost plans have changed only modestly between 2014 and 2015, average premiums increased significantly in some rating areas and decreased significantly in others.

Even Those with Affordable Premiums Could Face Challenges Maintaining Minimum Essential Insurance Coverage and Paying for High Out-of-Pocket Costs

Regardless of the affordability of premiums, some may face challenges in maintaining minimum essential coverage, and for those who retain insurance, obtaining health care may be costly. For example, among those eligible for the APTC, some may experience changes in their income that affect their eligibility, which may lead to coverage gaps or discontinuity in coverage.[81] It is too soon to know how many people became ineligible for the APTC in 2014, but experts we interviewed and studies of past years' data indicate that income changes are fairly common, particularly among those with lower incomes.[82]

Changes in employment status and family composition can change enrollees' eligibility for certain types of insurance, which could lead to challenges maintaining health insurance. For example, a change in employment status can affect eligibility for ESI, the most common form of insurance for the nonelderly. One survey found that among nonelderly adults who reported having had a gap in ESI coverage in 2011,

[81]Enrollees who experience changes can file with an exchange to report that their income has changed. Alternatively, when enrollees file taxes, the APTC amount will be reconciled with their actual income for the preceding year.

GAO is currently examining issues related to individuals' movement between the exchanges and Medicaid.

[82]For example, one study examined changes in household income. It found that 2 percent of adults in households with incomes between 133 and 199 percent of the FPL in 2005 had incomes over 400 percent in the following year, and 15 percent of adults with incomes between 200 and 399 percent of the FPL had incomes over 400 percent in the following year. If the same income changes occurred in 2014, those households would be ineligible for the APTC. See P. Farley Short, K. Swartz, N. Uberoi, and D. Graefe, *Realizing Health Reform's Potential: Maintaining Coverage, Affordability, and Shared Responsibility When Income and Employment Change* (Washington, D.C.: The Commonwealth Fund, May 2011). Some of these households may enroll in ESI, even if they are income-eligible for the APTC or Medicaid.

67 percent reported that it was due to a change in employment status.[83] Changes in family composition can also cause challenges for people seeking to maintain health insurance. For example, divorce can cause one spouse to lose access to the other's ESI, or may change household income such that eligibility changes for federal subsidies or Medicaid.

Even if individuals are able to maintain health insurance that meets the criteria for minimum essential coverage, obtaining medical care may be costly. When enrollees receive health care services, they are often responsible for cost-sharing payments such as copayments or coinsurance. Enrollees' cost-sharing responsibilities for silver, gold, and platinum plans are lower than for bronze plans, but out-of-pocket costs for all plans can be considerable depending on an enrollee's health care needs and the structure of one's health plan. Insurers can structure plans to charge more or less for certain services or medications, as long as the out-of-pocket costs are limited to no more than $6,350 per year for in-network goods and services for single coverage of those with incomes above 250 percent of FPL.[84] For an enrollee with income of 251 percent of FPL ($28,725), $6,350 represents about 22 percent of their annual income.[85]

Experts we interviewed stated that all exchange enrollees are vulnerable to high out-of-pocket costs, particularly if they seek care from out-of-network health care providers. Costs incurred by using out-of-network providers do not count toward a plan's out-of-pocket maximum, are not

[83]S. R. Collins, R. Robertson, T. Garber, and M. M. Doty, *Gaps in Health Insurance: Why So Many Americans Experience Breaks in Coverage and How the Affordable Care Act Will Help* (Washington, D.C.: The Commonwealth Fund, April 2012).

[84]This limit does not include premiums, balance billing amounts for non-network providers and other out-of-network cost-sharing, or spending for non-essential health benefits that are not covered by the plan.

[85]Exchange enrollees with incomes between 100 and 250 percent of the FPL are eligible for cost-sharing subsidies that reduce their maximum out-of-pocket costs if they are enrolled in a silver plan. Because silver plan premiums are higher than bronze plan premiums, some enrollees with low out-of-pocket costs may pay less overall by enrolling in a bronze plan without cost-sharing subsidies. Others with higher out-of-pocket costs would likely pay less overall in a silver plan with cost-sharing subsidies.

Insurers can choose one of two ways to reduce out-of-pocket spending for cost-sharing subsidy-eligible enrollees. Insurers can either reduce the total out-of-pocket spending limit to specified amounts, or insurers can design plans to meet higher actuarial values.

required to contribute toward a plan's deductible, and are ineligible for federal cost-sharing subsidies. Furthermore, experts told us that some insurers have limited the networks of providers covered by the plans offered on the exchanges. Experts explained that restricting networks allows insurers to reduce premiums by limiting the number of provider choices, but increases the possibility that a provider sought by an enrollee will be out-of-network.

Concluding Observations

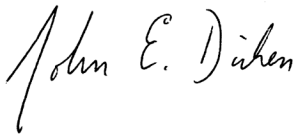
This report provides an early look at the effect of the tax credits and affordability of health insurance under PPACA, finding that evidence suggests that the APTC likely contributed to an expansion of health insurance coverage because it significantly reduced the cost of premiums for those eligible. However, the effects of the APTC and the affordability of health insurance in 2014 and beyond is uncertain for several reasons. First, complete data on the number of people who claimed the APTC in 2014 and the amount of the APTC claimed are not yet available because of the limited data reported from most state-based exchanges as well as the lag time during which enrollees file taxes and IRS completes reconciliation. Second, insurers will likely adjust premiums in exchange plans as more data become available about enrollees in the exchanges, including how the health profiles of exchange enrollees compares to that of enrollees previously purchasing individual insurance or ESI. Thus, trends for premiums in exchange plans may not stabilize for several years, although PPACA established certain requirements intended to reduce variation. Third, health insurance premiums are in large part driven by the underlying costs of health care. While the rate of growth of health care costs has slowed in recent years, there is no guarantee that such a trend will continue. As a result, it is important to note that our findings about the first year of the exchanges cannot be generalized to future years.

Agency Comments

We received technical comments on a draft of this report from HHS and IRS and incorporated them as appropriate.

We are sending copies of this report to the appropriate congressional committees, the Secretary of the Department of Health and Human Services, the Commissioner of the Internal Revenue Service, and other interested parties. In addition, the report is available at no charge on the GAO website at http://www.gao.gov.

If you or your staffs have any questions about this report, please contact me at (202) 512-7114 or DickenJ@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix IV.



John E. Dicken
Director, Health Care

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Appendix I: Potential Effects of Changing the Affordability Threshold for Employer-Sponsored Insurance

In addition to the two objectives we addressed in this report, PPACA mandated that GAO review what is known about the potential effects of lowering the employer-sponsored insurance (ESI) affordability threshold.[1] Under the 2014 income threshold, "affordable" means that employees' premium contribution for a self-only plan must cost no more than 9.5 percent of their household income.

Our literature review found no peer-reviewed studies that have examined the effects of lowering the ESI affordability threshold below 9.5 percent of household income.[2] However, experts to whom we spoke described mixed potential effects. Lowering the ESI affordability threshold would shift more of the cost of premiums onto employers—that is, employers would have to increase their contribution towards employees' premiums. Some experts stated that such a shift could encourage some employers to discontinue offering health insurance. In particular, experts told us that employers most likely to discontinue are those that employ a low-wage workforce. These employers face less competition in attracting lower-paid workers than higher-paid workers, so they have less incentive to offer health insurance coverage to attract workers. Employers with more than 50 full-time equivalent employees that do not provide health insurance coverage would be subject to the tax penalty on employers if any of their employees obtain health insurance coverage through the exchanges with assistance from the advance premium tax credit (APTC).[3] One expert commented that employers that cease offering health insurance may also choose to compensate employees for the loss of health insurance by increasing wages. Alternatively, one expert told us that employers that choose to continue offering health insurance might adjust employees' compensation packages to account for an increase in the employer contribution to health insurance premiums. These employers would avoid the tax penalty on employers that fail to offer affordable health insurance to employees.

Experts to whom we spoke stated that if the threshold were lowered, overall, federal costs would likely increase, although the magnitude of

[1]Pub. L. No. 111-148, § 1401(c), 124 Stat. 119, 220 (2010).

[2]See appendix II for details on our search for studies.

[3]Employers out of compliance will be subject to an annual fine of $2,000 times the number of full-time employees minus 30. For example, in 2016, an employer with 50 full-time equivalents that did not offer insurance would be penalized $40,000.

such an increase is unclear. Federal costs would increase if employers stop offering health insurance and employees that subsequently seek exchange coverage are eligible for and claim the APTC and cost-sharing subsidies. At the same time, federal tax revenue may also increase if employers dropping health insurance raised taxable wages and paid employer penalties because of their failure to offer health insurance. However, experts told us this increase in tax revenue would likely not be high enough to offset the increase in federal costs from employees' APTC and cost-sharing subsidy claims.

Because studies have estimated that relatively few people have an offer from their employer of self-only health insurance coverage that exceeds the affordability threshold of 9.5 percent of household income, relatively few are likely to be affected if the threshold were lowered. Three studies varied in their estimates, with the highest estimating up to 1 million people may have such an offer.[4] In comparison, the Congressional Budget Office (CBO) estimates that in 2014, 156 million nonelderly people received ESI coverage. The three studies found:

- The Agency for Healthcare Research and Quality (AHRQ) estimated that about one million people with household incomes between 139 to 400 percent of the federal poverty level (FPL) have an unaffordable offer.[5]
- CBO estimated that between 0 and 500,000 people had an unaffordable offer in 2014 and sought coverage on an exchange.[6]

[4]In contrast, another study separately estimated that about 10.5 million people are subject to the "family glitch"—that is, they are not eligible for the APTC or cost sharing subsidies because one household member has an offer of self-only coverage that is affordable, as discussed earlier. Medicaid and CHIP Payment and Access Commission, *Report to the Congress on Medicaid and CHIP* (Washington, D.C.: March 2014). This study was conducted at the request of the Medicaid and CHIP Payment and Access Commission and published in its report.

[5]Agency for Healthcare Research Quality, *Employer and Worker Incentives in the Affordable Care Act: Insights from a Linked Employer-Employee Data Set* (Washington, D.C.: June 23, 2013). Using Medical Expenditure Panel Survey (MEPS) Household Component data, authors created synthetic workforces for each establishment in the MEPS Insurance Component. Estimates may be imprecise due to multiple sources of errors, including the error stemming from linking household and establishment data.

[6]Congressional Budget Office, *Updated Estimates of the Effects of the Insurance Coverage Provisions of the Affordable Care Act* (Washington, D.C.: Congressional Budget Office, April 2014).

- Another study combined different data sets to generate estimates of the number of households that had an unaffordable ESI offer.[7] The study found that if employers keep employee contributions at the national average (which the study authors calculated as 20 percent for self-only coverage in 2009), no employees' contribution would have exceeded the ESI affordability threshold in 2009.

These studies estimated that a relatively low number of people are offered ESI coverage that exceed 9.5 percent of their income because generally, employee contributions for self-only ESI coverage are small compared to income. The average ESI premiums in 2014 were $6,025 per year for single coverage, and employees contributed about $1,081, on average.[8] Employees with household income of more than $11,380 would be considered to have affordable premiums.

[7]Researchers merged data from the MEPS Insurance Component, the March Current Population Survey as well as other data, and The Henry J. Kaiser Family Foundation premium data. This study has limitations as well, such as potential biases from various simplifying assumptions used for the analysis. For example, the researchers assumed that if an employee no longer received ESI, employers would fully pass on the savings from premiums to the employees. R. V. Burkhauser, S. Lyons, K. I. Simon, "The Importance of the Meaning and Measurement of 'Affordable' In the Affordable Care Act" (Cambridge, Mass.: National Bureau of Economic Research, Working Paper 17279, 2011).

[8]The Henry J. Kaiser Family Foundation and Health Research & Educational Trust, *Employer Health Benefits 2014 Annual Survey* (Washington, D.C.: The Henry J. Kaiser Family Foundation and Health Research & Educational Trust, 2014).

Appendix II: Objectives, Scope and Methodology

To describe what is known about the effects of the Advance Premium Tax Credit (APTC) and the small employer tax credit on health insurance coverage, as well as what is known about the potential effects of changing the employer-sponsored insurance (ESI) affordability threshold, we conducted a structured literature search for studies. To conduct this review, we searched over 30 bibliographic databases, including ABI/INFORM Global, MEDLINE, and WorldCat, for studies on these topics published between January 1, 2010, and November 12, 2014. Two analysts independently reviewed each of the results for relevance and then reconciled differences. We determined that a study was directly relevant to our objectives if it: (1) included empirical analysis related to the effects of the APTC or the small employer tax credit on the provision of health insurance or maintenance of health insurance; or (2) analyzed the effects of changing the ESI affordability threshold on the actions of employers, employees, or the federal budget. To supplement our search of reference databases, we:

- searched the Internet using Google.com and terms such as "APTC maintain health insurance" and "surveys insurance Patient Protection and Affordable Care Act (PPACA)";
- searched the websites of health policy research organizations such as the Henry J. Kaiser Family Foundation (KFF), the Urban Institute, and the American Enterprise Institute; and
- asked the experts we interviewed to recommend sources of literature that would address our objectives.

Through all of these literature searches, we identified 23 studies that were useful for the objectives of our report.[1] Among these studies, we identified summary results from three surveys that estimated the change in the rate of uninsured nonelderly adults between 2013 and 2014 by household income amounts comparable to APTC eligibility limits.[2] These surveys generally had low response rates and small sample sizes, which can introduce potential errors in estimating individuals' health insurance

[1]For these and all studies cited in our report, we reviewed the methodologies of the studies to ensure they were sound and determined that they were sufficiently reliable for our purposes.

[2]Larger, more rigorous survey data that can be used to more accurately estimate individuals' health insurance status were not yet available at the time that we conducted our analyses.

status, especially by population subgroups, such as by individuals' household income or type of health insurance coverage. Table 5 provides a summary of the response rate, sample size, and margin of error for these three surveys. To improve the reliability of estimates produced from the survey results, the studies' authors used certain sampling methodologies, such as stratified sampling to over-sample populations commonly underrepresented in such surveys (e.g., low-income populations), and weighted regression models. In addition, the authors validated their estimates against prior estimates from larger, more rigorous surveys, such as the American Community Survey, and found their estimates to be generally comparable, though with small differences in some cases. Because of these approaches to improve reliability, we determined the studies were sufficiently reliable for our purposes.

Table 5: Methodological Information for Surveys That Estimated the Change in the Rate of Uninsured Nonelderly Adults

Survey	Time period surveyed	Survey response rate	Sample size	Sampling error (at 95 percent confidence interval)[a]
Gallup Healthways Well-Being Index	January 2012 to June 2014	11%	420,449	+/-1.0
The Commonwealth Fund Affordable Care Act Tracking Survey	July 15 to September 8, 2013 and April 9 to June 2, 2014	14%	4,425	+/- 2.1
The Urban Institute Health Reform Monitoring Survey	September 2013 to September 2014	5%	7,500[b]	+/-1.3

Source: GAO analysis. | GAO-15-312

Notes:

[a]Sampling error is the extent to which the survey results differ from what would have been obtained if the whole population had been observed.

[b]The Urban Institute's Health Reform Monitoring Survey (HRMS) samples approximately 7,500 nonelderly adults each quarter. HRMS data from the third quarter of 2013 and the third quarter of 2014 were used to estimate changes in the rate of uninsured nonelderly adults between September 2013 through September 2014.

We also reviewed laws, regulations, and guidance related to PPACA's individual mandate, the APTC, the small employer tax credit, individual exchange regulation, and the ESI affordability threshold. We also reviewed the legislative history of the ESI affordability threshold.

We interviewed a range of experts to explore what is known about the effects of the APTC and the small employer tax credit on health insurance coverage and what is known about the extent to which health benefit plans are available and individuals are able to maintain minimum essential coverage, as well as what is known about the potential effects of changing the ESI affordability threshold. We asked experts at 11 research

and industry organizations, in addition to officials at the Department of Health and Human Services (HHS) and the Internal Revenue Service (IRS), about their work related to the potential effect of tax credits on health insurance coverage, the types of individuals that may have more or less difficulty maintaining minimum essential coverage, and the potential effects on employers, employees, and federal costs of changing the ESI affordability threshold (we did not ask every question of every expert). We chose these experts based on relevance of their published or other work to our objectives.[3]

To further analyze what is known about the effects of the small employer tax credit on health insurance coverage, we requested summary data from the IRS on small employer tax credit claims, the number of employee premiums covered, and the total cost of the credit that IRS provided for tax years 2011 and 2012. Data on tax year 2013 and 2014 were not available at the time of our analysis. To assess the reliability of the data, we reviewed the data and supporting documentation for obvious errors, as well as IRS's internal controls for producing the data.[4] We found the data to be sufficiently reliable for our purposes. To supplement these data, we also incorporated summary data from our previous report on this topic.[5]

To describe the extent to which affordable health benefits plans are available and individuals are able to maintain minimum essential coverage, we analyzed 2014 premium data—the most recent data available at the time of our analysis—for health benefit plans offered through the exchanges. We obtained data from two sources. First, The Henry J. Kaiser Family Foundation (KFF) provided us with data on

[3]Experts we interviewed included representatives from: American Enterprise Institute; The Center for Health Insurance Reforms at Georgetown University; HHS's Agency for Healthcare Research and Quality, Center for Consumer Information and Insurance Oversight, Office of the Assistant Secretary of Planning and Evaluation, and the Office of the Actuary; the Congressional Budget Office; IRS; National Business Group on Health; National Federation of Independent Businesses; Pennsylvania State University; The Commonwealth Fund; The Henry J. Kaiser Family Foundation; The Urban Institute; and the University of Minnesota.

[4]Internal control is a process effected by an entity's oversight body, management, and other personnel that provides reasonable assurance that the objectives of an entity will be achieved.

[5]See GAO, *Small Employer Health Tax Credit: Factors Contributing to Low Use and Complexity*, GAO-12-549 (Washington, D.C.: May 14, 2012).

premiums for all health plans offered in the individual health insurance exchanges by rating area, excluding New York. KFF compiled the data using HHS's Centers for Medicare & Medicaid Services' Landscape file, which, for 2014, captured data on premiums for plans participating in the 34 federally facilitated exchanges and 2 state-based exchanges that used the federal website, http://www.healthcare.gov, for enrollment.[6] KFF supplemented the Landscape file data with data on premiums for plans offered in the other 15 state-based exchanges, which it acquired by reviewing health insurance companies' rate filings in each state and validating these data through state exchange websites when possible. We assessed the reliability of these data by: interviewing KFF officials about how they compiled and validated the data as well as their internal controls, testing the data for duplicate data and outliers, and comparing the publicly available Landscape data on federally facilitated exchanges to the KFF data. Second, from the state of New York, we obtained premium data for plans offered through the state's individual exchange during the initial open enrollment period (October 1, 2013, through March 31, 2014). To assess these data for reliability, we checked the data for outliers and validated selected data through the New York state exchange website. We found both the KFF data and the New York data to be sufficiently reliable for our purposes.

Using the data from these sources, we calculated the percent of household income that nine hypothetical individuals or households would have had to spend on premiums for the lowest cost bronze plans in each rating area in the United States in 2014, assuming different levels of household income as a percentage of the federal poverty level.[7] We also calculated the amount of household income that each hypothetical

[6]PPACA required the establishment of exchanges in each state by January 1, 2014. In states that did not elect to operate their own state-based exchange, PPACA required the federal government to establish and operate an exchange in the state, known as federally facilitated exchanges. Some states that elected not to establish a state-based exchange entered into a partnership with the Department of Health and Human Services' (HHS) Centers for Medicare & Medicaid Services (CMS), in which HHS establishes and operates the exchange while states assist HHS in carrying out certain functions of the exchange. A partnership exchange is a variation of a federally facilitated exchange. In addition, in 2014, two states—Idaho and New Mexico—operated their own exchange but enrollees signed up for health insurance through the federal website, http://www.healthcare.gov, which populates CMS's Landscape file.

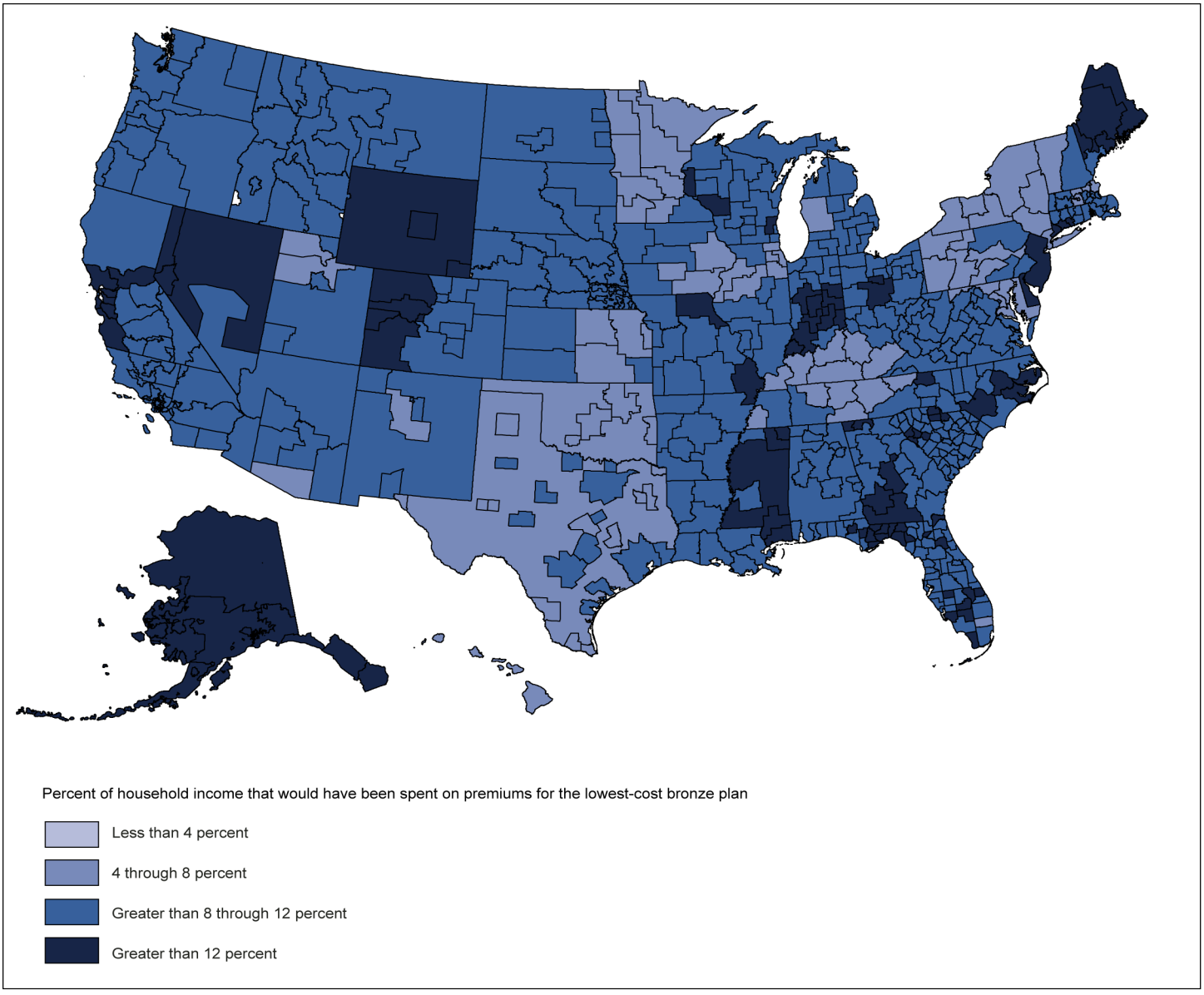
[7]We used the 2013 federal poverty level because 2014 eligibility for APTC and Medicaid was based on the 2013 level.

individual or household would need in order to pay 8 percent of household income for the lowest-cost bronze plan available by rating area.

We conducted this performance audit from July 2014 through March 2015 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix III: Affordability of the Lowest-Cost Bronze Plan, by Rating Area

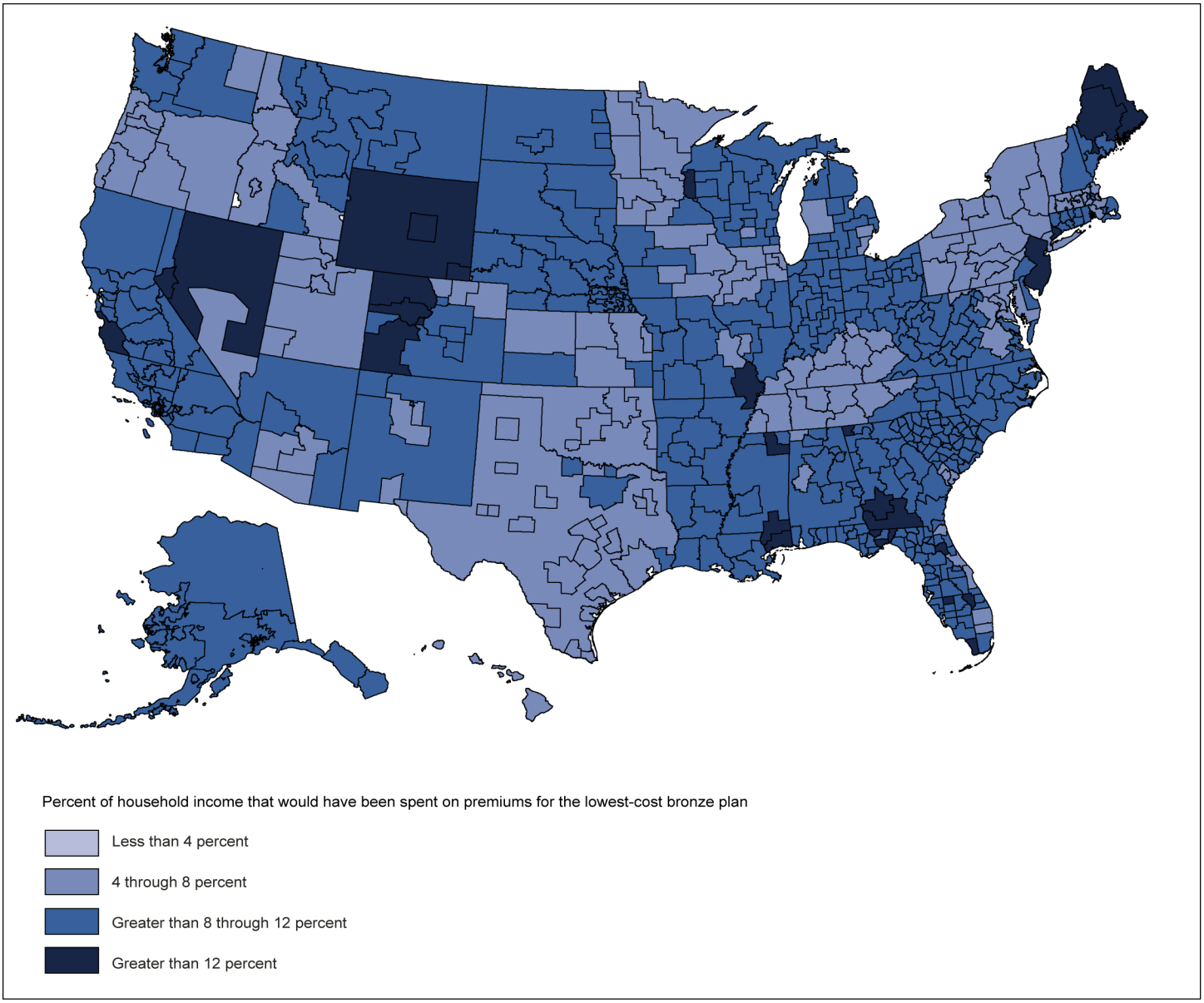
Figure 3: Percentage of Household Income That Would Have to Be Spent on Premiums for the Lowest-Cost Bronze Plan for a 60-Year-Old Individual with Household Income at 450 Percent of the Federal Poverty Level (2014)



Sources: GAO analysis of The Henry J. Kaiser Family Foundation data and New York state individual exchange data (data); Map Resources (map). | GAO-15-312

Note: Depending on the portion of health care costs expected to be paid by the health plan, qualified health plans are categorized into one of the following "metal tiers": bronze, silver, gold or platinum. Bronze plans cover an average of 60 percent of health care costs, silver plans cover 70 percent, gold plans cover 80 percent, and platinum plans cover 90 percent. The boundary lines depict the rating areas within each state except for Alaska. In Alaska, the boundary lines depict the three-digit zip codes in the state. In addition, due to how two zip codes are defined in Idaho, there are two areas in the state that were not assigned to a rating area and thus were left blank.

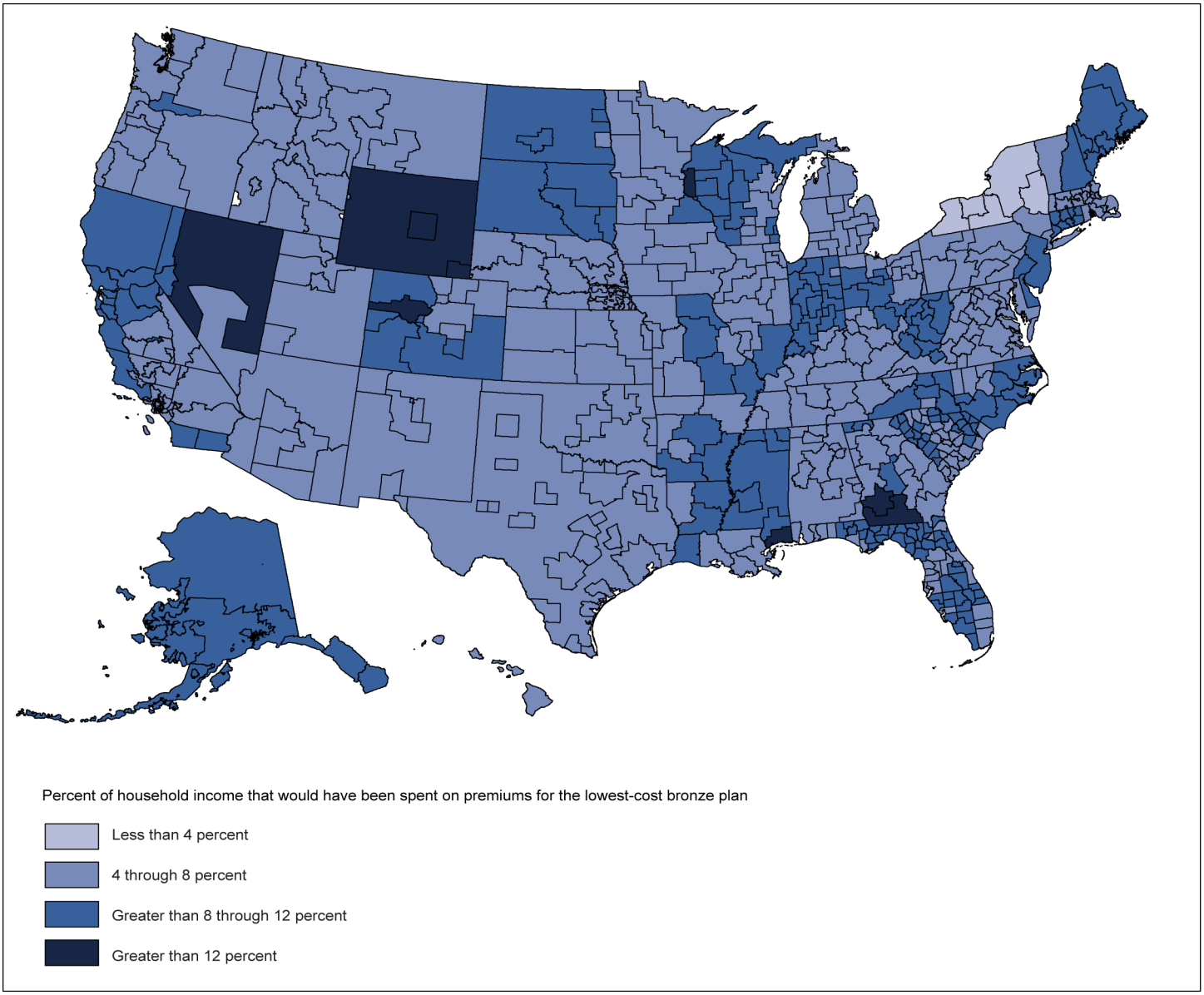
Figure 4: Percentage of Household Income That Would Have to Be Spent on Premiums for the Lowest-Cost Bronze Plan for a 60-Year-Old Individual with Household Income at 500 Percent of the Federal Poverty Level (2014)



Sources: GAO analysis of The Henry J. Kaiser Family Foundation data and New York state individual exchange data (data); Map Resources (map). | GAO-15-312

Note: Depending on the portion of health care costs expected to be paid by the health plan, qualified health plans are categorized into one of the following "metal tiers": bronze, silver, gold or platinum. Bronze plans cover an average of 60 percent of health care costs, silver plans cover 70 percent, gold plans cover 80 percent, and platinum plans cover 90 percent. The boundary lines depict the rating areas within each state except for Alaska. In Alaska, the boundary lines depict the three-digit zip codes in the state. In addition, due to how two zip codes are defined in Idaho, there are two areas in the state that were not assigned to a rating area and thus were left blank.

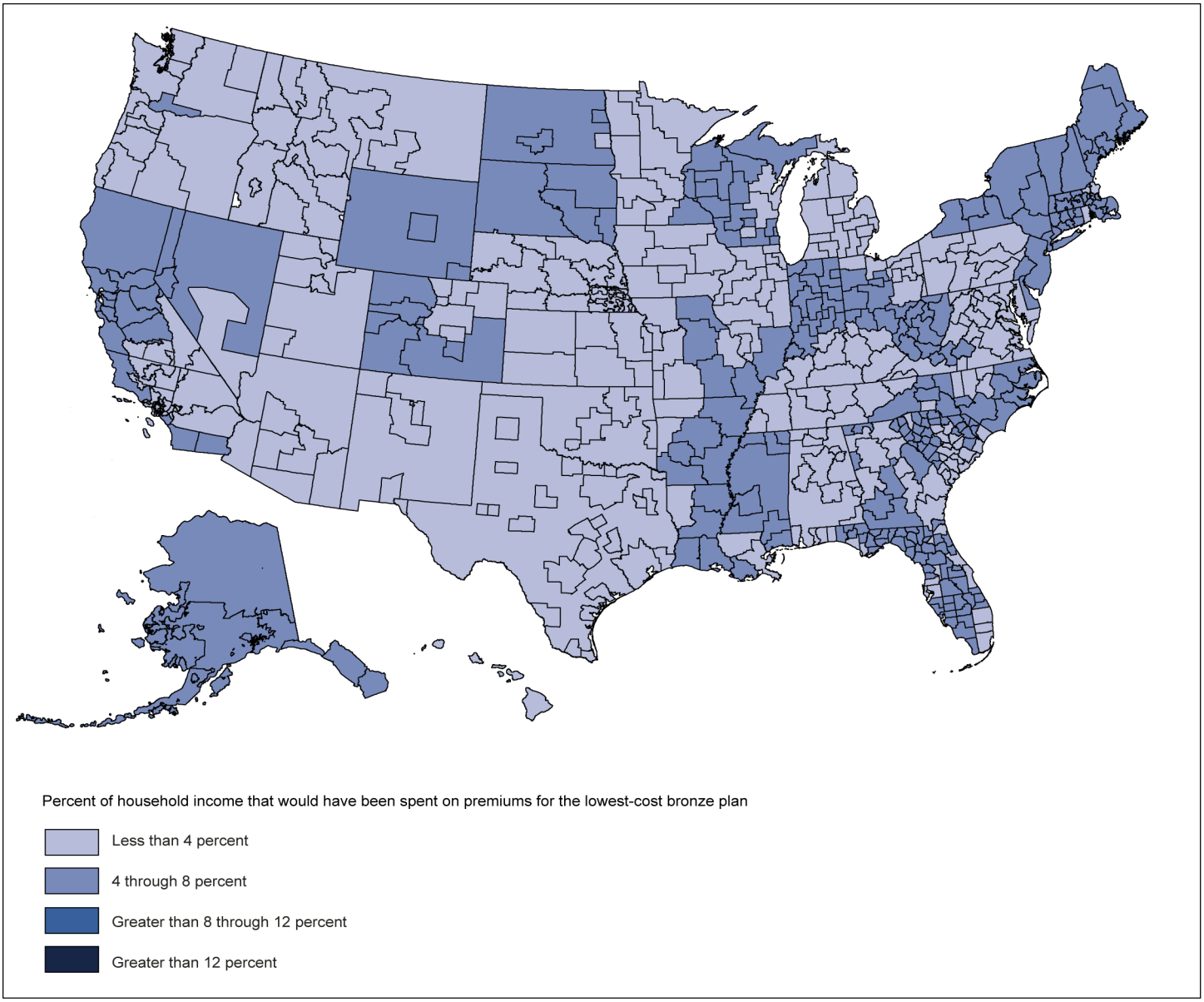
Figure 5: Percentage of Household Income That Would Have to Be Spent on Premiums for the Lowest-Cost Bronze Plan for a 60-Year-Old Individual with Household Income at 600 Percent of the Federal Poverty Level (2014)



Sources: GAO analysis of The Henry J. Kaiser Family Foundation data and New York state individual exchange data (data); Map Resources (map). | GAO-15-312

Note: Depending on the portion of health care costs expected to be paid by the health plan, qualified health plans are categorized into one of the following "metal tiers": bronze, silver, gold or platinum. Bronze plans cover an average of 60 percent of health care costs, silver plans cover 70 percent, gold plans cover 80 percent, and platinum plans cover 90 percent. The boundary lines depict the rating areas within each state except for Alaska. In Alaska, the boundary lines depict the three-digit zip codes in the state. In addition, due to how two zip codes are defined in Idaho, there are two areas in the state that were not assigned to a rating area and thus were left blank.

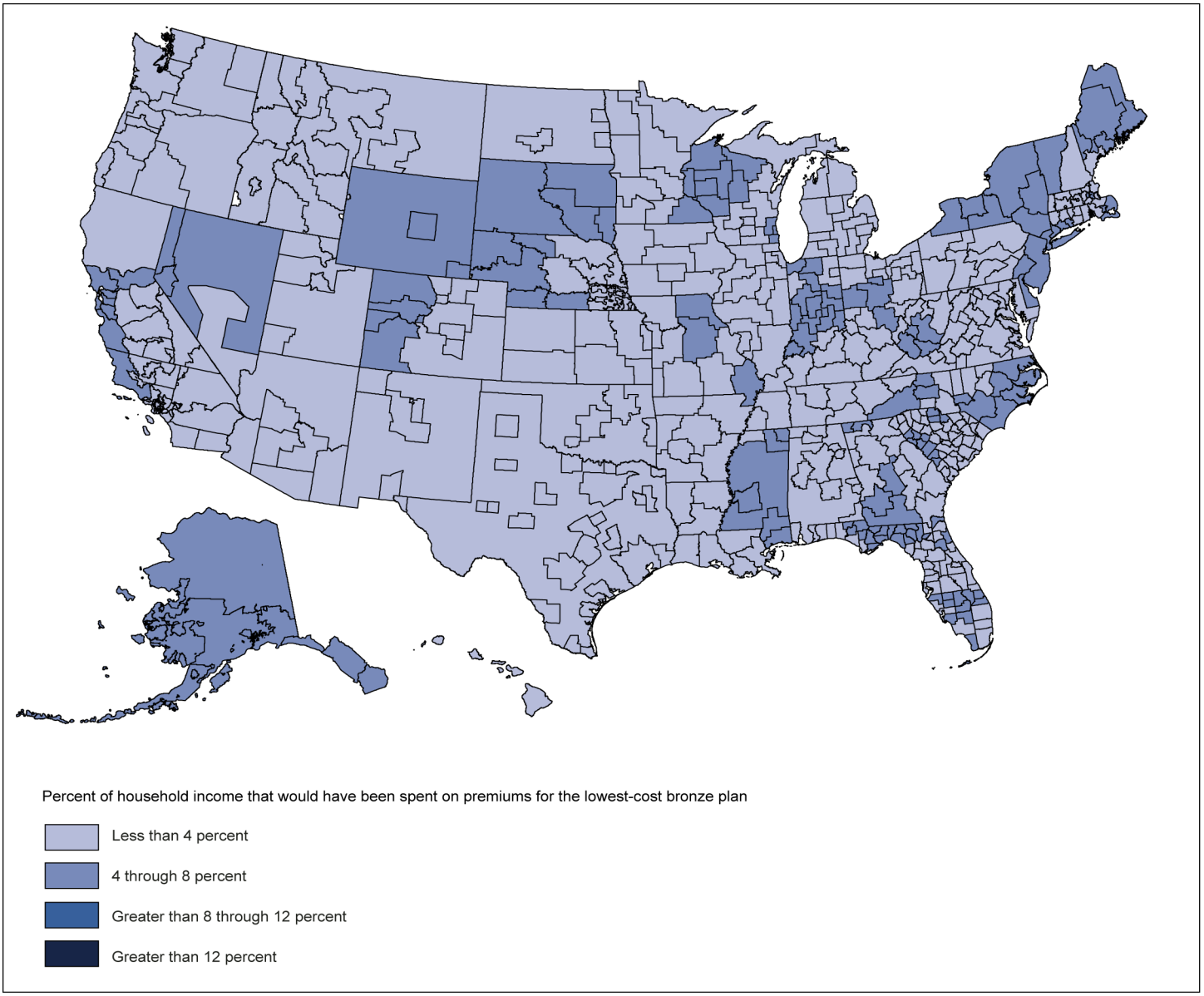
Figure 6: Percentage of Household Income That Would Have to Be Spent on Premiums for the Lowest-Cost Bronze Plan for a 27-Year-Old Individual with Household Income at 450 Percent of the Federal Poverty Level (2014)



Sources: GAO analysis of The Henry J. Kaiser Family Foundation data and New York state individual exchange data (data); Map Resources (map). | GAO-15-312

Note: Depending on the portion of health care costs expected to be paid by the health plan, qualified health plans are categorized into one of the following "metal tiers": bronze, silver, gold or platinum. Bronze plans cover an average of 60 percent of health care costs, silver plans cover 70 percent, gold plans cover 80 percent, and platinum plans cover 90 percent. The boundary lines depict the rating areas within each state except for Alaska. In Alaska, the boundary lines depict the three-digit zip codes in the state. In addition, due to how two zip codes are defined in Idaho, there are two areas in the state that were not assigned to a rating area and thus were left blank.

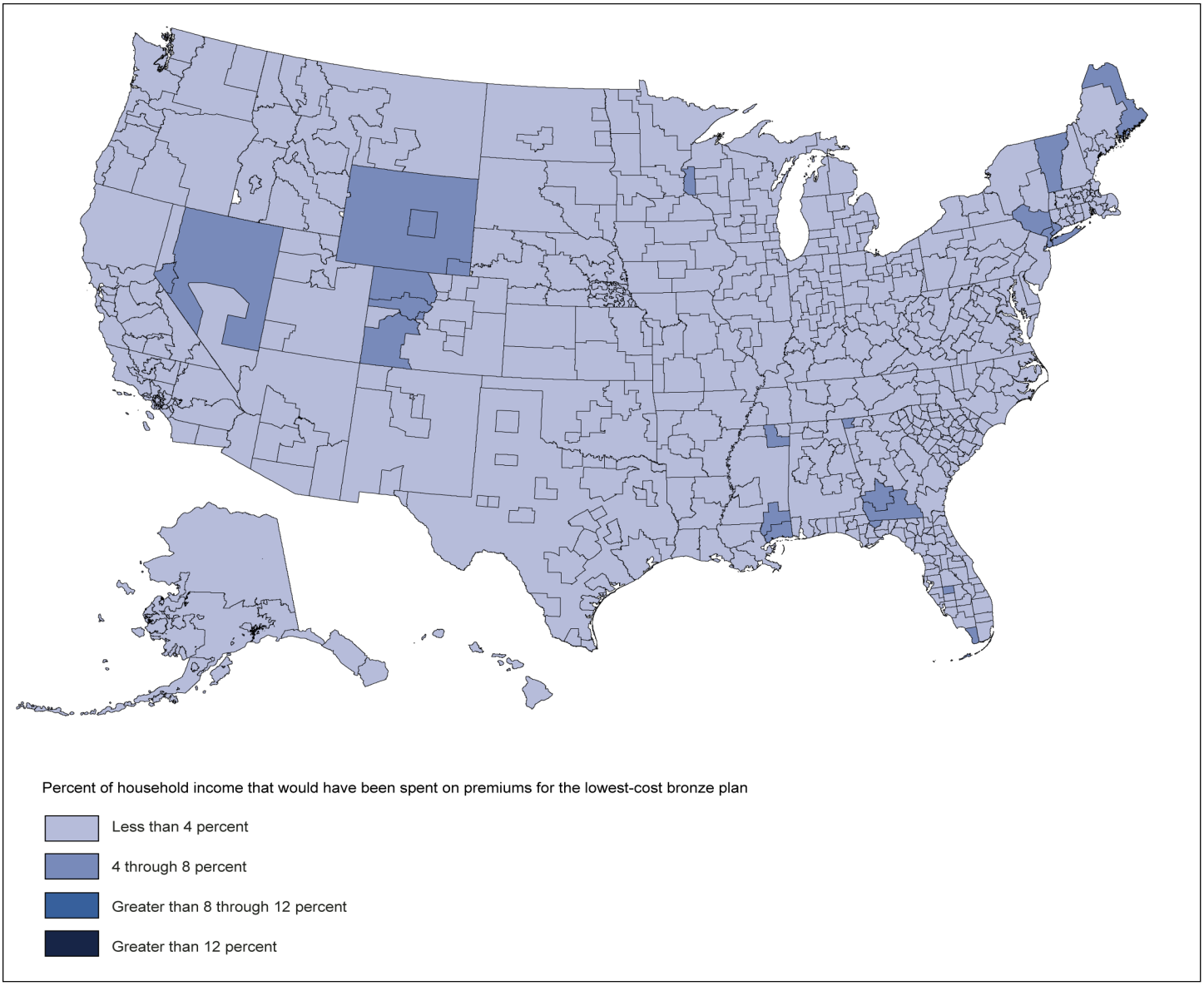
Figure 7: Percentage of Household Income That Would Have to Be Spent on Premiums for the Lowest-Cost Bronze Plan for a 27-Year-Old Individual with Household Income at 500 Percent of the Federal Poverty Level (2014)



Sources: GAO analysis of The Henry J. Kaiser Family Foundation data and New York state individual exchange data (data); Map Resources (map). | GAO-15-312

Note: Depending on the portion of health care costs expected to be paid by the health plan, qualified health plans are categorized into one of the following "metal tiers": bronze, silver, gold or platinum. Bronze plans cover an average of 60 percent of health care costs, silver plans cover 70 percent, gold plans cover 80 percent, and platinum plans cover 90 percent. The boundary lines depict the rating areas within each state except for Alaska. In Alaska, the boundary lines depict the three-digit zip codes in the state. In addition, due to how two zip codes are defined in Idaho, there are two areas in the state that were not assigned to a rating area and thus were left blank.

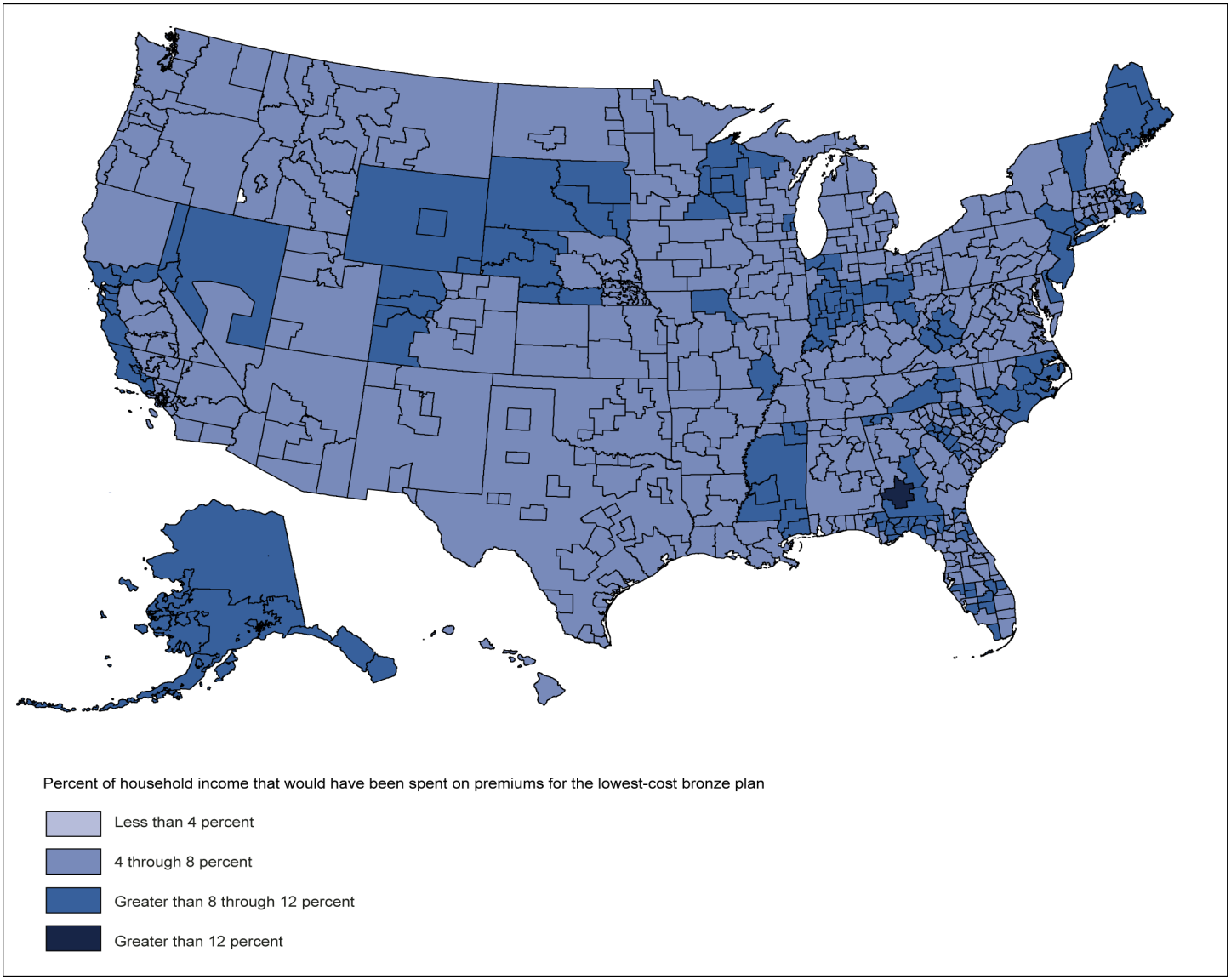
Figure 8: Percentage of Household Income That Would Have to Be Spent on Premiums for the Lowest-Cost Bronze Plan for a 27-Year-Old Individual with Household Income at 600 Percent of the Federal Poverty Level (2014)



Sources: GAO analysis of The Henry J. Kaiser Family Foundation data and New York state individual exchange data (data); Map Resources (map). | GAO-15-312

Note: Depending on the portion of health care costs expected to be paid by the health plan, qualified health plans are categorized into one of the following "metal tiers": bronze, silver, gold or platinum. Bronze plans cover an average of 60 percent of health care costs, silver plans cover 70 percent, gold plans cover 80 percent, and platinum plans cover 90 percent. The boundary lines depict the rating areas within each state except for Alaska. In Alaska, the boundary lines depict the three-digit zip codes in the state. In addition, due to how two zip codes are defined in Idaho, there are two areas in the state that were not assigned to a rating area and thus were left blank.

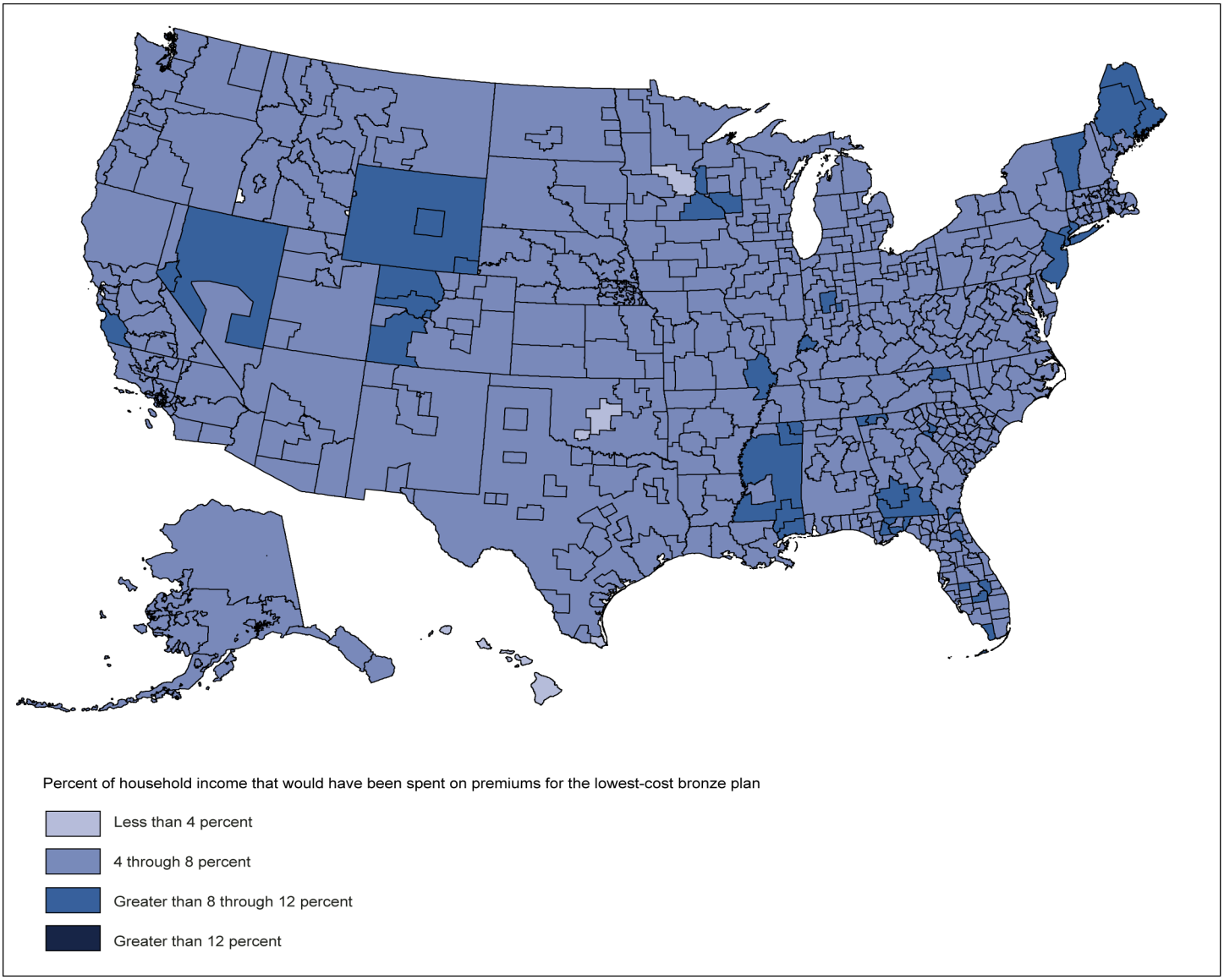
Figure 9: Percentage of Household Income That Would Have to Be Spent on Premiums for the Lowest-Cost Bronze Plan for a 40-Year-Old Married Couple with Two Children Under 21-Years-Old and Have Household Income at 450 Percent of the Federal Poverty Level (2014)



Sources: GAO analysis of The Henry J. Kaiser Family Foundation data and New York state individual exchange data (data); Map Resources (map). | GAO-15-312

Note: Depending on the portion of health care costs expected to be paid by the health plan, qualified health plans are categorized into one of the following "metal tiers": bronze, silver, gold or platinum. Bronze plans cover an average of 60 percent of health care costs, silver plans cover 70 percent, gold plans cover 80 percent, and platinum plans cover 90 percent. The boundary lines depict the rating areas within each state except for Alaska. In Alaska, the boundary lines depict the three-digit zip codes in the state. In addition, due to how two zip codes are defined in Idaho, there are two areas in the state that were not assigned to a rating area and thus were left blank.

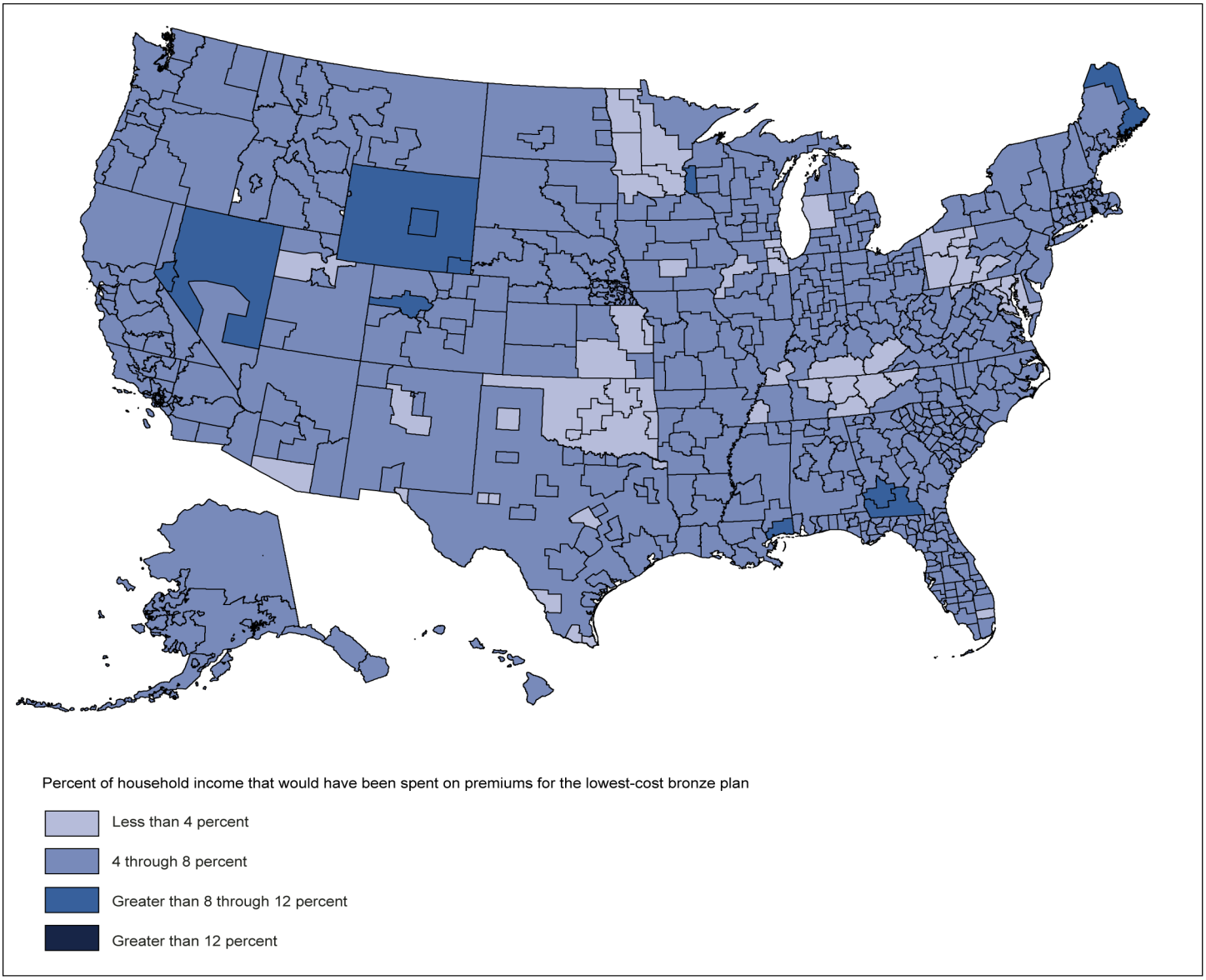
Figure 10: Percentage of Household Income That Would Have to Be Spent on Premiums for the Lowest-Cost Bronze Plan for a 40-Year-Old Married Couple with Two Children Under 21-Years-Old and Have Household Income at 500 Percent of the Federal Poverty Level (2014)



Sources: GAO analysis of The Henry J. Kaiser Family Foundation data and New York state individual exchange data (data); Map Resources (map). | GAO-15-312

Note: Depending on the portion of health care costs expected to be paid by the health plan, qualified health plans are categorized into one of the following "metal tiers": bronze, silver, gold or platinum. Bronze plans cover an average of 60 percent of health care costs, silver plans cover 70 percent, gold plans cover 80 percent, and platinum plans cover 90 percent. The boundary lines depict the rating areas within each state except for Alaska. In Alaska, the boundary lines depict the three-digit zip codes in the state. In addition, due to how two zip codes are defined in Idaho, there are two areas in the state that were not assigned to a rating area and thus were left blank.

Figure 11: Percentage of Household Income That Would Have to Be Spent on Premiums for the Lowest-Cost Bronze Plan for a 40-Year-Old Married Couple with Two Children Under 21-Years-Old and Have Household Income at 600 Percent of the Federal Poverty Level (2014)



Sources: GAO analysis of The Henry J. Kaiser Family Foundation data and New York state individual exchange data (data); Map Resources (map). | GAO-15-312

Note: Depending on the portion of health care costs expected to be paid by the health plan, qualified health plans are categorized into one of the following "metal tiers": bronze, silver, gold or platinum. Bronze plans cover an average of 60 percent of health care costs, silver plans cover 70 percent, gold plans cover 80 percent, and platinum plans cover 90 percent. The boundary lines depict the rating areas within each state except for Alaska. In Alaska, the boundary lines depict the three-digit zip codes in the state. In addition, due to how two zip codes are defined in Idaho, there are two areas in the state that were not assigned to a rating area and thus were left blank.

Appendix IV: GAO Contact and Staff Acknowledgments

GAO Contact

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Staff Acknowledgments

In addition to the contact named above, Kristi Peterson (Assistant Director), Anna Bonelli, Christine Davis, Leia Dickerson, Giselle Hicks, Katherine Mack, James R. McTigue, Jr., Yesook Merrill, Laurie Pachter, Vikki Porter, and Jennifer Whitworth made key contributions to this report.

Marketplace Premium Changes Throughout the United States, 2014–2015

John Holahan, Linda J. Blumberg, and Erik Wengle

Timely Analysis of Immediate Health Policy Issues

MARCH 2015

In-Brief

In this paper, we examine marketplace premium changes between 2014 and 2015 in all rating regions in all states and the District of Columbia. We provide premium data on the lowest-cost silver plan within each rating region for a 40-year-old individual who does not use tobacco.[1] We calculate that the population-weighted national average premium increase in the lowest-cost silver plan offered in each year was 2.9 percent. Increases varied considerably both across rating regions within states and across states. The change in the population-weighted average premium in the lowest-cost silver plan offered in each year was 1.8 percent in the Northeast, 3.5 percent in the Midwest, 5.4 percent in the South and 1.4 percent in the West.

Approximately 70 percent of the population of the West and over 80 percent of the population of the Northeast reside in rating regions where the lowest-cost silver plan premiums either fell or increased less than 5 percent. Almost 60 percent (59.3 percent) of Midwest residents live in rating areas where the lowest-cost silver plan premium either fell or increased less than 5 percent. In the South, however, the population is more heavily concentrated in areas with larger increases. Over 60 percent of the South's population live in rating regions with lowest-cost silver plan premium increases of 5 percent or more, and roughly 28 percent live in rating regions with increases of more than 10 percent. We also show that half the U.S. population lives in rating regions where there was a change in the lowest-cost insurer; this means that enrollees in those areas would have to switch plans to fully benefit from available price reductions.

We also provide data on premium increases in 40 cities. Most often in these major cities, the average premiums for the lowest-cost silver plans are lower and the average relative changes in the lowest-cost silver plan premiums were smaller than in their states overall. We also present data on 38 rural areas that could be separately identified. Most often, the lowest-cost silver premiums in rural areas are higher than their statewide average, but the relative changes for these rural areas between 2014 and 2015 were a mix of below and above the statewide average change.

Background

This brief updates our previous work that analyzed changes in marketplace premiums between 2014 and 2015.[2] In that paper, we looked at selected rating regions in 18 states that approved premiums early. We found premium increases to be low, though there were exceptions. In that analysis, we found that, typically, premiums and premium increases were lower in markets with competition among several commercial plans and those with participation by co-ops and plans previously providing coverage only for Medicaid enrollees. In general, insurers with the lowest premiums offer products with limited provider networks or are able to negotiate payment rates effectively with key providers. The underlying health care costs in a given market also affect premiums.

Subsequent to our previous paper's publication, several other reports have been issued. This has led to some confusion over whether premium increases overall have been large or modest for 2015. For example, on November 14, 2014, the *New York Times* printed an article stating that "many Americans with health insurance bought under the Affordable Care Act could face substantial price increases next year—in some cases as much as 20 percent—unless they switch plans."[3] The article later noted that premium increases would be more modest (closer to 5 percent) for many people who changed plans. Other reports have found lower premium increases but their analyses have not been as comprehensives as that presented here.[4] In addition, the Congressional

Budget Office released updated budget projections in March 2015, significantly lowering their estimate of the government costs of the ACA over the 10 year budget window.[5] While the report notes a number of reasons for the lower cost estimates since March 2010, they highlight the lower than expected premiums and the persistence of the slower growth in health care costs in regard to both private insurance covered services and in Medicare and Medicaid.

Methods

In this paper, we present data on premium increases for all rating regions in each of the 50 states and the District of Columbia. Data on premiums for states using the federally facilitated marketplace were obtained from healthcare.gov. For states using an IT system of their own, premium information was collected from individual state marketplace websites, as of November 20, 2014. We use census data to derive populations by county; these are aggregated to compute population at the Affordable Care Act rating region level, and the rating region populations are used to compute weighted average premiums at the state level using rating region–specific premium information.[6]

Because the lowest-cost silver plan in each area offers the least expensive entry to the marketplace into the most popular tier of coverage, and the silver plans are those to which the financial assistance is pegged (and the only ones for which cost-sharing reductions are available), we focus our analysis on these. We provide data on the lowest-cost silver plan in each year and the relative difference between the two. Silver plans enroll the largest share of marketplace enrollees: 65 percent of individuals who selected a plan.[7] The lowest–cost and second-lowest-cost silver plans are the most popular.[8] The lowest-cost silver plan in 2014, however, may not be the lowest-cost silver plan in 2015; the two plans can frequently be offered by different insurers.[9] In such cases, a consumer wanting to choose the lowest-cost silver plan in each year would have to change plans and presumably provider networks.

In this paper, we present data in four ways. First, we compute statewide average premiums for the lowest-cost silver plans in all 50 states and the District of Columbia, weighted by rating region population, showing the relative change in those premiums between 2014 and 2015. Second, we compute the percentage of the population in each state that lives in rating regions where the lowest-cost silver plan premium decreased between 2014 and 2015, the percentage living in rating regions with small increases (0 percent to 5 percent) in the lowest-cost silver option, the share living in areas with moderate increases (5 percent to 10 percent), and those residing in areas with large increases (10 percent or greater). We also indicate the number of rating regions in a state and the share of each state's population for whom the lowest cost silver premium is sold by a different insurer in 2015 than in 2014. Third, we provide data for selected large cities. We chose 10 major cities in each of the four geographic regions and used the rating regions' populations to calculate the weighted averages. Fourth, we show premium increases in rural areas for those states in which rural areas could be identified.[10]

Results

State and Regional Averages

The results are shown in tables 1–4. Table 1 shows a population-weighted average premium increase of 2.9 percent nationwide. This is in comparison to a projected increase in the gross domestic product of 5.0 percent and a projected increase in national health expenditures of 4.9 percent.[11]

In the Northeast, the population-weighted average increase in lowest-cost silver plan premiums was 1.8 percent between 2014 and 2015. All but 2 of the 12 states in this region had either small (less than 5 percent) average increases or decreases in lowest-cost silver plan premiums. New Hampshire and Rhode Island stand out for their large reductions. New Hampshire's lowest-cost silver plan premiums fell 17.5 percent, likely because of competition from four new market entrants for 2015. Lowest-cost silver plan premiums in Rhode Island fell 10.9 percent because of the expanded market presence of the Neighborhood Health Plan, which reduced its premiums substantially. The Neighborhood Health Plan replaced Blue Cross as the lowest-cost silver plan insurer in the state in 2015.

In the Midwest, the lowest-cost silver plan premiums increased on average 3.5 percent in 2015. Most states had decreases or small increases in these premiums. Michigan and Minnesota, however, had larger increases. Michigan experienced significant premium increases from the two lowest-cost insurers in the Detroit market as well as large increases in less competitive rural areas. Minnesota's large increase is attributable to the marketplace exit of the lowest-cost insurer in six of the nine rating regions (including Minneapolis) as well as large increases in rural areas.

In the South, on average, the lowest-cost silver plan premiums increased 5.4 percent in 2015. Many health insurance markets in the South have few competitors; many are dominated by Blue Cross–affiliated plans. Florida, North Carolina, Texas and West Virginia had particularly large increases in premiums that can be attributed to the preexisting dominance of Blue Cross plans. In contrast, Mississippi had a large decrease (12.5 percent) because of a new market entrant, United Healthcare, and aggressive pricing from Ambetter, a former Medicaid-only plan.

Lowest-cost silver premium increases were quite small (1.4 percent on average) in the West. This small regionwide average increase, however, disguises considerable variability in the experiences across the Western states, where decreases in about half the states

Table 1. State and Regional Averages for Lowest-Cost Silver Plan Premiums,[a] Population Weighted Across All Rating Regions

	State	Average 2014 premium	Average 2015 premium	Relative change
	National average	**$256**	**$264**	**2.9%**
Northeast	**Regional average**	**$284**	**$288**	**1.8%**
	Connecticut	$346	$348	0.6%
	Delaware	$286	$297	4.0%
	District of Columbia	$238	$239	0.3%
	Maine	$311	$307	-1.5%
	Maryland	$221	$228	3.2%
	Massachusetts	$247	$243	-1.5%
	New Hampshire	$288	$238	-17.5%
	New Jersey	$308	$315	2.2%
	New York	$340	$344	1.0%
	Pennsylvania	$207	$222	7.1%
	Rhode Island	$274	$244	-10.9%
	Vermont	$395	$428	8.3%
Midwest	**Regional average**	**$239**	**$248**	**3.5%**
	Illinois	$222	$229	3.0%
	Indiana	$313	$300	-4.3%
	Iowa	$219	$231	5.7%
	Kansas	$208	$201	-3.3%
	Michigan	$218	$241	10.5%
	Minnesota	$178	$199	11.8%
	Missouri	$257	$269	4.6%
	Nebraska	$239	$254	6.3%
	North Dakota	$281	$292	3.7%
	Ohio	$244	$252	3.2%
	South Dakota	$274	$257	-6.4%
	Wisconsin	$277	$281	1.3%
South	**Regional average**	**$248**	**$261**	**5.4%**
	Alabama	$244	$255	4.8%
	Arkansas	$282	$281	-0.6%
	Florida	$244	$276	12.8%
	Georgia	$255	$260	1.8%
	Kentucky	$203	$208	2.5%
	Louisiana	$294	$297	1.1%
	Mississippi	$324	$283	-12.5%
	North Carolina	$289	$307	6.2%
	Oklahoma	$206	$201	-2.2%
	South Carolina	$267	$266	-0.6%
	Tennessee	$189	$199	5.0%
	Texas	$231	$248	7.1%
	Virginia	$259	$273	5.3%
	West Virginia	$266	$290	9.0%
West	**Regional average**	**$265**	**$269**	**1.4%**
	Alaska	$380	$488	28.4%
	Arizona	$200	$177	-11.3%
	California	$280	$294	4.9%
	Colorado	$258	$225	-12.5%
	Hawaii	$176	$195	10.4%
	Idaho	$223	$235	5.7%
	Montana	$249	$237	-4.8%
	Nevada	$276	$270	-2.1%
	New Mexico	$225	$204	-9.2%
	Oregon	$204	$216	5.9%
	Utah	$196	$211	8.0%
	Washington	$269	$237	-12.0%
	Wyoming	$396	$429	8.6%

[a] *Premiums shown are for a 40-year-old non-tobacco user. Because of fixed age-rated premium schedules, relative changes for all ages are the same as those shown here.*

essentially offset sizable increases in the other half. Arizona and Colorado saw large decreases. The co-op in Colorado decreased its premiums significantly, lowering the cost of the lowest-cost silver plan in six of the state's seven rating regions. Arizona also saw several new entrants to the individual marketplace, increasing the level of competition in an already highly competitive market.

Population Distribution

Table 2 shows the population distribution of each state across rating regions with reductions, small increases, moderate increases and large increases in the lowest-cost silver plan premiums available. None of the rating regions in the Northeast had premium increases greater than 10 percent. Over 80 percent of the Northeast's population lives in rating regions that experienced either decreases or small increases (less than 5 percent) in premiums.

In the Midwest, almost 60 percent of the population lives in rating regions with premium reductions or small increases in their lowest-cost silver plans. The majority of the populations in each of Illinois (86.9 percent), Indiana (92.8 percent), Kansas (100.0 percent), North Dakota (100.0 percent), Ohio (61.2 percent), South Dakota (100.0 percent) and Wisconsin (82.2 percent) live in areas with reductions or only small increases in premiums.

In the South, 63.1 percent of the population lives in rating regions that experienced moderate (5 percent to 10 percent) or large increases (more than 10 percent) in their lowest-cost silver plan premiums. Large segments of the population in Florida (84.9 percent), Kentucky (42.6 percent), North Carolina (32.1 percent), Tennessee (25.3 percent) and Texas (24.4 percent) live in areas with large increases in their lowest-cost silver plan premiums.

In the West, almost 70 percent of the region's population lives in rating areas experiencing decreases or small increases in their lowest-cost silver plan premiums. Large segments of the populations (75 percent or more) in Arizona, Colorado, Montana, Nevada, New Mexico and Washington live in areas that had decreases in their lowest-cost silver plan premiums. In California, over 62 percent of the population lives in rating areas that had either a decrease or a small increase in these premiums.

Table 2 also shows that if individuals are to benefit from these decreases or small increases in premiums, many will have to change insurers. We show that 237 out of 497 rating regions in the nation had a change in the lowest-cost silver plan insurer.[12] Further, 50.3 percent of the U.S. population lives in these rating regions. The need to switch to have the lowest-cost plan is particularly prominent in the Northeast. About 72 percent of the population in the Northeast lives in rating regions where there was a change in the lowest-cost silver plan insurer. The comparable percentages are 46.9 percent in the Midwest, 49.1 percent in the South and 36.8 percent in the West.

The large number of changes in the lowest-cost insurers and the large number of people affected is a product of competitive marketplaces. Insurers adjust premiums, lowering them when they can, to compete for market share. The large amount of plan order switching should decline over time as insurers finalize their pricing strategies and markets reach an equilibrium. However, data show that for the market to work, individuals must be willing to change insurers to take advantage of the best prices. This can be burdensome for some because changing insurers often means changing provider networks, but it is a direct outgrowth of insurers responding to competitive incentives and a sign of an effective, dynamic market.

Selected Cities

Table 3 provides data on the lowest-cost silver plan premiums in selected cities throughout each region. Overall, in 24 of 38 cities,[13] premiums grew more slowly than the statewide average for the state in which they are located. In addition, premiums tend to be low in the cities compared with the rest of the state: 24 of 38 cities have a lower 2015 silver plan premium than their state's average, and two have an identical premium. The average increase in the lowest cost-silver plan premium in the selected cities in the Northeast was 1.9 percent, including three cities with decreases: Baltimore (0.7 percent), Buffalo (4.8 percent), and Rochester (11.3 percent). The 10 cities we examined in the Midwest had an average increase in their lowest-cost silver plan premiums of 4.8 percent. This average is heavily influenced by the large increases in Detroit and Minneapolis that were discussed earlier. In the South, the regional average lowest-cost silver plan premium increase was 6.0 percent. Premium increases were particularly large in Atlanta, Charlotte, Miami and New Orleans. In the West, the average change in lowest-cost silver premiums was actually a decrease of 2.2 percent.

Rural Areas

Table 4 provides data on premiums and premium changes in rural areas. It was not possible to identify premiums in rural areas in all states because some states either have one statewide rating region or otherwise combine urban and rural areas into combined rating regions. The data presented in table 4 includes only identifiable rural areas, defined as rating regions in which at least 80 percent of counties are classified as rural.

The 2015 increases in the lowest-cost silver plan premiums in these rural areas were low, averaging 3.3 percent in the Northeast, 2.8 percent in the Midwest, 2.7 percent in the South and 1.9 percent in the West. The level of 2015 premiums, however, is high in rural areas: 27 of the 38 rural areas have lowest-cost silver plan premiums that are higher than the overall average for their state. But relative changes in premiums between 2014 and 2015 varied considerably across states within a region. In 16 states, the rural areas we identified experienced lowest-cost silver plan premium increases that exceeded their statewide average changes, and in 19 states the rural areas had smaller changes than in their respective state averages.

Table 2. Distribution of Population Across Rating Areas with Lowest-Cost Silver Premium Increases and Decreases and Share of Population Living in Regions Where Lowest-Cost Insurer Changed, 2014 to 2015

	State	Number of rating regions	Percent of population in rating regions with a decrease	Percent of population in rating regions with a small increase (<5%)	Percent of population in rating regions with a moderate increase (5% to 10%)	Percent of population in rating regions with a large increase (>10%)	Number of rating regions where lowest-cost insurer changed	Percent of population living where lowest-cost insurer changed
	National average	**497**	**25.6%**	**33.9%**	**22.6%**	**16.9%**	**237**	**50.3%**
Northeast	**Regional average**	**46**	**25.2%**	**56.9%**	**17.9%**	**0.0%**	**23**	**71.9%**
	Connecticut	8	31.3%	68.7%	0.0%	0.0%	4	59.5%
	Delaware	1	0.0%	100.0%	0.0%	0.0%	0	0.0%
	District of Columbia	1	0.0%	100.0%	0.0%	0.0%	0	0.0%
	Maine	4	100.0%	0.0%	0.0%	0.0%	1	39.1%
	Maryland	4	43.1%	0.0%	56.9%	0.0%	3	88.8%
	Massachusetts	7	40.2%	56.2%	3.6%	0.0%	4	69.2%
	New Hampshire	1	100.0%	0.0%	0.0%	0.0%	1	100.0%
	New Jersey	1	0.0%	100.0%	0.0%	0.0%	1	100.0%
	New York	8	24.0%	61.4%	14.5%	0.0%	4	67.4%
	Pennsylvania	9	9.5%	57.2%	33.3%	0.0%	4	66.7%
	Rhode Island	1	100.0%	0.0%	0.0%	0.0%	1	100.0%
	Vermont	1	0.0%	0.0%	100.0%	0.0%	0	0.0%
Midwest	**Regional average**	**124**	**24.7%**	**34.6%**	**19.1%**	**21.6%**	**66**	**46.9%**
	Illinois	13	4.1%	82.8%	8.3%	4.8%	5	14.8%
	Indiana	17	76.5%	16.3%	5.8%	1.4%	15	92.5%
	Iowa	7	18.4%	21.3%	10.3%	50.0%	2	31.6%
	Kansas	7	70.6%	29.4%	0.0%	0.0%	5	89.6%
	Michigan	16	2.1%	7.4%	40.5%	50.0%	8	23.9%
	Minnesota	9	14.9%	0.0%	0.0%	85.1%	7	87.4%
	Missouri	10	5.5%	39.3%	36.6%	18.6%	4	36.4%
	Nebraska	4	0.0%	42.7%	23.9%	33.4%	1	42.7%
	North Dakota	4	0.0%	100.0%	0.0%	0.0%	3	77.5%
	Ohio	17	35.5%	25.7%	30.0%	8.8%	10	63.9%
	South Dakota	4	66.0%	34.0%	0.0%	0.0%	3	66.0%
	Wisconsin	16	43.8%	38.4%	17.7%	0.0%	3	26.4%
South	**Regional average**	**249**	**17.9%**	**18.3%**	**35.4%**	**27.7%**	**108**	**49.1%**
	Alabama	13	8.5%	36.4%	55.1%	0.0%	6	32.5%
	Arkansas	7	28.3%	71.7%	0.0%	0.0%	2	19.1%
	Florida	67	5.1%	5.4%	4.6%	84.9%	39	46.6%
	Georgia	16	29.3%	0.0%	58.7%	12.0%	9	79.6%
	Kentucky	8	47.7%	0.0%	9.7%	42.6%	2	15.4%
	Louisiana	8	30.9%	43.8%	15.3%	0.0%	6	74.6%
	Mississippi	6	71.9%	8.1%	19.9%	0.0%	1	19.9%
	North Carolina	16	8.3%	8.6%	51.0%	32.1%	9	66.5%
	Oklahoma	5	60.9%	33.5%	3.2%	2.4%	1	25.0%
	South Carolina	46	70.4%	27.4%	2.3%	0.0%	12	39.3%
	Tennessee	8	24.0%	18.4%	32.3%	25.3%	7	92.2%
	Texas	26	3.2%	25.8%	46.1%	24.4%	7	33.0%
	Virginia	12	0.0%	17.1%	82.9%	0.0%	7	74.9%
	West Virginia	11	0.0%	0.0%	100.0%	0.0%	0	0.0%
West	**Regional average**	**78**	**34.8%**	**34.6%**	**21.4%**	**9.2%**	**40**	**36.8%**
	Alaska	3	0.0%	0.0%	0.0%	100.0%	0	0.0%
	Arizona	7	76.8%	7.7%	0.0%	15.5%	7	100.0%
	California	19	5.1%	57.3%	33.1%	4.5%	4	9.6%
	Colorado[a]	7	97.6%	2.4%	0.0%	0.0%	6	97.6%
	Hawaii	1	0.0%	0.0%	0.0%	100.0%	0	0.0%
	Idaho	7	26.0%	0.0%	43.5%	30.6%	4	47.4%
	Montana	4	100.0%	0.0%	0.0%	0.0%	4	100.0%
	Nevada	4	86.5%	13.5%	0.0%	0.0%	3	35.8%
	New Mexico	5	100.0%	0.0%	0.0%	0.0%	1	10.2%
	Oregon	7	0.0%	45.4%	54.6%	0.0%	3	61.8%
	Utah	6	4.1%	43.2%	0.0%	52.7%	2	25.7%
	Washington	5	100.0%	0.0%	0.0%	0.0%	4	70.7%
	Wyoming	3	0.0%	0.0%	100.0%	0.0%	2	86.1%

[a] *Colorado redrew the state's geographic rating regions, creating 9 where 11 had been drawn before. Only the seven regions in the state that remained unchanged between 2014 and 2015 are included here.*

Table 3. Selected Cities: Lowest-Cost Silver Premiums[a] and Relative Change 2014 to 2015

	Rating area	2014 lowest-cost silver plan premium	2015 lowest-cost silver plan premium	Relative change 2014–2015
Northeast	**Regional average of selected cities**	**$289**	**$295**	**1.9%**
	District of Columbia	$238	$239	0.3%
	Hartford, CT	$316	$321	1.5%
	Baltimore, MD	$228	$226	-0.7%
	Boston, MA	$250	$255	2.1%
	Newark, NJ	$308	$315	2.2%
	New York, NY	$359	$372	3.5%
	Buffalo, NY	$275	$262	-4.8%
	Rochester, NY	$305	$271	-11.3%
	Philadelphia, PA	$256	$267	4.3%
	Pittsburgh, PA	$163	$170	4.4%
Midwest	**Regional average of selected cities**	**$225**	**$233**	**4.8%**
	Chicago, IL	$210	$212	1.0%
	Indianapolis, IN	$339	$317	-6.3%
	Detroit, MI	$190	$219	15.2%
	Minneapolis, MN	$154	$181	17.9%
	Kansas City, MO	$238	$241	1.1%
	St. Louis, MO	$239	$252	5.1%
	Omaha, NE	$256	$259	1.1%
	Cleveland, OH	$246	$242	-1.6%
	Columbus, OH	$238	$244	2.3%
	Milwaukee, WI	$302	$301	-0.1%
South	**Regional average of selected cities**	**$244**	**$259**	**6.0%**
	Birmingham, AL	$255	$262	2.8%
	Miami, FL	$247	$274	11.0%
	Atlanta, GA	$229	$248	8.2%
	New Orleans, LA	$255	$276	8.2%
	Charlotte, NC	$301	$324	7.6%
	Oklahoma City, OK	$193	$201	3.9%
	Memphis, TN	$186	$184	-0.7%
	Houston, TX	$238	$248	4.2%
	Dallas, TX	$264	$279	5.7%
	Richmond, VA	$230	$241	5.2%
West	**Regional average of selected cities**	**$242**	**$238**	**-2.2%**
	Phoenix, AZ	$194	$166	-14.5%
	Los Angeles, CA[b]	$234	$238	1.7%
	San Diego, CA	$271	$295	9.0%
	San Francisco, CA	$328	$356	8.5%
	San Jose, CA	$340	$343	0.9%
	Denver, CO	$245	$207	-15.7%
	Albuquerque,NM	$189	$167	-11.3%
	Las Vegas, NV	$237	$237	-0.2%
	Portland, OR	$194	$212	9.3%
	Seattle, WA	$267	$235	-12.2%

[a] *Premiums shown are for a 40-year-old non-tobacco user. Due to fixed age-rated premium curves, relative changes are the same for all ages as those shown here.*

[b] *Average of Los Angeles' two rating areas*

Conclusion

We conclude that, across the country, relative increases in the premiums associated with the lowest-cost silver plans were modest, although there were exceptions in a small number of states. The same is true for the bulk of rating regions within these states. The exceptions (large increases) tend to be found in rating regions where the 2014 lowest-cost plan left the market, where the 2014 premiums were very low, and in areas without significant insurance market competition; in several cases, such circumstances caused very large increases in the lowest-cost available option in 2015. On the other hand, the lowest-cost silver plan premium options fell considerably in markets where new competitors entered or where an existing insurer priced more competitively after seeing their position in the 2014 market.[14]

The competitive success thus far is attributable to the managed competition framework built into the Affordable Care Act, where premium tax credits are tied to the second-lowest-cost silver plan in an individual's rating area. Individuals who want a more expensive plan must pay the full difference directly and those who choose a less expensive plan reap the financial benefits. The transparency of premiums provided through the on-line marketplaces and the comparability of benefits and actuarial values of plans also spur competition. As we have shown, however, many people must be willing to change plans and insurers to take advantage of the lowest premiums. Without plan switching, competitive pressures on insurers will weaken.

In general, Blue Cross plans that were historically dominant in nongroup insurance markets have participated in marketplaces, although they frequently offer more limited network products than they had before 2014. In larger, particularly urban, markets, other commercial plans participate in the marketplaces and many have priced aggressively. In 2014, many markets were joined by plans that previously had enrolled only Medicaid beneficiaries and were thus structured to be low-cost plans. Co-ops, additional new entrants facilitated by the Affordable Care Act, were surprisingly successful in keeping rates competitive in several areas.[15]

Whether marketplaces will continue to see aggressive pricing and small premium increases in the future is uncertain. First, the temporary risk corridors and reinsurance provisions in the law will end after 2016. This is expected to cause a small average increase in premiums. Second, if underlying health care costs begin to grow at historical rates, as opposed to the lower rates seen in recent years, it will be hard for insurers to avoid reflecting this in their premiums.

Finally, many insurers have been able to keep rates low by developing more limited provider networks. These have generally consisted of providers willing to accept lower reimbursement rates; whether these arrangements are sustainable and remain attractive to consumers over time is unknown. If consumers prefer broader networks and are willing to pay for them, the market will respond by offering such products, and premiums will consequently increase. States and the federal government could also engage in greater regulation of network adequacy; this, too, could cause premiums to increase.

ABOUT THE AUTHORS & ACKNOWLEDGMENTS

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Table 4. Rural Areas: Average Lowest-Cost Silver Plan Premiums[a] and Relative Change 2014 to 2015

	State	2014 lowest-cost silver plan premium	2015 lowest-cost silver plan premium	Relative change 2014–2015
Northeast	**Regional average for selected rural areas**	**$254**	**$262**	**3.3%**
	Connecticut	$328	$323	-1.6%
	Maine	$329	$328	-0.6%
	New York	$373	$356	-4.4%
	Pennsylvania	$180	$202	11.9%
Midwest	**Regional average for selected rural areas**	**$262**	**$269**	**2.8%**
	Illinois	$264	$276	4.7%
	Indiana	$313	$302	-3.3%
	Iowa	$245	$248	1.7%
	Kansas	$227	$206	-9.4%
	Michigan	$260	$271	4.3%
	Minnesota	$181	$212	17.2%
	Missouri	$305	$318	4.0%
	Nebraska	$225	$250	10.8%
	North Dakota	$286	$297	4.0%
	Ohio	$271	$280	3.2%
	South Dakota	$285	$258	-9.6%
	Wisconsin	$291	$294	1.2%
South	**Regional average for selected rural areas**	**$254**	**$261**	**2.7%**
	Alabama	$234	$254	8.5%
	Arkansas	$282	$277	-1.5%
	Florida	$288	$318	10.7%
	Georgia	$303	$289	-4.9%
	Kentucky	$196	$235	19.5%
	Louisiana	$313	$322	2.8%
	Mississippi	$325	$270	-16.8%
	North Carolina	$299	$302	1.2%
	Oklahoma	$213	$197	-7.4%
	South Carolina	$268	$268	-0.1%
	Tennessee	$209	$215	2.7%
	Texas	$206	$238	15.7%
	Virginia	$265	$274	3.4%
	West Virginia	$270	$295	9.0%
West	**Regional average for selected rural areas**	**$281**	**$286**	**1.9%**
	California	$313	$337	7.5%
	Idaho	$229	$224	-2.2%
	Montana	$248	$236	-4.8%
	Nevada	$456	$418	-8.4%
	New Mexico	$261	$238	-9.0%
	Oregon	$214	$235	9.8%
	Utah	$235	$245	4.1%
	Wyoming	$405	$440	8.7%

[a] *Premiums shown are for a 40 year old non-tobacco user. Due to fixed age-rated premium curves, relative changes are the same for all ages as those shown here.*

Notes

1 Because all states require insurers to use a fixed age gradient for setting premiums, relative changes in premiums for a 40 year old are identical to those for every age.

2 Holahan J, Blumberg LJ, Wengle E, et al. *Marketplace Insurance Premiums in Early Approval States: Most Markets Will Have Reductions or Small Increases in 2015*. Washington: Urban Institute, 2014, *http://www.urban.org/publications/413287.html*.

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4 Rau J and Appleby J. "More Competition Helps Restrain Premiums in Federal Health Marketplace," *Kaiser Health News*, Monday, December 1, 2014, *http://kaiserhealthnews.org/news/more-competition-helps-restrain-premiums-in-federal-health-marketplace* (accessed February 2015); Cox C, Levitt L, Claxton G, et al. *Analysis of 2015 Premium Changes in the Affordable Care Act's Health Insurance Marketplaces*. Menlo Park, CA: Kaiser Family Foundation, 2014, *http://files.kff.org/attachment/analysis-of-2015-premium-changes-in-the-affordable-care-acts-health-insurance-marketplaces-issue-brief* (accessed February 2015); McKinsey Center for U.S. Health System Reform. *2015 Individual Exchange Information*. Washington: McKinsey & Company, 2014, *http://healthcare.mckinsey.com/sites/default/files/McKinsey_2015_individual_rate_filings.pdf* (accessed February 2015); McKinsey Center for U.S. Health System Reform. *2015 OEP: Emerging Trends in the Individual Exchanges*. Washington: McKinsey & Company, 2014.

5 Congressional Budget Office. *Updated Budget Projections: 2015 to 2025*. Washinton, DC: CBO, 2015, *http://www.cbo.gov/sites/default/files/cbofiles/attachments/49973-Updated_Budget_Projections.pdf#page=24* (accessed March 2015).

6 "Annual Estimates of the Resident Population for Counties: April 1, 2010 to July 1, 2013," U.S. Census Bureau, *http://www.census.gov/popest/data/counties/totals/2013/CO-EST2013-01.html* (accessed February 2015). Ideally, we would have used nongroup market enrollment by county and then rating region to calculate weights, but such data are unavailable at this time. However, total population should provide a reasonable approximation.

7 Office of the Assistant Secretary for Planning and Evaluation. *Health Insurance Marketplace Summary Enrollment Report for the Initial Annual Open Enrollment Period*. Washington: Office of the Assistant Secretary for Planning and Evaluation, 2014, *http://aspe.hhs.gov/health/reports/2014/MarketPlaceEnrollment/Apr2014/ib_2014Apr_enrollment.pdf*.

8 Of those choosing silver level coverage through the federally facilitated marketplaces, 65 percent chose the lowest or second lowest cost silver plan in 2014. Office of the Assistant Secretary for Planning and Evaluation. *Premium Affordability, Competition, and Choice in the Health Insurance Marketplace, 2014*. Washington: Office of the Assistant Secretary for Planning and Evaluation, 2014, *http://aspe.hhs.gov/HEALTH/REPORTS/2014/PREMIUMS/2014MKTPLACEPREMBRF.PDF*

9 Holahan J et al., *Marketplace Insurance Premiums in Early Approval States*.

10 For the rural area analysis, we exclude states in which urban and rural areas are combined in the same rating region. We identify the rural counties using state profiles from the University of Iowa's Rural Policy Research Institute, Center for Rural Health Policy Analysis. "Health Insurance Marketplace Rating Areas," University of Iowa RUPRI Center for Rural Health Policy Analysis. *http://cph.uiowa.edu/rupri/publications/policybriefs/2014/premiums* (accessed February 2015).

11 Congressional Budget Office. *Appendix G: CBO's Economic Projections for 2014 to 2024*. Washington: Congressional Budget Office, 2014, *http://www.cbo.gov/sites/default/files/cbofiles/attachments/45010-breakout-AppendixG.pdf* (accessed February 2015); and Centers for Medicare and Medicaid Services. "National Health Expenditure Estimates," Baltimore: Centers for Medicare and Medicaid Services, 2014. *http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/Proj2013tables.zip* (accessed February 2015).

12 In 2015, Colorado redefined the state's geographic rating regions, creating 9 regions where previously 11 had been defined. Our analysis includes only the seven regions in the state that remained unchanged in 2015.

13 Table 3 includes 40 cities, but for this purpose we only count 38. Because the District of Columbia and New Jersey only have one rating area, their city average will be the same as their state average.

14 Holahan J, et al. *Marketplace Insurance Premiums in Early Approval States*.

15 There is concern that many co-ops may not be sustainable. Most have priced aggressively and are experiencing operating losses. They have benefited from federal loans as well as temporary risk corridors and reinsurance. Whether they can survive long term will depend on their attractiveness to consumers and their ability to develop provider networks with reasonable payment rates. Holahan J, et al. *Marketplace Insurance Premiums in Early Approval States: Most Markets Will Have Reductions or Small Increases in 2015*. Washington: Urban Institute, 2014; and Banerjee D, Sung J, Weir C. *Other U.S. Health Insurance Co-Ops Could Be Going Down the Same Bumpy Road as Iowa's CoOportunity Health*. New York, New York: Standard & Poor's Rating Services, February 2015. *https://www.statereforum.org/sites/default/files/2-10-15_-_other_us_health_insurance_co-ops_could_be_going_down_the_same_bumpy_road_as_iowas_cooportunity_health.pdf* (Accessed February 2015).

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Cynthia Cox, Anthony Damico, Gary Claxton, Rosa Ma, and Larry Levitt

Repayments and Refunds: Estimating the Effects of 2014 Premium Tax Credit Reconciliation

In January 2014, the Affordable Care Act (ACA) began making federal premium tax credits available to eligible individuals who purchased health coverage through exchanges, or Marketplaces. These subsidies are a centerpiece of the law and are designed to provide financial assistance to millions of Americans who could not otherwise afford health coverage.

Taxpayers may claim a premium tax credit for themselves and other family members based on their income for the year. An individual or family may also elect to receive an advance premium tax credit (APTC) based on projected household income. Projected income may be based on previous income history and may be documented with the most recent available tax return or with other evidence of income. These advance credits are an estimate and must be reconciled based on actual income when people file their taxes. People who received an overpayment of the premium tax credit (for example, due to an unexpected increase in income midyear) have to repay some of or the entire amount overpaid when they file their taxes. Conversely, people who received an underpayment of the tax credit may get a refund when reconciling their advance payments with their actual annual income and subsidy eligibility.

There are several reasons that may cause people to need to reconcile their advance credits. The simplest is just that their income may change. Another is that there may be a change in the size of the family (e.g., birth, death, divorce), which affects the family's income as a percent of poverty. People are encouraged to report these changes to the Marketplace so that their advance credit may be modified, but notification may not happen in all cases and even when midyear changes are reported, some reconciliation will likely occur when taxes are filed.

In this brief, we focus on reconciliation based only on income changes (prior year v. current year), and estimate that 50% of subsidy-eligible tax households would owe some repayment and 45% would receive a refund. Subsidy-eligible tax households with starting incomes under 200% of poverty would be somewhat more likely to owe a repayment (54%) and somewhat less likely to receive a refund (40%). (Throughout this brief we define "subsidy-eligible tax households" as those households containing any individual who would have been determined eligible for advance payment of the premium tax credit based on their starting incomes).

Among those projected to owe a repayment, the average repayment amounts would be $667 for taxpayers with starting incomes under 200% of poverty, $886 for taxpayers with starting incomes of 200-300% of poverty, and $1,380 for taxpayers with starting incomes of 300-400% of poverty. Among those projected to receive a refund, the average refund amounts would be $412 for taxpayers with starting incomes under 200% of poverty,

$1,016 for taxpayers with starting incomes of 200-300% of poverty, and $1,601 for taxpayers with starting incomes of 300-400% of poverty. Overall, the estimated average repayment is $794 and the refund is $773.

Overview of Reconciliation of the Premium Tax Credit

The premium tax credit is a refundable tax credit available to U.S. citizens and legal immigrants with incomes in the range of 100-400% of the federal poverty level who are not eligible for other affordable coverage. Offered on a sliding scale based on income, the premium tax credit limits what people will be required to pay for a benchmark health plan to a percentage of their income (ranging in 2014 from 2% to 9.5% of income).

The law allows eligible enrollees to take the premium tax credit in the form of an advance payment because low- and moderate-income people generally would not be able to afford the coverage without upfront assistance. When enrollees choose the advance payment option, their tax credits are paid directly to the insurer they select. Enrollees then pay the remaining share of the monthly premium to the insurer (and out-of-pocket costs if they use health care).

The amount of the premium tax credit a family ultimately receives, though, is based on their annual household income as reported on their tax return. For those who choose to wait and claim the entire credit when they file their taxes the following year, the credit will be applied against any taxes they owe or will be sent as a refund to those who do not owe any taxes. For people who choose advance payments the process is different. Because their coming year's annual income will not be known at the time they apply for advance payment of the tax credit, eligibility for advance payment is based on an estimate of income for the year and may be verified using their most recent tax return or, if current income is different, pay stubs or other documentation.

People applying early in open enrollment for advance payments beginning in January 2014, therefore, would have likely had their incomes verified by their 2012 tax returns (as this was the most recent tax return they would have had). Unless applicants actively accounted for changes between 2012 and current income, their subsidies may have been based on an already out-of-date income. People applying toward the end of 2014 open enrollment may have been more likely to use 2013 income in their applications, particularly if they had filed their 2013 taxes before applying, but they still may have experienced changes in income during 2014.

As shown below, household incomes change, sometimes significantly, over the course of a year. Enrollees are expected to contact the Marketplace when they experience changes in their incomes so that their subsidies can be recalculated, but there is as of yet no indication of how often this contact is made.

The law requires that any advance payments received in a year be reconciled against the tax credits for which individuals and families are eligible based on their annual income reported on their tax return. If the advance payment exceeded the amount of the credit for which individuals were ultimately eligible, a portion of the overpayment must be repaid. While the ACA originally limited the amount that had to be repaid to $250 for an individual and $400 for a family, Congress subsequently raised the repayment caps and created a scaled repayment structure, as shown in the table below.

Figure 1: Limits on Repayments For Advanced Payment of the Premium Tax Credit		
Annual 2014 Income (as a % of 2013 FPL)	**Maximum repayment amount for a single individual**	**Maximum repayment amount for couples and families**
100% to <200%	$300	$600
200% to <300%	$750	$1,500
300% to 400%	$1,250	$2,500
Greater than 400% FPL	Full amount	Full amount
Note: Enrollees with incomes that fall below poverty at the time of reconciliation are not expected to repay the tax credit Source: 2012-24 Internal Revenue Bulletin, § 1.36B-4.		

Households that end up having an annual income within the subsidy range (100-400% of poverty) will have caps on their repayment amounts. Those whose incomes rise above the subsidy range (over 400% of poverty) have no limit on repayment and therefore may be subject to sizeable repayments when they file their taxes. Some households may have a decrease in income during the year that puts them below the subsidy range. In this case, though, the person or family would not be subject to a repayment and may even receive a refund.

For example, a single 40-year-old living in Atlanta, GA with a starting income of $17,000 (148% of 2013 FPL) may have qualified for advance payments totaling $2,614 for 2014. If the enrollee's annual 2014 income increased to $23,000 (200% of 2013 FPL), she ultimately would qualify for $1,824 in premium assistance. Assuming she did not notify the Marketplace of her income change, she would owe a repayment of $750 (because $2,614 minus $1,824 equals $790, which exceeds her repayment cap of $750). If her annual 2014 income rose even higher to $46,000 (which is above 400% of 2013 FPL), she would no longer be eligible for assistance and would be required to repay the entire $2,614 she received in advance payments.

Some Marketplace shoppers were eligible for two types of assistance: the premium tax credit described above and a second form of assistance called cost sharing reductions, which limit out-of-pocket costs for the lowest income enrollees. The cost sharing reductions are *not* subject to reconciliation.

Estimates of Repayments and Refunds

We use the Survey of Income and Program Participation to model the subsidy-eligible population at the start of 2014 and to track income changes over time among this group in order to estimate how many would face repayment or receive refunds this tax season and the amounts of their repayments or refunds. We focus on the cohort of households that were subsidy eligible at the beginning of the year and follow them through the year. Eligible people are assumed to retain Marketplace coverage unless they obtain public coverage or they obtain or become eligible for employer-sponsored coverage. Because we are looking at changes in income, we exclude tax households with changes in household size – such as a birth, death, or marriage – during the year.

We made several assumptions in this model, which are described in more detail in the methods section. Most notably, we assume that everyone who was eligible for a premium tax credit opted for advanced payment in the full amount; that they all received the maximum potential subsidy in the year; and that they did not report

changes in income during the year or receive an adjustment to their tax credit midyear. We assume that people who obtain other coverage inform the Marketplace and stop receiving subsidies at that time.

Although this analysis models tax households containing individuals who would have been *potentially* eligible to enroll with an advance payment of the tax credit, the income distribution of the households in our model is similar to that of actual Marketplace enrollees in HealthCare.gov states, according to data published by HHS.[1]

We use 2013 annual income in this analysis, which we call "starting income," to determine eligibility for advance premium tax credits, and 2014 annual income as the basis for determining final tax credit eligibility. We recognize that some families may have to use their income tax return from two years earlier (their most recent available return) to verify income at the time of application, while others would provide documentation of their current income. In the appendix, we also provide results for two other scenarios: 2012 annual income (which addresses those who applied early in open enrollment and by default used their 2012 income tax return to verify their incomes); and March 2014 income (which captures those who signed up toward the end of open enrollment and used their current monthly incomes in their application).

Throughout this brief, we provide estimates by starting income (i.e. 2013 annual income) shown in poverty ranges. Under the ACA, eligibility for advance and final premium tax credits for 2014 is based on 2013 poverty levels[2], which range from $11,490 (100% FPL) to $45,960 (400% FPL) for a single individual; the 2014 subsidy eligibility range for a family of four was $23,550 to $94,200.

Estimates of 2014 Tax Households Owing Repayment or Receiving Refund

Incomes can change quite a bit over a year, and because premium tax credits vary continuously with income, these changes mean that most subsidized households will have a repayment or refund. Ninety-five percent of tax households experience a change in income over the year, with 49% experiencing an increase of decrease of more than 20% (Figure 2).

Figure 2: Estimated Annual Income Volatility from 2013 to 2014
among tax households eligible to receive advance payments of tax credit

Annual 2013 Income (%FPL)	Percent of tax households experiencing a change in annual income from 2013 to 2014				
	Decrease of 20% or more	Decrease of less than 20%	No Change	Increase of less than 20%	Increase of 20% or more
100% to <200%	22%	18%	6%	25%	29%
200% to <300%	25%	24%	4%	26%	21%
300% to 400%	25%	26%	3%	24%	21%
All (100–400%)	23%	21%	5%	25%	26%

Note: Households with a change in the tax filing unit size (e.g. due to birth, death, divorce) are not included in this analysis.
Source: Kaiser Family Foundation analysis of 2008 Survey of Income and Program Participation (SIPP) panel data.

Due to these midyear changes in income, one-half (50%) of tax households who were eligible to receive advance payments of the tax credit in 2014 would face a repayment of some or all of the tax credit and 45% would receive a refund. Relative to the other starting income groups, those households with starting incomes below 200% percent of poverty would be more likely to have a repayment (54% v. 46%).

These findings are similar to reports from tax preparers Jackson Hewitt and H&R Block of the experiences of early tax households, which respectively have reported that 53% and 52% of their early filing clients have been required to issue a repayment.[3]

How Many People Could be Subject to Reconciliation?

There is no definitive data yet on the number of people who received premium tax credits during 2014 and will be required to reconcile those tax credits based on actual income on their tax returns.

As of the end of open enrollment for 2014, 6.7 million people selected a plan and qualified for premium tax credits through a state or the federal Marketplace. That figure may be over-stated because not all of those people paid their premiums and actually ended up receiving advance tax credits, though it may also be under-stated because additional people qualifying for special enrollment periods signed up throughout the year. The Treasury Department has estimated that three to five percent of all taxpayers received advance premium tax credits in 2014. Based on an estimated 150 million returns filed, that would translate to 4.5 to 7.5 million tax households receiving advance payments of the premium tax credit in 2014 (with some households including more than one person).

The current number of people signed up and qualifying for subsidized coverage for 2015 is just under 10 million, and the Congressional Budget Office (CBO) projects that 18 million people will receive subsidies through the Marketplace on average each month by 2017.

Amounts of Repayments and Refunds

Repayment and refund amounts will depend on how much income changes during the year. As shown in Figure 1 above, tax households with annual income below 400% of poverty may have their repayments capped while those with higher incomes would be required to repay the entire advance credit amount.

Average repayment and refund amounts are shown in Figure 3. Among tax households who would owe a repayment, the average repayment amounts are $667 for those with starting incomes below 200% of poverty, $886 for those with starting incomes of 200-300% of poverty, and $1,380 for those with starting incomes of 300-400% of poverty. Among tax households who would receive a refund, the average refund amounts are $412 for those with starting incomes below 200% of poverty, $1,016 for those with staring incomes of 200-300% of poverty, and $1,601 for those with starting incomes of 300-400% of poverty.

For the 2014 benefit year, 100% of poverty was $11,490 for a single individual and $23,550 for a family of four; 400% of poverty was $45,960 for a single individual and $94,200 for a family of four.

Figure 3: Estimated Average Amount of Repayment or Refund among tax households owing repayment or receiving a refund		
Annual 2013 Income (%FPL)	**Average Repayment**	**Average Refund**
100% to <200%	**$667**	**$412**
200% to <300%	**$886**	**$1,016**
300% to 400%	**$1,380**	**$1,601**
All (100–400%)	**$794**	**$773**
Note: Repayment and refund amounts are estimated per tax household, and therefore represent the amount per tax-filing unit (household); not per person or per enrollee. Source: Kaiser Family Foundation analysis of 2008 Survey of Income and Program Participation (SIPP) panel data.		

The amounts of repayments and refunds vary with income change, which means that there is considerable variation around these average amounts. For example, among tax households who would owe a repayment, 15% would repay less than $50 and 18% would repay between $50 and $200 (Figure 4). At the other end of the distribution, seven percent of tax households owing a repayment would owe between $2,000 and $5,000, and two percent would owe $5,000 or more. Refund amounts show a similarly wide distribution.

Figure 4: Estimated Percent of Subsidy-Eligible Tax Households Owing Repayment or Receiving a Refund, by Amount of Adjustment among tax households projected to owe repayment or receive refund		
Reconciliation Adjustment	**Repayment**	**Refund**
Less than $50	**15%**	**14%**
$50 to <$200	**18%**	**19%**
$200 to <$500	**22%**	**22%**
$500 to <$1000	**24%**	**20%**
$1000 to <$2000	**12%**	**16%**
$2000 to <$5000	**7%**	**9%**
More than $5000	**2%**	**1%**
Note: Repayment and refund amounts are estimated per tax household, and therefore represent the amount per tax-filing unit (household); not per person or per enrollee. Source: Kaiser Family Foundation analysis of 2008 Survey of Income and Program Participation (SIPP) panel data.		

Looking more closely at those who would be required to make a repayment, the average repayment amounts are significantly influenced by repayments for households whose final incomes exceeded 400% of poverty and who would therefore be required to repay their entire advance credit without any cap on repayment.

Figure 5: Estimated Average Repayments Amounts, by Starting and Final Income among tax households owing repayment			
Annual 2013 Income (%FPL)	Percent of households with annual 2014 incomes that exceed 400% FPL	Average repayment among households with annual 2014 incomes that exceed 400% FPL	Average repayment among households with annual 2014 incomes that do not exceed 400% FPL
100% to <200%	6%	$3,837	$472
200% to <300%	15%	$2,610	$577
300% to 400%	57%	$2,306	$157
Note: Repayment and refund amounts are estimated per tax household, and therefore represent the amount per tax-filing unit (household); not per person or per enrollee. Source: Kaiser Family Foundation analysis of 2008 Survey of Income and Program Participation (SIPP) panel data.			

Figure 5 shows average repayment amounts for these households and for the other repaying households whose final incomes remain below 400% of poverty. While the share of repaying households with final incomes exceeding 400% of poverty are relatively small, particularly among households with starting incomes below 300% of poverty, their average repayment amounts would be quite high: $3,837 for those with starting incomes below 200% of poverty; $2,610 for those with starting incomes at 200-300% of poverty; and, $2,306 for those with staring incomes at 300-400% of poverty.

Another way to look at the amounts that households would repay or receive is to look at the difference between the total premium credit amounts that ultimately would be paid to people (i.e., post reconciliation) and the advance credit amounts (which are what people qualify for based on their starting income). While final tax credits that people ultimately receive after reconciliation are very close on average to the advance credit amounts, these overall numbers mask substantial differences across households that would be required to make a repayment and those that would receive a refund.

Repaying households would return 27% of their advance credits, with households with starting incomes below 200% of poverty repaying 20% of the advance credit amounts, households with starting income at 200-300% of poverty repaying 36% of the advance tax credits, and households with starting incomes at 300-400% of poverty repaying 65% of the advance tax credits. The large percentage for the higher-income group occurs because 57% of households owing repayments who started out with incomes between 300-400% of poverty end the year with income of 400% of poverty or more and would be required to repay the entire advance amount.

The refund amounts for tax households eligible to receive them would average 29% of the advance credit amounts, with households with starting incomes below 200% of poverty receiving an additional 13% on average, households with starting income at 200-300% of poverty receiving an additional 45% on average, and households with starting incomes at 300-400% of poverty receiving an additional 87% on average. The relatively large percentage for the higher income group reflects the relatively low advance credit amounts that some of these households initially qualified for.

Figure 6: Estimated Repayment or Refund as a Share of Tax Credit Advance Payments			
Annual 2013 Income (%FPL)	Among tax households projected to owe repayment or receive refund		Among all tax households that received an advance payment
	Average percentage of advance payment repaid	Average percentage received in excess of advance payment	Average adjustment to advance payment
100% to <200%	-20%	+13%	-6%
200% to <300%	-36%	+45%	+4%
300% to 400%	-65%	+87%	+12%
All (100-400%)	-27%	+29%	+2%

Note: Repayment and refund amounts are estimated per tax household, and therefore represent the amount per tax-filing unit (household); not per person or per enrollee.

Source: Kaiser Family Foundation analysis of 2008 Survey of Income and Program Participation (SIPP) panel data.

Discussion

Whether applicants use their prior year's income or more current income when applying for the advance payments, it is likely that their estimated incomes will be different from what is ultimately reported on the tax return at the end of the year. Many people's income fluctuates throughout the year: the income of hourly workers can change as the number of hours worked varies, and even salaried workers with more stable earnings can receive bonus payments that increase their income. Changes in circumstances, such as job loss or job gain can also alter income from what may have been used to determine the advance payments.

Reconciliation of premium subsidies under the ACA is a natural outgrowth of using the tax system to provide those subsidies. Income taxes – and the various credits and deductions that affect them – are generally based on actual annual income, which can only be known after the fact. Taxes that are withheld from paychecks or paid on an estimated basis by self-employed people are always reconciled on the tax return in the following year. In this respect, the ACA's premium subsidies are no different.

However, the reconciliation of premium subsidies poses some particular challenges. The subsidies primarily go to lower-income households with very little discretionary income. An unanticipated repayment – which may require tax households to actually write a check to the IRS or get a lower-than-expected tax refund – may be difficult for these household to handle financially, even though it would only happen if their income is higher than originally estimated. Also, the premium tax credits are designed to make health insurance more affordable and encourage people who are uninsured to get covered. To the extent people are uncertain about how much of a subsidy they will ultimately qualify for, they may be more hesitant to sign up for insurance.

Repayments can be minimized – though not necessarily avoided entirely – if people promptly report any changes in income and household composition. In the first year, many people did not even realize they were receiving subsidies. State and federal marketplaces, as well as brokers and navigators, can play an important role in helping people to understand the subsidy reconciliation process and encouraging them to report any changes throughout the year. Over time, this reporting may improve as subsidy beneficiaries become more familiar with the process.

Appendix

2012 Annual Income Scenario

This scenario addresses people who applied early in open enrollment and by default used their 2012 income tax return to verify their incomes at the time of application.

Estimates of Premium Tax Credit Repayments and Refunds for 2014 Benefit Year				
Among tax households who defaulted to using 2012 annual income at time of application for 2014 tax credit	**Annual 2012 Income (As a % of 2013 FPL)**			
	100% to <200%	200% to <300%	300% to 400%	All (100 – 400%)
Estimated percent of 2014 subsidy-eligible tax households experiencing a change in income by end of 2014				
Decrease of 20% or more	25%	36%	30%	29%
Decrease of less than 20%	16%	18%	22%	17%
Increase of 20% or more	35%	24%	29%	31%
Increase of less than 20%	19%	20%	17%	19%
No Change	5%	2%	2%	4%
Estimated percent of 2014 subsidy-eligible tax households with a repayment or refund of premium tax credit				
Required to repay some or all of tax credit	54%	44%	46%	50%
Receive a refund for remaining tax credit	41%	55%	52%	47%
No adjustment	5%	2%	2%	4%
Estimated amount of repayment or refund, among tax households projected to owe repayment or receive a refund				
Average repayment	$899	$1,105	$1,681	$1,048
Average refund	$483	$1,322	$1,535	$963
Estimated repayment or refund as a share of tax credit advance payments, among tax households projected to owe repayment or receive refund				
Repayment: Average percentage of advance payment repaid	-25%	-41%	-81%	-34%
Refund: Average percentage received in excess of advance payment	+15%	+54%	+83%	+35%

Notes: Households with a change in the tax filing unit size (e.g. due to birth, death, divorce) are not included in this analysis. Repayment amounts are estimated per tax household, and therefore represent the amount per tax-filing unit (household); not per person or per enrollee.
Source: Kaiser Family Foundation analysis of 2008 Survey of Income and Program Participation (SIPP) panel data.

2013 Annual Income Scenario

This scenario captures people who applied early in open enrollment and used their 2013 income, verified through pay stubs or other documentation.

Estimates of Premium Tax Credit Repayments and Refunds for 2014 Benefit Year				
Among tax households who used their 2013 income for 2014 tax credit	**Annual 2013 Income (As a % of 2013 FPL)**			
	100% to <200%	200% to <300%	300% to 400%	All (100 – 400%)
Estimated percent of 2014 subsidy-eligible tax households experiencing a change in income by end of 2014				
Decrease of 20% or more	22%	25%	25%	23%
Decrease of less than 20%	18%	24%	26%	21%
Increase of 20% or more	29%	21%	21%	26%
Increase of less than 20%	25%	25%	24%	25%
No Change	6%	4%	3%	5%
Estimated percent of 2014 subsidy-eligible tax households with a repayment or refund of premium tax credit				
Required to repay some or all of tax credit	54%	46%	44%	50%
Receive a refund for remaining tax credit	40%	50%	53%	45%
No adjustment	6%	4%	3%	5%
Estimated amount of repayment or refund, among tax households projected to owe repayment or receive a refund				
Average repayment	$667	$886	$1,380	$794
Average refund	$412	$1,016	$1,601	$773
Estimated repayment or refund as a share of tax credit advance payments, among tax households projected to owe repayment or receive refund				
Repayment: Average percentage of advance payment repaid	-20%	-36%	-65%	-27%
Refund: Average percentage received in excess of advance payment	+13%	+45%	+87%	+29%

Notes: Households with a change in the tax filing unit size (e.g. due to birth, death, divorce) are not included in this analysis. Repayment amounts are estimated per tax household, and therefore represent the amount per tax-filing unit (household); not per person or per enrollee.
Source: Kaiser Family Foundation analysis of 2008 Survey of Income and Program Participation (SIPP) panel data.

March, 2014 Income Scenario

This scenario captures people who signed up toward the end of open enrollment and used their current (March, 2014) income in their application.

Estimates of Premium Tax Credit Repayments and Refunds for 2014 Benefit Year				
Among tax households who used March, 2014 income at time of application for 2014 tax credit	**Annualized March 2014 Income (As a % of 2013 FPL)**			
	100% to <200%	200% to <300%	300% to 400%	All (100 – 400%)
Estimated percent of 2014 subsidy-eligible tax households experiencing a change in income by end of 2014				
Decrease of 20% or more	16%	20%	23%	18%
Decrease of less than 20%	29%	29%	30%	29%
Increase of 20% or more	14%	15%	8%	14%
Increase of less than 20%	26%	23%	27%	25%
No Change	15%	13%	12%	14%
Estimated percent of 2014 subsidy-eligible tax households with a repayment or refund of premium tax credit				
Required to repay some or all of tax credit	40%	38%	35%	39%
Receive a refund for remaining tax credit	45%	50%	53%	47%
No adjustment	15%	12%	12%	14%
Estimated amount of repayment or refund, among tax households projected to owe repayment or receive a refund				
Average repayment	$487	$692	$792	$585
Average refund	$306	$835	$1,179	$598
Estimated repayment or refund as a share of tax credit advance payments, among tax households projected to owe repayment or receive refund				
Repayment: Average percentage of advance payment repaid	-15%	-28%	-35%	-20%
Refund: Average percentage received in excess of advance payment	+10%	+31%	+58%	+21%

Notes: Households with a change in the tax filing unit size (e.g. due to birth, death, divorce) are not included in this analysis. Repayment amounts are estimated per tax household, and therefore represent the amount per tax-filing unit (household); not per person or per enrollee.
Source: Kaiser Family Foundation analysis of 2008 Survey of Income and Program Participation (SIPP) panel data.

Methods

We applied our Current Population Survey (CPS) modeling work to the Survey of Income and Program Participation (SIPP) 2008 Panel to estimate the experience of tax claimants over two full calendar years. We computed each individual's health insurance coverage, Medicaid and advance premium tax credit (APTC) poverty level, and eligibility category under the ACA (Medicaid-eligible, subsidy-eligible, coverage gap, etc.) following the methods discussed in depth in the appendices of our state estimates of the coverage gap and subsidy-eligible individuals.

The income, employment, and health insurance sections of the CPS and SIPP questionnaires include many of the same questions. Implementing our CPS algorithm in SIPP produces similar calendar year-weighted estimates of both insurance coverage and ACA eligibility. CPS produces reliable estimates at the state-level at a single point in time while SIPP follows a cohort of individuals and families on a monthly basis over a period of four years, making SIPP the preferred microdata for estimating the dynamics of income and ACA eligibility.

We assessed tax claimants' ability to predict their final 2014 annual income in late 2013 by shifting survey responses forward by two calendar years. The current SIPP 2008 Panel includes a four-year, person-weighted sample of about 45,000 individuals over the 48-month period of 2009 to 2012. Respondents' annualized income and health insurance coverage status at the end of 2011 served as the point of initial enrollment (displayed throughout the text as 2013) and annual income collected during survey year 2012 provided amounts for the final tax reconciliation (displayed as 2014). Both values were inflated with the Bureau of Labor Statistics factor from 2012 to 2014 when compared to 2014 premiums.

To accommodate the added dimension of time in SIPP, we imputed documentation status only at the beginning of the panel but imputed an offer of employer-sponsored insurance (ESI) for each unique job over the period. Otherwise, both of these techniques mirrored the strategy outlined in the immigration status and offer imputation appendices of our prior work.

This analysis estimates the reconciliation experience of tax filers who were either eligible for an APTC themselves or who claimed a dependent eligible for APTC based on filing unit 2013 Modified Adjusted Gross Income (MAGI). Additionally, that subsidy-eligible individual must have been a part of the potential marketplace population in January of 2014. To create a tax filing unit weight, person-weights for single filers and heads of household were maintained, married couples' person-weights were each divided by two, and all tax dependents' weights were zeroed out. This resulted in a starting population of approximately 11 million tax households based on an unweighted sample of 1,918 records. Approximately ten percent of claimants experienced a change in tax filing unit structure at some point during the reconciliation year (2014) due to birth, death, marriage, divorce, or income or residence changes of a dependent relative. Since a change in family size (and with it, monthly marketplace premiums) might precipitate the APTC recipient to report any revised income, these units were excluded from the analysis.

Starting in January 2014, we determined each individual's monthly premium based on actual reported monthly insurance coverage. All individuals without insurance, or with nongroup, unknown private coverage, or dependent ESI who also did not have access to an imputed offer of ESI for the month were designated as a marketplace enrollee for that month in need of coverage. Their premiums were summed alongside others in

their tax filing unit, and then capped according to their tax filing unit's subsidy-eligibility from the point of application (2013 annual income) for a single pro-rated month. After computing all twelve months of potential marketplace subsidies, this process was repeated using the tax filing unit's subsidy-eligibility from the point of reconciliation (2014 annual income). After capping based on current-law repayment limits, the difference between these two APTC amounts provided our final estimates of required repayments, overpayments, and net adjustments shown.

Endnotes

[1] We estimate that 61% of subsidy-eligible tax households in the 37 Healthcare.gov states had starting incomes between 100-200% of poverty; 31% were between 200-300% of poverty, and 8% were between 300-400% of poverty. HHS reported that 65% of enrollees had starting incomes between 100-200% of poverty; 23% were between 200-300% of poverty, and 8% were between 300-400% of poverty.

[2] Refers to the federal poverty guideline in the 48 contiguous states; note that Alaska and Hawaii follow different poverty guidelines.

[3] We estimate that the average repayment amount would be $794 and the refund would be $773, while H&R Block has reported average repayments of $530 and average premium tax credit refunds of $365 among its early filers, as of February 2015. These differences could be explained by timing (as the distribution of clients filing early returns may differ from overall subsidy-eligible filers) as well as possible differences between the income distribution of H&R Block clients and that of our model. Additionally, in the 2013 income scenario of our model, we assume that eligible household members are enrolled for the entire year (unless they became eligible for other coverage), but most enrollees signed up later in open enrollment, meaning that they were not covered through the Marketplace for the entire year. Finally, our model assumes that no tax households notified the exchange of mid-year income changes, but in reality some enrollees likely would have notified the exchange of income changes and therefore faced smaller repayments at the time of reconciliation.

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Realizing Health Reform's Potential

MARCH 2015

The Federal Medical Loss Ratio Rule: Implications for Consumers in Year 3

Michael J. McCue and Mark A. Hall

Abstract For the past three years, the Affordable Care Act has required health insurers to pay out a minimum percentage of premiums in medical claims or quality improvement expenses—known as a medical loss ratio (MLR). Insurers with MLRs below the minimum must rebate the difference to consumers. This issue brief finds that total rebates for 2013 were $325 million, less than one-third the amount paid out in 2011, indicating much greater compliance with the MLR rule. Insurers' spending on quality improvement remained low, at less than 1 percent of premiums. Insurers' administrative and sales costs, such as brokers' fees, and profit margins have reduced slightly but remain fairly steady. In the first three years under this regulation, total consumer benefits related to the medical loss ratio—both rebates and reduced overhead—amounted to over $5 billion. This was achieved without a great exodus of insurers from the market.

The mission of The Commonwealth Fund is to promote a high performance health care system. The Fund carries out this mandate by supporting independent research on health care issues and making grants to improve health care practice and policy. Support for this research was provided by The Commonwealth Fund. The views presented here are those of the authors and not necessarily those of The Commonwealth Fund or its directors, officers, or staff.

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OVERVIEW

One of the consumer protections granted by the Affordable Care Act (ACA) is the regulation of health insurers' medical loss ratios, or MLRs. A key financial measure, an MLR shows the percentage of premium dollars a health insurer pays out for medical care and quality improvement expenses compared with the portion allocated to profits, administrative costs, and sales expenses. For instance, if an insurer uses 80 cents of every premium dollar to pay its customers' medical claims and carry out activities to improve the quality of care, it has a medical loss ratio of 80 percent.

To reduce overhead and ultimately lower the cost of insurance to consumers and the government, in 2011, the ACA set minimum MLRs of at least 80 percent in the individual and small-group markets and of at least 85 percent in the large-group market.[1] Insurers that pay out less than these percentages on medical care and quality improvement must rebate the difference to their members.

Previously, we reported that health insurers that failed to meet MLR requirements paid out more than $1 billion in rebates to consumers

for insurance sold in 2011,[2] and $513 million in 2012.[3] In addition, insurers reduced overhead (i.e., administrative costs and profits) by over $350 million in 2011, and by more than $1 billion in 2012, in part to reduce the rebates they might owe. In both years, insurers reported spending less than 1 percent of their premium revenues on improving the quality of care.

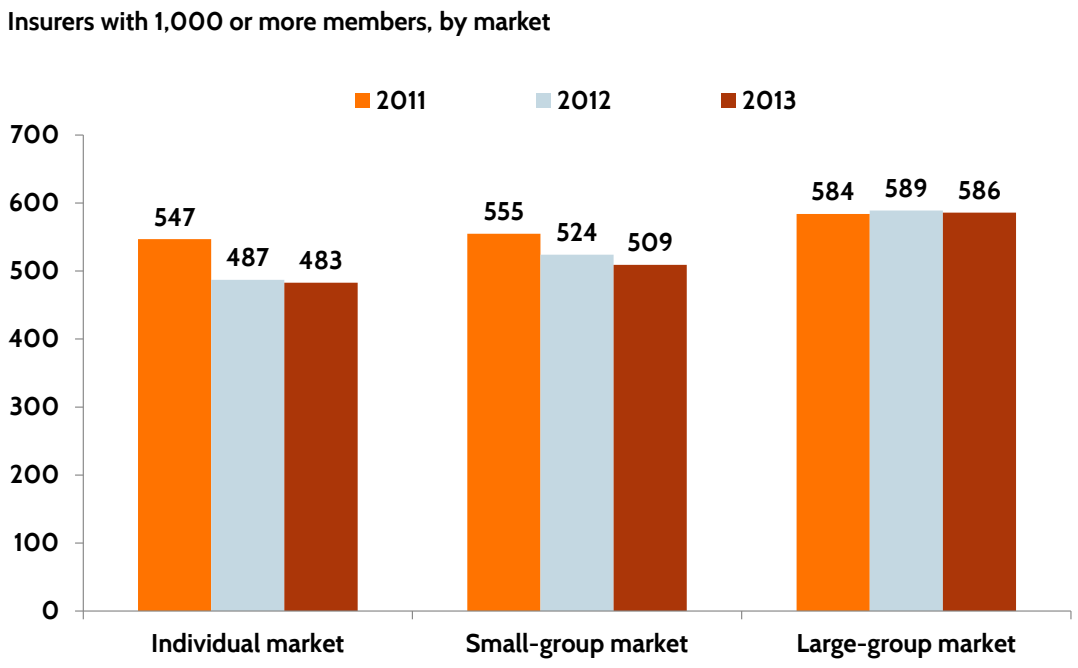
This issue brief revisits these measures in year 3 of the new law to determine the continued impact of the MLR regulation. In 2013, rebates continued to drop, falling to $325 million, which indicates even greater compliance with the MLR standard. Insurer spending on quality improvement remained low, at less than 1 percent of premiums. In year 3 insurers increased overhead by $1.6 billion, but still this was $0.9 billion less than the amount allocated to overhead in 2011. Summing the savings achieved in each year we find that insurers showed a cumulative savings in overhead costs of over $3 billion over these first three years. While it is not known exactly how much of the reduced overhead can be attributed to the new MLR regulation rather than market competition, it is fair to conclude that total consumer benefits related to the MLR amount to more than $5 billion in the first three years due to savings of over $3 billion and almost $2 billion in rebates.

NUMBER OF INSURERS

When the Affordable Care Act was enacted, some critics predicted it would cause an exodus of insurers from the market.[4] To assess this concern, we measured changes in the number of active insurers, either inside or outside the new marketplaces. In this analysis, we only included insurers with 1,000 or more members in a market segment.

From 2011 to 2013, there was a modest contraction but still a substantial number of insurers actively competing (Exhibit 1). Throughout the country in 2013, there were still roughly 500 insurers in each of the individual, small-group, and large-group markets. These numbers reflect modest

Exhibit 1. Number of Credible Health Plans, by Market Segment



Source: Authors' analysis of Centers for Medicare and Medicaid Services medical loss ratio and rebate data.

About This Study

Medical loss ratio data were collected from the Centers for Medicare and Medicaid Services (CMS) Center for Consumer Information & Insurance Oversight (CCIIO) for 2011 through 2013. In computing 2010, we used 2010 National Association of Insurance Commissioners (NAIC) filings since CMS did not collect MLR data in 2010. Data were collected from health insurers in 50 states and Washington, D.C., but not from the territories. The key financial measures were calculated consistent with the NAIC Supplemental Health Care Exhibit.

CMS requires only insurers with "credible" actuarial experience to calculate MLRs and pay rebates. For MLR and rebate analysis, we followed the approach used by CMS, which bases credibility on a three-year aggregate. For simply counting the number of active insurers, however, we included only insurers that had 1,000 members in the particular market segment in order to have a more consistent study sample across multiple years. In calculating financial measures, we included insurers with 100 members or more, in order to capture the experience of insurers that were less active and possibly exiting these markets. We excluded plans with negative or zero values for net premiums earned or net medical claims. Exhibit 3 shows the resulting study sample for the MLR and rebate analysis. For financial measures, we had the following study sample: 1,827 insurers in 2011, 1,589 in 2012 and 1,496 in 2013 (individual market); 1,030 insurers in 2011, 932 in 2012, and 894 in 2013 (small-group market); and 930 insurers in 2011, 846 in 2012, and 854 in 2013 (large-group market).

decreases from 2011 in the individual and small-group markets, where the number of insurers with at least 1,000 members declined 13 percent and 9 percent, respectively.[5]

Some degree of market consolidation is to be expected. The number of insurers has declined steadily for more than a decade as the industry consolidates either through acquisition and merger or because smaller insurers have difficulty competing.[6] Therefore, a modest reduction in the number of insurers does not appear to be strongly related to the Affordable Care Act. Indeed, the ACA's subsidized insurance marketplaces are credited with bringing a significant number of new insurers into the individual market.[7]

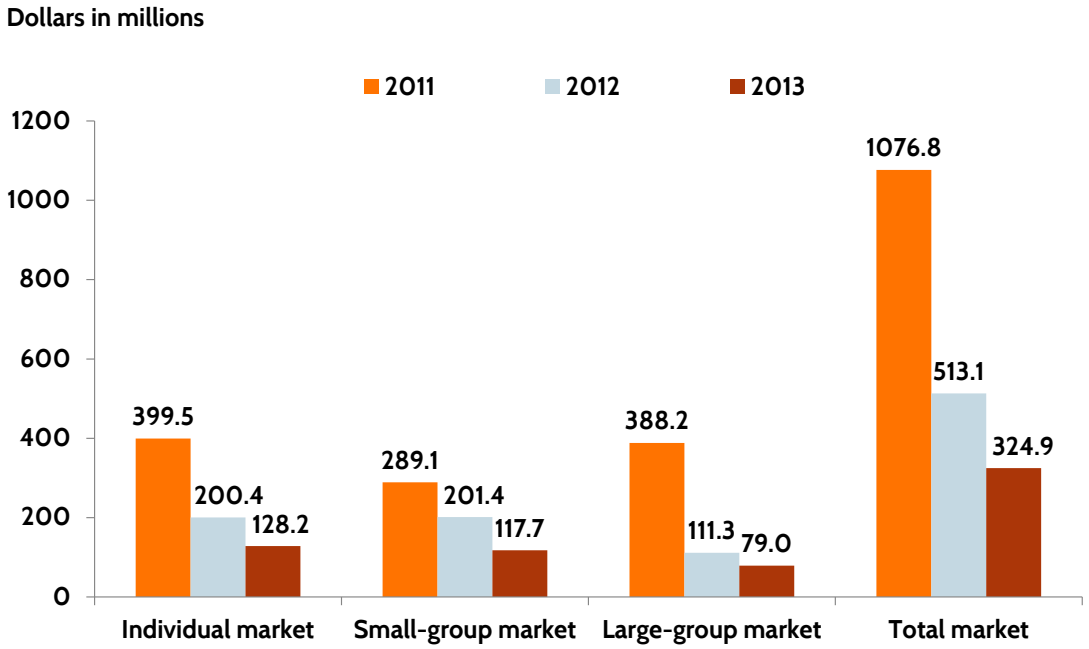
CONSUMER REBATES

Overall, the amount of total rebates that insurers paid to consumers dropped by more than two-thirds from 2011 to 2013—from $1.1 billion to $325 million dollars (Exhibit 2). The reduction is attributable primarily to a decline in the average size of rebates owed in the group markets, rather than a reduced total number of insurers owing rebates (Exhibit 3). In 2011, median rebates ranged from $99 to $116 per member across the three market segments. By 2013, median rebates remained at $100 in the individual market, but dropped to $29 and $61 in the small- and large-group markets, respectively. There was only a modest reduction of between 2 and 7 percentage points in the number of insurers owing rebates (Exhibit 3).

In the individual market, insurers paid $128 million in rebates in 2013, amounting to less than one-half of 1 percent of collected premiums. This is a decline of more than two-thirds from 2011, when they paid out $400 million. Between 2011 and 2013, the median adjusted MLR increased 2.4 percentage points from 82.5 percent to 84.9 percent, indicating that insurers in the individual market are paying out a greater portion of their premiums for medical claims and quality improvement.[8]

In the group markets, the median adjusted MLR has held steady since 2011. Despite this stability in the middle, we see a substantial decline in the amount of rebates owed by insurers that fell below the minimum loss ratios. Total small-group rebates dropped 60 percent from 2011 to 2013,

Exhibit 2. Rebates by Market Segments, 2011–2013



Source: Authors' analysis of Centers for Medicare and Medicaid Services rebate data.

Exhibit 3. Medical Loss Ratios and Rebates by Insurance Market Segment, 2011–2013

	Individual market				Small-group market				Large-group market			
	2011	2012	2013	Change	2011	2012	2013	Change	2011	2012	2013	Change
	n=548	n=655	n=747	2013-2011	n=562	n=622	n=667	2013-2011	n=587	n=663	n=697	2013-2011
Median adjusted MLR	82.5%	84.5%	84.9%	2.4%	84.6%	85.3%	85.0%	0.4%	89.2%	89.6%	89.3%	0.1%
Percent of credible insurers owing rebate	38%	35%	31%	-7%	20%	18%	18%	-2%	18%	15%	13%	-5%
Median rebate per member	$108	$95	$100	-$8	$116	$86	$29	-$87	$99	$57	$61	-$38
Total rebate paid (in millions)	$399.5	$200.4	$128.2	-$271.3	$289.1	$201.4	$117.7	-$171.4	$388.2	$111.3	$79.0	-$309.2

Note: Insurers with actuarial "credibility" are those with enough enrollment to be subject to the MLR rule. Adjusted MLRs are defined in note 8 on page 10.
Source: Authors' analysis of Centers for Medicare and Medicaid Services medical loss ratio and rebate data.

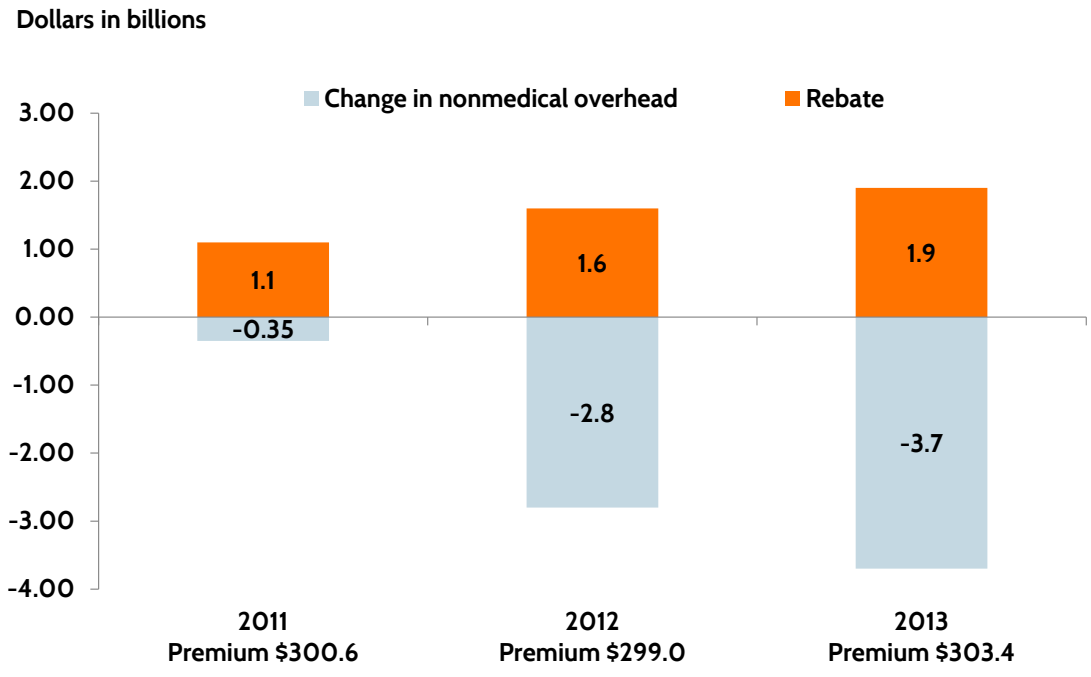
from $289 million to $118 million. Total large-group rebates dropped 80 percent, from $388 million to $79 million. In the small-group market, the proportion of insurers owing rebates has remained steady but the rebate amounts have dropped, indicating that insurers below the MLR minimums are coming closer to being in compliance. In the large-group market, we see declines in both the size of rebates and the number of insurers owing rebates (Exhibit 3).

Insurers' Financial Performance

We next analyzed how key financial performance measures for insurers changed from 2011 to 2013. Previously, we reported that between 2010 and 2011, the first year of the MLR rule, insurers' nonmedical overhead dropped by about $350 million, owing to reduced administrative costs and reduced profits, mainly in the individual market.[9] As shown in Exhibit 4, this initial gain in consumer benefits was retained in the second and third years of the MLR rule. Overall, the amount of premium devoted to medical claims and quality improvement has remained at about 88 percent, meaning nonmedical overhead has been at about 12 percent each of the past three years.

Small percentage changes in nonmedical overhead produced substantial benefits for consumers. The drop in nonmedical overhead of half a percentage point between 2011 and 2012 amounted to a consumer gain of about $2 billion in reduced profits and administrative spending. This is in addition to the consumer gain already achieved in 2011. In 2013, nonmedical overhead increased $1.6 billion. Still, administrative expenses remained $500 million below the 2011 level. The total reduction in overhead reported for 2011, 2012, and 2013 amount to $3.7 billion cumulatively over the three years the MLR rules have been in effect (Exhibit 4). It is impossible to know how much of this reduced overhead is attributable strictly to the new regulation. Nevertheless, the consumer gains related to medical loss ratios amount to over $5 billion dollars, including rebates of almost $2 billion and reduced overhead of over $3 billion.

Exhibit 4. Cumulative Rebate and Nonmedical Overhead Reduction, 2011–2013



Source: Authors' analysis of Centers for Medicare and Medicaid Services medical loss ratio and rebate data.

Quality Expense and Overhead Components

The MLR rule regards expenses for quality improvement as being part of medical claims rather than part of administrative expenses. In 2013, these quality improvement expenses (see Glossary for definition) remained at just under 1 percent of premiums.

We also looked at insurers' expenses for brokers as a component of administrative costs. This issue is significant because some industry observers expect that increasing MLRs will cause insurers to reduce the role of—or compensation for—independent brokers. But broker expenses, which generally amount to about 3 percent of premiums, have dropped only slightly—by 0.2 percentage points overall since 2011 (Exhibits 5 and 6).

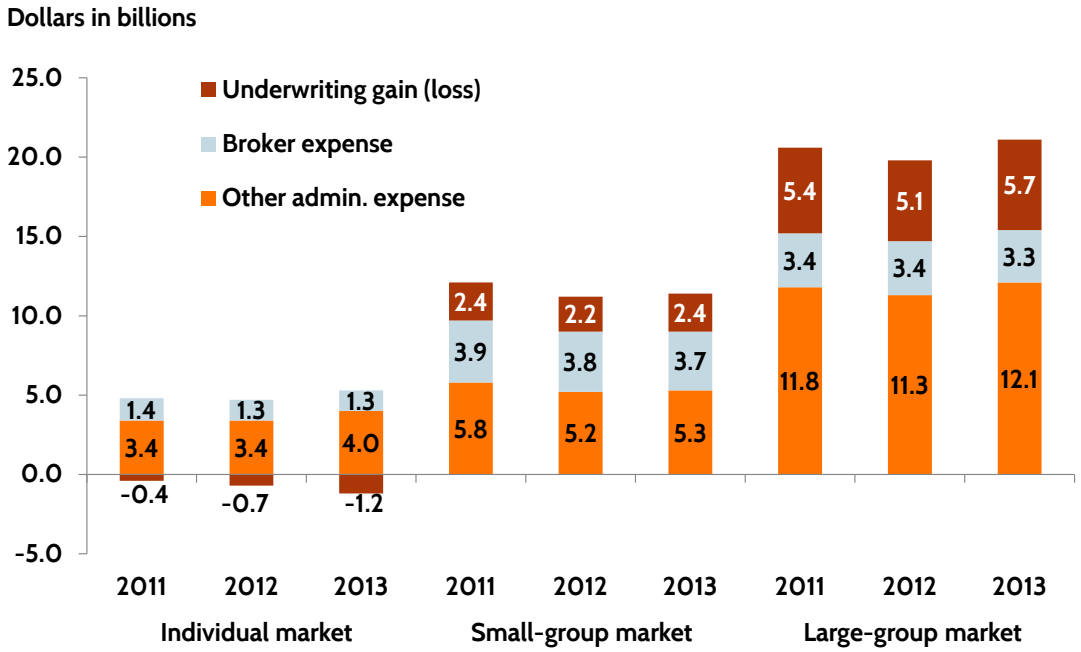
Exhibit 5. Components of Insurance Premiums, 2011–2013

			All markets	
				2013–2011
(in $ billions and % of premium)	2011	2012	2013	% pt. change
Net premium	$300.6	$299.0	$303.4	
Net medical claims	$261.3	$261.5	$264.4	
	86.9%	87.5%	87.1%	0.2%
Quality improvement	$2.2	$2.4	$2.4	
	0.7%	0.8%	0.8%	0.1%
Nonmedical overhead*:	$37.1	$35.0	$36.6	
	12.3%	11.7%	12.1%	–0.2%
Broker expense	$8.7	$8.4	$8.3	
	2.9%	2.8%	2.7%	–0.2%
Other admin. expense	$21.0	$19.9	$21.3	
	7.0%	6.7%	7.0%	0.0%
Underwriting gain/loss	$7.4	$6.8	$7.0	
	2.5%	2.2%	2.3%	–0.2%

* Nonmedical overhead percentage equals sum of broker expense, other admin. expense, and underwriting gain/loss percentages.
Note: Overhead consists of profits plus administrative and sales costs.
See the appendix on page 9 for analysis by markets.
Source: Authors' analysis of National Association of Insurance Commissioners and Centers for Medicare and Medicaid Services medical loss ratio and rebate data.

Finally, insurers' operating profit margins (also known as underwriting gains) have declined only slightly overall—by 0.2 percentage points since 2011 (Exhibits 5 and 6). Modest profit margin decreases in the individual market, where underwriting losses increased from 1.4 percent to 3.8 percent, have been partially offset by modest increases in the small- and large-group markets, where profit margins have risen modestly but remain at about 3 percent (see Appendix).

Exhibit 6. Overhead Components, 2011–2013, by Market



Note: The appendix on page 9 provides total premium and overhead for each column. Overhead consists of profits plus administrative and sales costs.
Source: Authors' analysis of National Association of Insurance Commissioners and Centers for Medicare and Medicaid Services medical loss ratio and rebate data.

CONCLUSION

The new federal regulation of health insurers' medical loss ratios continues to provide substantial consumer benefits in the third year of operation. Total rebates to consumers dropped by two-thirds, from over $1 billion in 2011 to $325 million in 2013, reflecting greater compliance with the MLR rule and meaning that insurers are spending a larger percentage of premium dollars on medical claims. To meet the legal minimums, insurers also reduced their administrative costs without substantially increasing their profits, producing a net reduction in overhead that cumulatively amounted to more than $3 billion over three years. Combined with the total of almost $2 billion in rebates, consumer benefits related to the MLR rule were more than $5 billion in the first three years. Insurers' spending on quality improvement has remained low, at less than 1 percent of premiums, even though the new law allows insurers to count these expenses toward meeting their required minimums.

These consumer gains have not come at the cost of substantially reduced competition or choice among insurers. Although there has been a modest reduction in the number of insurers in the market, this appears to continue a decade-long trend of consolidation. Roughly 500 insurers appear to remain active in both the individual and the group markets across all states. Federal regulation of MLRs appears to be producing significant consumer benefits without causing any substantial harm to the insurance markets.

Glossary

Quality improvement costs are all expenses related to improving the quality of care and include activities in the following categories: improving health outcomes, preventing hospital readmissions, improving patient safety and reducing medical errors, increasing wellness and promotion, and implementing health information technology. Quality improvement expenses are included along with medical expenses in the numerator of the MLR for purposes of calculating rebates owed under the federal regulation.

Overhead refers to the component of premium that is not spent on medical claims or improving quality. It equates simply to the sum of administrative and sales costs plus profit margin.

- **Agent and broker expenses** are usually reported as part of administrative expenses. In this brief we separate out this element.
- **Other administrative costs** are all administrative expenses other than those for agent and broker fees. Included are internal sales expenses, claims adjustment costs, and salary and benefit expenses, as well as all other general corporate overhead costs.
- **Profit margin** is also known as the underwriting gain or loss. It is calculated by subtracting all medical and administrative costs from net premium earned. As such, it does not include profit or loss from investments or taxes on investments. A negative profit margin indicates that medical and administrative costs exceeded premiums.

Appendix: Components of Insurance Premiums, by Markets, 2011–2013

	Individual market				Small-group market				Large-group market			
(in $ billions)	2011	2012	2013	2013–2011 % Pt Chg	2011	2012	2013	2013–2011 % Pt Chg	2011	2012	2013	2013–2011 % Pt Chg
Net premium	$29.1	$29.8	$31.3		$74.9	$73.4	$73.0		$196.6	$195.7	$199.1	
Net medical claims	$24.5	$25.5	$26.9		$62.2	$61.6	$61.0		$174.6	$174.4	$176.5	
	84.2%	85.6%	85.9%	1.7%	83.0%	83.9%	83.6%	0.6%	88.8%	89.1%	88.6%	-0.2%
Quality improvement	$0.2	$0.3	$0.3		$0.6	$0.6	$0.6		$1.4	$1.5	$1.5	
	0.7%	1.0%	1.0%	0.3%	0.8%	0.8%	0.8%	0.0%	0.7%	0.8%	0.8%	0.1%
Nonmedical overhead*:	$4.4	$4.1	$4.1		$12.1	$11.2	$11.3		$20.6	$19.8	$21.2	
	15.1%	13.8%	13.1%	-2.0%	16.1%	15.3%	15.5%	-0.6%	10.5%	10.1%	10.6%	0.1%
Broker expense	$1.4	$1.3	$1.3		$3.9	$3.8	$3.7		$3.4	$3.4	$3.3	
	4.8%	4.4%	4.2%	-0.6%	5.2%	5.2%	5.1%	-0.1%	1.7%	1.7%	1.7%	0.0%
Other admin. expense	$3.4	$3.4	$4.0		$5.8	$5.2	$5.3		$11.8	$11.3	$12.1	
	11.7%	11.4%	12.8%	1.1%	7.7%	7.1%	7.3%	-0.4%	6.0%	5.8%	6.1%	0.1%
Underwriting gain (loss)	($0.4)	($0.7)	($1.2)		$2.4	$2.2	$2.4		$5.4	$5.1	$5.7	
	-1.4%	-2.0%	-3.8%	-2.4%	3.2%	3.0%	3.3%	0.1%	2.7%	2.6%	2.9%	0.2%

* Nonmedical overhead percentage equals sum of broker expense, other admin. expense, and underwriting gain/loss percentages.

Source: Authors' analysis of National Association of Insurance Commissioners and Centers for Medicare and Medicaid medical loss ratio and rebate data.

NOTES

[1] The small-group market currently consists of employers with 50 or fewer workers, but in 2016, this market segment will expand to include groups of up to 100 workers.

[2] M. J. McCue and M. A. Hall, *Insurers' Responses to Regulation of Medical Loss Ratios* (New York: The Commonwealth Fund, Dec. 2012).

[3] M. J. McCue and M. A. Hall, *The Federal Medical Loss Ratio Rule: Implications for Consumers in Year 2* (New York: The Commonwealth Fund, May 2014). In this study, we report an even greater reduction in nonmedical overhead for 2012, based on a more consistent measure of premium revenue.

[4] For instance, R. Epstein, "Unmanageable Competition," *Forbes,* Nov. 24, 2009.

[5] In this snapshot, we did not investigate whether these enrollment drops were large or miniscule for each insurer or whether these insurers remained somewhat active in the market or withdrew entirely. Also, note that some changes in insurer counts, both increases and decreases, can occur simply because an insurance holding company with various subsidiaries either consolidates or increases the number of subsidiaries. Also, since 2012, new insurers have entered the individual market in several states as part of their new insurance exchanges. See C. Cox G. Claxton, L. Levitt et al., *An Early Look at Premiums and Insurer Participation in Health Insurance Marketplaces, 2014* (Menlo Park, Calif.: Kaiser Family Foundation, Sept. 2013). Therefore, our coarse measure does not perfectly reflect the level of effective competition in a state. Nevertheless, it gives a rough indicator of any major changes nationally.

[6] J. C. Robinson, "Consolidation and the Transformation of Competition in Health Insurance," *Health Affairs,* Nov. 2004 25(6):11–24; U.S. Government Accountability Office, *Concentration of Enrollees Among Individual, Small-Group, and Large-Group Insurers from 2010 through 2013* (Dec. 2014); and D. Andrew Austin and T. L. Hungerford, *The Market Structure of the Health Insurance Industry* (Washington, D.C.: Congressional Research Service, 2009).

[7] U.S. Department of Health and Human Services, *Health Plan Choice, Premiums and Affordability in the 2015 Health Insurance Marketplace* (Washington, D.C.: DHHS, Dec. 2014); McKinsey Center for U.S. Health System Reform, *Emerging Exchange Dynamics: Temporary Turbulence or Sustainable Market Disruption?* (New York: McKinsey and Company, 2013); and J. Holahan, R. Peters, K. Lucia et al., *Cross-Cutting Issues: Insurer Participation and Competition in Health Insurance Exchanges: Early Indications from Selected States* (Washington, D.C.: Urban Institute, July 2013).

[8] In calculating the MLR for rebate purposes, the federal rule allows insurers to make various adjustments. Insurers with fewer than 75,000 members and those that have high deductibles (i.e., greater than $2,500) may increase their calculated MLR under a formula that takes into account greater actuarial predictability for smaller pools and lower claims for high-deductible plans. In addition, we only included rebates from insurers within 50 states but not U.S. Territories, so there may be slight underreporting of rebates.

[9] McCue and Hall, *Insurers' Responses to Regulation of Medical Loss Ratios*, 2012.

About the Authors

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TAX REFUNDS AND AFFORDABLE CARE ACT RECONCILIATION

Len Burman, Gordon Mermin, and Elena Ramirez

March 31, 2015

ABSTRACT

People may purchase subsidized health insurance through the ACA exchanges with premiums based on projected future income. However, if actual income is higher than estimated, they may be required to repay part or all of the subsidy when they file tax returns. This "reconciliation" process could raise taxes substantially for many ACA participants. However, analysis of income tax return data suggests that for most lower-income filers, the reconciliation will reduce the refund they receive rather than require them to remit additional tax because their refunds exceed the reconciliation amount. We conclude by making suggestions to improve the reconciliation process.

We thank Stan Dorn, Elaine Maag, Tara Straw, and Eric Toder for helpful comments and advice.

The findings and conclusions contained within are those of the author and do not necessarily reflect positions or policies of the Tax Policy Center or its funders.

The Patient Protection and Affordable Care Act (ACA) subsidizes health insurance purchased through the newly created health insurance exchanges, or health insurance marketplaces, for low- and middle-income households who aren't offered qualifying health insurance plans through an employer. The subsidies, which are delivered in the form of tax credits, are based on income in the tax year in which the premiums are paid and calculated when the taxpayer files her income tax return. However, most participating households receive their tax credits in advance in the form of a reduction in the insurance premium they would otherwise pay. Calculation of this reduced premium is based on an estimate of income in the year of coverage. This estimated income is typically based on income reported on the last tax return filed prior to enrolling for the insurance.

Because annual income is highly variable, many families will either qualify for larger credits or be required to repay part or all of the advance credit when they file their tax return, based on whether actual income is higher or lower than projected. Some tax filers could owe a substantial amount of additional tax as part of this reconciliation process.

Health insurance purchased through the exchanges is subsidized for taxpayers with incomes up to 400 percent of the federal poverty level (FPL), which was $46,680 for singles and $95,400 for a family of four in 2014. (See Table 1.) The subsidies make coverage more affordable by capping spending on health insurance premiums as a share of income for consumers who buy a "benchmark" plan. Net premium contributions range from a low of 2 percent of income for families at the poverty threshold to 9.5 percent of income for families with incomes between 300 and 400 percent of poverty.[1] Families with incomes below the poverty threshold are not generally eligible for the premium tax credit (PTC)[2] although many are covered by Medicaid. In states that opted to expand Medicaid coverage in response to the ACA incentives, most individuals with incomes up to 138 percent of FPL are covered by Medicaid and thus ineligible for tax credits.[3]

The maximum premium contribution assumes that households purchase the second least expensive Silver plan among the menu of Bronze, Silver, Gold, and Platinum health insurance plans offered through the exchanges. People who buy less expensive plans generally have to contribute even less to premiums (although they may face substantially higher out-of-pocket

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[1] Those percentages increase slightly after 2014 based on changes to premiums and income nationally. For 2015, for example, households with incomes below 133 percent of FPL pay 2.01 percent of income, rather than 2.0 percent; those at 133 percent FPL pay 3.02 percent, rather than 3.00 percent; etc. IRS, Rev. Proc. 2014-37 (26 CFR 601.105: Examination of returns and claims for refund, credit, or abatement; determination of correct tax liability), July 24, 2014, http://www.irs.gov/pub/irs-drop/rp-14-37.pdf.

[2] The exception is certain legal immigrants who are not eligible for Medicaid by virtue of their immigration status are eligible for ACA subsidies. In addition, people who were determined eligible for the PTC and received an Advanced Premium Tax Credit for at least one month in 2014 before their income fell below the poverty threshold may continue to claim the credit for that year. See Center on Budget and Policy Priorities, "Premium Tax Credits: Answers to Frequently Asked Questions," July 2013. Available at: http://www.cbpp.org/files/QA-on-Premium-Credits.pdf .

[3] See Henry J. Kaiser Family Foundation, "How Will the Uninsured Fare Under the Affordable Care Act?", April 7 2014. Available at http://kff.org/health-reform/fact-sheet/how-will-the-uninsured-fare-under-the-affordable-care-act/.

costs) and those who opt for more generous health insurance plans must cover a larger share of premiums.

TABLE 1. MAXIMUM PREMIUM CONTRIBUTION* (AFTER CREDITS) FOR SINGLES AND FAMILIES OF FOUR BY INCOME LEVEL IN 2014

Income as Percentage of Federal Poverty Level (FPL)	Premium as Percentage of Income	Single		Family of Four	
		Income in Dollars	Maximum Premium	Income in Dollars	Maximum Premium
100	2	11,670	233	23,850	477
133	3	15,521	466	31,721	952
150	4	17,505	700	35,775	1,431
200	6.3	23,340	1,470	47,700	3,005
250	8.05	29,175	2,349	59,625	4,800
300	9.5	35,010	3,326	71,550	6,797
399	9.5	46,563	4,424	95,162	9,040
400	no limit	46,680	No Limit	95,400	No Limit

**Based on purchase of second least expensive Silver plan offered through a health insurance exchange.*

The exact amount of PTC depends on the particular situation of the family—how large it is, the age of family members, and the cost of health insurance in their particular location. Families with older parents, for example, or who live in high-cost areas, face higher premiums and thus qualify for larger credits. Figure 1 illustrates the size of the premium credit for a family of four in Washington, DC, headed by 45- and 40-year old parents with two children under the age of 21. Before credits, the second least expensive Silver plan had a premium of $10,272 per year in 2014.[4] A family with income equal to 100 percent of the FPL would qualify for a tax credit of $9,795 in DC. (In DC, this could apply only to a non-citizen family since others at this income level are eligible for Medicaid.) The PTC declines to $1,209 for the family as its income approaches the 400 percent of FPL limit for credit eligibility.

As noted, families whose incomes or family composition change will generally qualify for a different tax credit than they claimed in advance. Families can limit discrepancies by updating their information with the health insurance exchange so that Advance Payment of Tax Credit (APTC) amounts change when incomes fluctuate. IRS researchers estimated that only 2 percent of households would see no change in their PTC if they claimed an advance credit based on prior

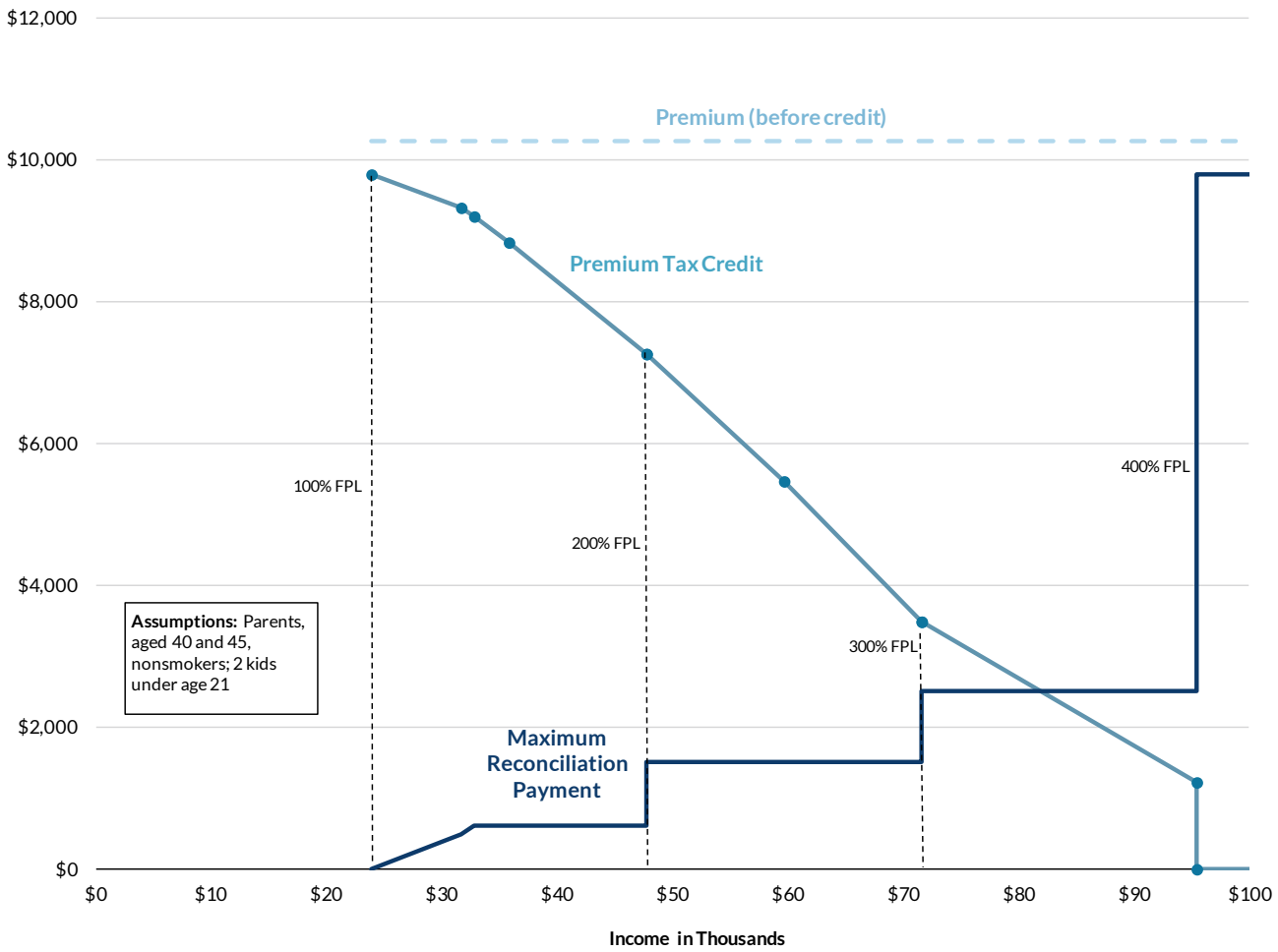
[4] This is calculated based on the premiums listed on the DC Health Link website. The 45-year old faced a premium of $292 per month; the 41-year old, $242; and each child cost $162. This yields a total monthly premium of $856, or an annual premium of $10,272. See http://dchealthlink.com/sites/default/files/forms/2014_SLCSP_Listing%28v3_2-28-14%29.pdf.

year's income (based on income data for 2010 and 2011).[5] Half would have to repay part or all of the credit and slightly less than half (48 percent) would qualify for additional credits.

Ken Jacobs and coauthors used data from the Survey of Income and Program Participation calibrated to match the demographic characteristics of the population of households eligible for the PTC in California.[6] The population of low- and middle-income households has very volatile incomes.

> Nearly three-quarters (73.3 percent) of the predicted subsidy recipients were in families with [year to year] income changes of more than 10 percent… Of those recipients, 37.8 percent had large income increases, while 35.5 percent had large decreases. Thirty percent of recipients were in families whose income increased more than 20 percent, and 18.9 percent had income increases of more than 40 percent. (p. 1541)

FIGURE 1. PREMIUM TAX CREDIT AND MAXIMUM RECONCILIATION PAYMENT FOR HYPOTHETICAL FAMILY OF FOUR IN DC, BY INCOME, 2014



[5] Brian Erard, Emily Heys, Brock Ramos, Layne Morrison, and Robert Mueller, "Return-Based Affordable Care Act Microsimulation Model: Projecting the Impact of ACA Tax Provisions on Taxpayers and the IRS," June 19, 2014. Available at http://www.irs.gov/pub/irs-soi/14resconsession4.pdf (p. 47).

[6] Ken Jacobs, Dave Graham-Squire, Elise Gould, and Dylan Roby, 2013, "Large repayments of Premium Subsidies may be Owed to the IRS if Family Income Changes are not Promptly Reported," *Health Affairs*, 32(9):1538–1545.

Fortunately for most households with large income increases, the maximum reconciliation payment is limited. The maximum addition to tax is capped at $300 in 2014 for single filers with incomes at or below 200 percent of FPL. (See Table 2.) As incomes rise, the maximum repayment amount increases: $750 for families with incomes between 200 and 300 percent of FPL and $1250 for those with incomes between 300 and 400 percent. The limits are twice as high for married filers and heads of household.

However, families whose incomes are above 400 percent of FPL must repay their entire APTC. In DC, a non-citizen immigrant family that expected to have income at 100 percent of FPL but actually had income over 400 percent could owe as much as $9,795 in additional tax on their 2014 income tax return.[7] A family whose projected income was 200 percent of FPL but whose actual income was above the 400 percent FPL eligibility threshold could owe $7,267 (the tax credit for families at 200 percent of FPL).

TABLE 2. AVERAGE TAX REFUND BY INCOME GROUP COMPARED WITH MAXIMUM ACA RECONCILIATION

Household Income as Percentage of Poverty Level	Maximum Reconciliation Payment (in Dollars)	Percentage of Returns with Refunds	Average Refund (in Dollars)	Percentage of Refunds Exceeding Limits
Non-single Filers				
Less than 200	600	92	4,434	86
200-299	1,500	86	3,240	62
300-399	2,500	83	3,436	42
400 and over	unlimited	71	7,644	N/A
Single Filers				
Less than 200	300	82	1,397	70
200-299	750	81	1,375	53
300-399	1,250	83	1,732	42
400 and over	unlimited	75	4,441	N/A

Source: Tax Policy Center computations based on the 2008 Internal Revenue Service Public Use File, inflated to $2014 using the CPI

Jacobs, et al., estimated that 1 percent of credit-eligible families in California with income of 100 percent of FPL or less in 2018 would have incomes over 400 percent of FPL in 2019; 6 percent with incomes between 201 and 250 percent and 19 percent with incomes between 251 and 400 percent of FPL in 2018 would ultimately find themselves ineligible and be required to repay in full any APTC.

[7] $9,795 is the PTC assuming income at 100 percent of FPL. See Figure 1.

All told, Jacobs, et al., estimate that about 38 percent of people who qualify for advance credits would owe additional tax if they do not report changes in income or family status over the course of the year. This is less than the IRS estimate primarily because Jacobs, et al., assume that credit recipients will use the most recent income information available—not simply prior year tax returns—to project income when enrolling in an exchange. The percentage owing reconciliation payments would be even lower if families report income changes during the year.

The estimates from Jacobs and colleagues involve people who *qualify* for credits, not those who *receive* the APTC. To illustrate the difference, suppose that APTC take-up rates are highest among eligible households who qualify for the deepest subsidies because they have the lowest incomes when they apply for the APTC. Because such households are less likely than others to see their final annual incomes exceed 400 percent FPL, fewer APTC beneficiaries would owe large amounts than the percentages estimated by Jacobs and colleagues. We will not know actual reconciliation totals until long after tax filing season.

For the families who do not report income changes (and adjust premium subsidies), the additional tax arising from reconciliation could be a substantial hardship. However, most lower-income households are likely to have large enough income tax refunds to cover the maximum reconciliation payment. In 2008, the latest year for which a public use file is available from the IRS, 86 percent of married filing joint households with incomes below 200 percent of the FPL received refunds, which averaged almost $4,500 in 2014$. (See Table 2.) We estimate that 77 percent would have large enough refunds to cover the maximum reconciliation payment of $600.[8] Almost 80 percent of singles in that income category would have large enough refunds to cover reconciliation, should it occur.

The adequacy of refunds to cover reconciliation declines as income increases. About 60 percent of households with incomes between two and three times the FPL have a refund large enough to cover the maximum possible reconciliation payment, and less than half of those with incomes between three and four times FPL are in that situation. This is because the likelihood of having a refund falls as income rises and also because the average refund does not increase as fast as the maximum reconciliation payment (and indeed is somewhat smaller for families with incomes between 200 and 400 percent of poverty than for families with lower incomes). Fortunately, families with higher incomes are also more likely to have savings that they can use to pay an unexpected tax bill.

[8] Note that these projections rest on a number of assumptions, including that refunds and incomes for those eligible for credits grow with the consumer price index, and that those who purchase insurance in exchanges do not have systematically higher or lower refunds than otherwise similar households who have other insurance coverage. One concern is that self-employed people might be especially likely to purchase health insurance through the exchanges. For example, if their estimated tax payments are lower than typical W-2 withholdings, they would have smaller refunds and be more likely to owe tax in excess of their reconciliation. Self-employed people might also have especially volatile incomes and thus be more likely to face a substantial reconciliation payment. Many self-employed people also qualify for additional assistance, since they can deduct from self-employment income any Qualified Health Plan premium payments that are not covered by PTC. For those reasons, these estimates should be considered illustrative.

However, it is likely that reconciliation will present a hardship for some families who claimed the APTC even if they do not have a net tax payment due. Many low-income households rely on refunds to meet pressing needs—treating their over-withholding of tax as a form of saving.[9]

Quincy, Kleimann, and Kingsley recommend a consumer education campaign to explain the possible consequences of reconciliation.[10] In testing, they found that about half of participants would elect to take the tax credit on their income tax return rather than as an advance credit. (They also concluded that participation would be higher if more middle-income people knew that they might be eligible for credits.)

However, many low- and moderate-income uninsured who qualify for tax credits lack the room in household budgets needed to pay a year's insurance premiums, based on the expectation of financial assistance on their next tax return. Affordability appeared to be the most important factor limiting participation among uninsured consumers who examined Marketplace options in 2014 and chose not to sign up.[11]

One option to address this problem would be to end reconciliation altogether for households whose incomes are higher than the good-faith projections that they made at the time of enrollment. This would make the ACA more comparable to other means-tested transfer programs where benefits are not rescinded retroactively when income rises between reporting periods. Medicare Parts B and D, federally-funded college student aid, and 2008 tax stimulus payments made to individuals through the tax code, all base current-year subsidies on prior-year incomes. If current income declines, beneficiaries can seek additional aid. If income rises, there is no "claw back" of current-year payments through reconciliation.[12] This approach provides certainty. However, changing the ACA's PTC to fit this more generous model would increase the cost of the program A somewhat less expensive option would be to reduce the limits on repayment to the levels originally specified in the ACA—a flat $250 for individuals and $400 for families whose incomes remain below 400 percent of FPL.[13]

An even more modest option would be to allow tax filers who made a good-faith estimate of annual income at the time they claimed the APTC the option of doing monthly reconciliation

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[9] Ruby Mendenhall, Kathryn Edin, Susan Crowley, Jennifer Sykes, Laura Tach, Katrin Kriz, and Jeffrey R. Kling, "The Role of Earned Income Tax Credit in the Budgets of Low-Income Families," *Social Service Review*, volume 86 issue 3, February 2012.

[10] Lynn Quincy, Susan Kleimann, and Barbra Kingsley, "Helping Consumers Understand the New Premium Tax Credit," Consumers Union, May 2013. Available at http://consumersunion.org/wp-content/uploads/2013/05/Understanding_The_Premium_Tax_Credit.pdf.

[11] Dorn, S., *Affordability of Marketplace Coverage: Challenges to Enrollment and State Options to Lower Consumer Costs*, December 2014, Washington, DC: Urban Institute, http://www.urban.org/UploadedPDF/2000039-Affordability-of-Marketplace-Coverage.pdf.

[12] Dorn, S., *Implementing National Health Reform: A Five-Part Strategy for Reaching the Eligible Uninsured*, May 2011, Washington, DC: Urban Institute, http://www.urban.org/UploadedPDF/412335-Reaching-the-Eligible-Uninsured.pdf; Dorn, S., *Express Lane Eligibility and Beyond: How Automated Enrollment Can Help Eligible Children Receive Medicaid and CHIP*, April 2009, Washington, DC: Urban Institute and National Academy for State Health Policy, http://www.urban.org/UploadedPDF/411879_eligible_children.pdf.

[13] Both the Medicare and Medicaid Extenders Act of 2010 and the Comprehensive 1099 Taxpayer Protection and Repayment of Exchange Subsidy Overpayment Act of 2011 increased the limits on repayment of premium credits when income increases.

on their income tax returns if their incomes exceed projections. This would be somewhat complex as filers would have to compute income for every month in the tax year and compare monthly subsidies claimed to the amount to which they would be entitled based on their income in that month. This would especially help filers whose incomes unexpectedly rise at the end of the year because of a windfall (say, an award in a lawsuit or a bonus payment at work). A filer whose income increased dramatically at the end of the year might owe back the entire subsidy claimed in the last month or two, but would no longer face the risk of having to repay the entire year's subsidy.

These changes would require legislation, which seems unlikely given the current political impasse over the ACA. The IRS, however, could help some taxpayers to avoid large reconciliation payments by modifying the form W-4, which every employee is required to fill out at the start of employment, to encourage employees to report changes in income—and health insurance coverage status—to the ACA exchange. HR departments could also be advised to inform new employees that a new job may change their eligibility for subsidies under the ACA.

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The New Bipartisan Consensus for an Individual Mandate

Linda J. Blumberg and John Holahan

April 2015

In Brief

The individual responsibility requirement, most often referred to as the individual mandate, included in the Affordable Care Act (ACA) has perhaps been the most controversial feature of the law since its passage. It requires most Americans to maintain minimum essential coverage (as defined in the ACA) or pay a tax penalty. The ACA includes the individual mandate to avoid the consequences of individuals waiting until they are sick or injured to obtain coverage, because the act also prohibits insurers from discriminating against those with health problems. If people did not enroll in coverage until they knew they would need care, premiums would increase tremendously and health insurance markets could become unstable. Although those opposing the ACA have decried the burdensome nature of such a mandate, a recent proposal (the Patient Choice, Affordability, Responsibility, and Empowerment Act, or PCARE) developed by Republican Senators Orrin Hatch and Richard Burr and Representative Fred Upton seeks to address the same problem as the ACA's mandate and would impose strong penalties on the uninsured. Specifically, if individuals fail to maintain continuous coverage, they can be medically underwritten or effectively denied insurance in the nongroup market. Medicare Parts B and D also have provisions that penalize individuals for failing to promptly enroll in coverage for the same reason, yet this approach to an individual mandate has not been controversial. With the PCARE proposal, there now seems to be at least some agreement across the political spectrum that insurance markets cannot effectively operate while simultaneously treating individuals equitably regardless of health status (e.g., covering pre-existing conditions, no medical underwriting) if the healthy can obtain coverage whenever they choose. The consensus also appears to be that strong incentives to obtain and maintain insurance are required, although the details differ across the ACA, PCARE, and Medicare Parts B and D. Only the ACA is popularly referred to as an individual mandate, although that is, in fact, what all of them include.

Introduction

With the Patient Choice, Affordability, Responsibility, and Empowerment Act (PCARE) introduced by Republican Senators Orrin Hatch and Richard Burr, together with Congressman Fred Upton, it is now clear

that there is at least some bipartisan agreement on the need for an individual mandate for health insurance. Although the official description of the PCARE proposal includes language indicating strong objection to the individual responsibility requirement of the Affordable Care Act (ACA), the proposal uses different types of penalties intended to bring most Americans into the health insurance pool and keep them there.[1] According to the authors, "Unlike the individual mandate which unfairly forces Americans to buy insurance or face financial penalties, these alternative provisions strike the right balance between strongly encouraging individuals to become insured, while ensuring greater regulatory predictability and market stability, which in turn helps to keep health care costs down." The individual mandate referenced is the ACA's requirement that individuals be enrolled in minimum essential coverage during a given year or pay a tax penalty if they are uninsured for more than three months and do not qualify for an exemption.[2] However, PCARE's approach imposes financial penalties on uninsured people as well; the method for imposing the penalties, their size, and the types of people exempt are where the differences in its individual mandate lie as compared to the ACA's. The Medicare program has also created a type of individual mandate in Parts B and D, again with the same intent as the ACA and PCARE, but differing in the particulars of the mechanism, size, and exemptions.

Patient Choice, Affordability, Responsibility, and Empowerment Act

PCARE would provide a one-time open enrollment period. After that it would require individuals to have continuous private coverage for at least 18 months in order to have guaranteed issue of private insurance *without* being medically underwritten. For those who have a gap in coverage (the document suggests that a permissible length of a gap in insurance would be defined consistent with the Health Insurance Portability and Accountability Act, which is 63 days), the penalty is that insurers can use medical underwriting to set premiums as a function of current or past health experience; outright denials would also be allowed, at least between annual open enrollment periods.[3] Although the wording is unclear, it seems that the approach would require insurers to offer a policy to all applicants during the open enrollment period; however, the proposal would not limit the premiums that could be charged to those not having 18 months of continuous coverage prior to applying, and thus insurers would be allowed to effectively deny coverage by setting prices prohibitively high.

No time limits on medical underwriting are noted in the document describing the PCARE proposal, nor does it mention whether re-underwriting would be permitted, but it is certainly possible that the higher rates could persist until the age of Medicare eligibility (65), depending upon an individual's circumstances. As an illustration, consider an individual with a gap in private coverage of more than 63 days who applies for nongroup insurance and is denied coverage or charged a premium so high that it is unaffordable. If that person cannot gain access to 18 months of affordable creditable coverage, where at least the last type of coverage held was employer-based insurance,[4] there appears to be no mechanism for him or her to eventually obtain insurance in the nongroup insurance market. Even if this person was guaranteed issue of a policy during the next annual open enrollment period or some type of special enrollment period for which he or she might be eligible, there is no provision that would limit the premium that this person could be charged, thereby denying him or her coverage for all practical purposes. Given the income fluctuations of the low- and moderate-income population and the challenging circumstances that can arise over the course of one's life, particularly in the case of individuals facing health challenges, it is entirely possible that large numbers of people could find themselves without insurance for a few months at one time or another, and then never again have access to adequate, affordable insurance.

The Affordable Care Act

In contrast, the consequences of going uninsured for more than three months under the Affordable Care Act is a tax penalty for that year, with guaranteed issue of coverage, including essential health benefits and meeting actuarial value standards, again available at the next annual open enrollment period without premium discrimination based on health status. The tax penalties are the greater of a flat dollar amount and a percentage of family income, prorated for the number of months uninsured (details provided in the matrix below) and not to exceed the national average cost of bronze-level coverage. Under the provisions of both the ACA and PCARE, the individual must have coverage or pay a penalty; the size of the penalty, the method of its delivery, and which individuals are exempt from it are what differ. The PCARE proposal is not being referred to as an individual mandate, but it is one in all but name.

Medicare Parts B and D

Similar rules hold in Medicare Part B (public insurance for physician services) and Part D (public insurance for prescription drug expenses), programs available to persons age 65 and older and certain disabled persons. Individuals who do not sign up for Part B upon becoming eligible pay a penalty of 10 percent of the regular Part B premium for each 12-month delay in enrolling, with the penalty assessed for the rest of their lives while enrolled, once they do ultimately enroll.[5] In Part D, a penalty for late enrollment is also imposed via the premium, equal to 1 percent per month that the individual is without qualified prescription drug coverage; again, this penalty is imposed for the rest of the person's life while he or she is enrolled. Similarly, under both programs, penalties are assessed on those who enroll, disenroll, and then enroll again.

Comparing the Alternative Types of Individual Mandate

The ACA, PCARE, and Medicare all include significant financial penalties for individuals who do not enroll in and maintain health insurance coverage, and they all do so for exactly the same reason. If individuals can enroll in coverage at the same price and with the same benefits whenever they choose, they would wait until they were sick or injured and needed medical care before obtaining coverage. Healthy individuals would have no reason to enroll, and the average health care costs of those insured would skyrocket along with premiums paid by enrollees (and/or government in the case of publicly subsidized plans). In fact, the concentration of high-cost individuals in insurance pools could accelerate and destabilize the markets, likely leading to their eventual collapse in the case of private insurance or the need for substantially more government financing per enrollee in the case of publicly subsidized insurance.

Thus, providing adequate, accessible insurance regardless of health status in the context of private insurance markets ultimately requires an approach that provides sufficiently strong incentives for individuals to enroll and remain enrolled, even when they do not expect to use medical care. PCARE recognizes this problem, as did the architects of the ACA and Medicare Parts B and D.

Referring to the ACA's individual responsibility requirement as an "individual mandate" suggests that it requires individuals to obtain coverage, although that is not the case. Individuals can choose between enrolling in coverage and paying a penalty, a year-by-year choice under the ACA but a one-time choice under PCARE and Medicare Parts B and D. The differences, as noted earlier, are in the details of the penalties' structures, shown in the following matrix:

Penalty Structures by Insurance Coverage Type

	Affordable Care Act	PCARE	Medicare Parts B and D
How and when is penalty delivered?	■ Via tax system, when income taxes are filed ■ Penalty applies to periods of uninsurance in that tax year only	■ Via medically underwritten premiums or denial of access to insurance ■ Penalty applies indefinitely unless individual enrolls in at least 18 months of continuous creditable coverage, where at least last type held is via an employer	■ Via surcharges on premiums for these programs if the individual eventually enrolls ■ Penalty applies for the remainder of life, unless individual disenrolls and remains disenrolled from the programs
How large is penalty?	■ Phases up to full level by 2016, then adjusted by the Consumer Price Index thereafter. Prorated for number of months uninsured ■ Greater of a flat dollar amount or share of income. In 2016 these will be 2.5 percent of income, or $695 per uninsured adult, $347.50 per uninsured child, to a maximum of $2,085 per family; penalty not to exceed national average premium for bronze coverage sold through Marketplaces ■ Penalty is thus larger for higher incomes but does not vary by health status ■ Individual can enroll in coverage at standard rates and face no further penalty during next open enrollment period or special enrollment period.	■ Varies by individual, based upon health and eventual coverage: smallest penalties for the healthy and those able to obtain 18 months of continuous coverage and largest for sick and injured and those without any access to employer-based insurance ■ Amount of extra premium charged to obtain medically underwritten coverage (this amount varies by health circumstances), applied indefinitely until a period of 18 months of continuous coverage allows individual to purchase nonunderwritten coverage ■ Effectively, penalty would range from $0 for those who eventually enroll in coverage but who are perfectly healthy and can obtain standard rates, to a permanent inability to access coverage, due to sufficiently large premium add-on and lack of 18 months of continuous creditable coverage ■ Penalty may also include the cost of care for excluded benefits, or, depending upon the person's financial situation, the inaccessibility of necessary medical care	■ Varies by length of time between eligibility and enrollment and length of time coverage is held upon enrollment (i.e., length of life remaining) ■ A percentage of premium, and will therefore increase over time as premiums increase ■ The Part B penalty is 10 percent of premium for each 12-month period that the individual could have enrolled in Part B but did not. For example, in 2015, the premium for most Medicare eligibles is $104.90 per month. Delaying enrollment by three years would mean a 2015 penalty of $378, with the penalty applied each year of enrollment and increasing annually with the premium. ■ Part D penalty is an extra 1 percent of the Part D premium for each month without coverage, calculated off the national base beneficiary premium ($397.56 in 2015). So a person who delayed enrollment by three full years would pay a penalty of $143 in 2015, with the penalty applied each year of enrollment and increasing annually with the national base premium.
Which uninsured are exempt from penalty?	Those who are uninsured for fewer than three months; with incomes below tax filing threshold; unable to obtain qualified coverage for less than or equal to 8 percent of family income; incarcerated; not legally present in the country; members of Indian tribes; with certified religious objections or membership in a health care sharing ministry; facing other hardships as determined by the Secretary.	Those who are uninsured with insurance coverage gaps shorter than 63 days; enrolled in continuous coverage for at least 18 months prior to attempting to enroll in nongroup coverage (including employer coverage as at least the last type) and not needing medical care before then; in perfect health who are thus not subject to denials or increased premiums due to medical underwriting.	Those who never purchase Part B or Part D coverage and do not face significant medical costs that they must alternatively finance out-of-pocket.

Note: PCARE = Patient Choice, Affordability, Responsibility, and Empowerment Act.

For individuals unable to access the required amount and type of continuous coverage in a timely manner and for those in less than perfect health, PCARE penalties are much harsher and longer lasting than those imposed under the ACA. The penalties can last until Medicare eligibility depending upon an individual's circumstances, and they are larger for those in worse health status. PCARE restrictions could mean denial of coverage outright or effective denial through unaffordable premiums, denial of coverage for particular benefits related to the individual's health conditions, or extra premium charges that are incurred by those who do enroll. However, given pre-ACA variation in nongroup insurance premiums, the higher premiums charged those in less-than-perfect health would, at least for some, be considerably greater than the penalties individuals are subject to under the ACA, and the ACA provides opportunities within a calendar year to obtain affordable coverage and/or end the imposition of the penalties.

Penalties in Part B and Part D also last longer than the ACA, but may be larger or smaller in size depending upon length of time prior to enrollment and length of remaining life. They apply to the Medicare population, one that is either disabled or over age 65 and thus highly conscious of the need for health coverage. As a consequence, enrollment rates are very high at the initial enrollment time. However, for those who do not enroll, the penalties are quite significant and last for the remainder of an individual's lifetime.

Conclusion

Although there are many issues one could discuss in comparing PCARE and its implications to the ACA (e.g., affordability and accessibility of adequate health insurance benefits, financial burdens associated with health care by income group and age group, and implications for nongroup insurers' willingness to offer comprehensive coverage), what is perhaps most interesting is that PCARE acknowledges the need for an individual mandate or otherwise-named equivalent. Medicare does the same. The alternative proposals differ from the ACA regarding the appropriate size, timing, and exceptions to penalties when an individual becomes uninsured and then later seeks coverage. However, for all of the criticism of the ACA's individual mandate as being overly burdensome, it is, in fact, the least burdensome and most equitably applied of the three discussed here.

Notes

1. "The Patient Choice, Affordability, Responsibility, and Empowerment Act," US House of Representatives, Energy and Commerce Committee, accessed March 31, 2015, http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/114/20150205-PCARE-Act-Plan.pdf.
2. Patient Protection and Affordable Care Act/Reconciliation Act of 2010. Part I, Section 1501, Requirement to Maintain Minimum Essential Coverage.
3. The description in the proposal is somewhat unclear with regard to outright denials of coverage. It reads, "Under this new protection, individuals moving from one health plan to another—regardless of whether it was in the individual, small group, or large employer markets—could not be medically underwritten and denied a plan based on a pre-existing condition if they were continuously enrolled in a health plan." This language also seems to suggest that individuals moving from public insurance coverage, such as Medicaid or CHIP, would not be afforded the same consumer protections, even if previously covered under that program continuously. In the following paragraph, however, the authors write, "So long as an individual or family in the case of a family policy, has stayed continuously covered, they could not be forced to pay a higher premium solely because of a costly health condition when switching plans." Here they do not mention outright denials of coverage, so there

is some ambiguity. However, with no limits on the higher premiums charged those being underwritten, even if outright denials are prohibited (likely during an annual open enrollment period), the premiums could be set sufficiently high to be equivalent to an outright denial.

4. Although the language in the proposal is unclear, as noted in note 3, we presume that this approach would count public insurance coverage as well as private insurance coverage as creditable coverage counting toward the 18-month total, but that portability of insurance to nongroup insurance coverage at standard rates during an open enrollment or a special enrollment period would require that the *last* type of coverage held be through an employer plan. This would be consistent with the Health Insurance Portability and Accountability Act's (HIPAA's) requirements for portability to nongroup insurance, and because the proposal references HIPAA in a number of places, we presume it would be consistent on this as well. In addition, the text of the PCARE proposal states, "Under this new protection, individuals moving from one health plan to another—regardless of whether it was in the *individual, small group, or large group markets* (emphasis added)—could not be medically underwritten and denied a plan based on a pre-existing condition if they were continuously enrolled in a health plan." There is no mention of moving to private coverage from public coverage or a high-risk pool, for example, again consistent with the provisions of HIPAA.
5. Special enrollment periods are available for those not taking Part B due to enrollment in a group health insurance plan. No penalty is assessed for those enrolling late under these provisions.

About the Authors and Acknowledgments

Linda Blumberg is a senior fellow and **John Holahan** is an Institute Fellow in the Urban Institute's Health Policy Center. The authors are grateful for comments and suggestions from Andy Hyman and Stephen Zuckerman.

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ACA Implementation—Monitoring and Tracking

The Widespread Slowdown in Health Spending Growth

Implications for Future Spending Projections and the Cost of the Affordable Care Act

April 2015

John Holahan and Stacey McMorrow

Robert Wood Johnson Foundation

URBAN INSTITUTE

With support from the Robert Wood Johnson Foundation (RWJF), the Urban Institute is undertaking a comprehensive monitoring and tracking project to examine the implementation and effects of the Patient Protection and Affordable Care Act of 2010 (ACA). The project began in May 2011 and will take place over several years. The Urban Institute will document changes to the implementation of national health reform to help states, researchers and policymakers learn from the process as it unfolds. Reports that have been prepared as part of this ongoing project can be found at **www.rwjf.org** and **www.healthpolicycenter.org**. The quantitative component of the project is producing analyses of the effects of the ACA on coverage, health expenditures, affordability, access and premiums in the states and nationally.

SUMMARY

A recent report from the Congressional Budget Office (CBO) showed another substantial reduction in projected federal spending on the Affordable Care Act (ACA). With these projections now 25 percent lower than CBO's initial ACA estimate for the period 2014-19, there has been renewed attention to the ongoing slowdown in health spending growth. In this paper, we examine the annual health spending projections from the Centers for Medicare and Medicaid Services (CMS) Office of the Actuary from February 2010, just prior to enactment of the ACA, through October 2014. Unlike CBO estimates, which are limited to federal spending, the CMS projections include spending by all public and private payers. We consider how the CMS projections have changed since 2010 and examine the factors that have contributed to these changes, particularly the potential role of the ACA in the altered trajectory of national health spending.

In September 2010, CMS first incorporated the provisions of the ACA into its forecast, and predicted that national health expenditures would increase by $577 billion over the 2014-2019 period compared to the pre-ACA baseline (Table 1). This included the costs of public and private coverage expansions, less the reductions in Medicare and Medicaid payments. In October 2014, the current forecast suggested that national health expenditures will be $2.5 trillion less over the 2014-2019 period than under the ACA baseline forecast from September 2010. Over the 2014-2019 period, Medicare spending is now expected to be lower by $384 billion, Medicaid by $927 billion, and private health insurance expenditures by $688 billion compared to the September 2010 ACA baseline. Clearly, not all of the spending reduction is due to the ACA; much is due to the recent recession and a long period of slow income growth, the growth of high deductible private health plans, cost constraints within state Medicaid programs, and Medicare policies unrelated to the ACA (e.g. sequestration).

But it is also likely that the law contributed; though how much is impossible to estimate. The ACA reduced Medicare payments, established a managed care competition framework in the marketplaces, and imposes an excise tax on high cost health plans beginning in 2018. While the estimated impacts of these provisions on spending were incorporated in the ACA baseline and later forecasts, other effects of the ACA may have contributed to the reduction in projected spending, but have not been attributed as such. These include the impact of Medicare payment adjustments on utilization of a wide variety of services, the spillover effects of Medicare payment policies on private payers, and lower than expected premiums in marketplaces due to strong competition and intense negotiations over provider payment rates. Thus, while the exact impact of the ACA cannot be determined, it is clear that the nation has successfully expanded coverage and is now expected to spend considerably less than anticipated even before the law was enacted.

Table 1. Cumulative Spending Projections for 2014-2019

	Pre-ACA Baseline	ACA Baseline	Current Forecast	Original Estimated Impact of ACA for 2014-2019		Current Forecast (2014-2019) Relative to Pre-ACA Baseline		Current Forecast (2014-2019) Relative to ACA Baseline	
	A	B	C	B-A	% change	C-A	% change	C-B	% change
	(in $ billions)								
National Health Expenditures	22973	23550	21012	577	2.5%	-1961	-8.5%	-2538	-10.8%
Medicare	4863	4554	4170	-309	-6.4%	-693	-14.3%	-384	-8.4%
Medicaid	4003	4567	3640	564	14.1%	-363	-9.1%	-927	-20.3%
Private Health Insurance	7102	7694	7006	592	8.3%	-96	-1.3%	-688	-8.9%
Out-of-Pocket	2438	2237	2217	-202	-8.3%	-222	-9.1%	-20	-0.9%
Other	4567	4498	3979	-69	-1.5%	-587	-12.9%	-519	-11.5%

Source: CMS Office of the Actuary.

BACKGROUND

The ACA has been criticized for insufficient attention to cost containment, despite Medicare payment reductions, the managed competition framework in the marketplaces, and the excise tax on high-cost plans.[1] The law was originally forecast to add $577 billion to national health expenditures (NHE) over the 2014–19 period (from $23.0 trillion to $23.6 trillion, or 2.5 percent) (table 1). This included the cost of the coverage expansions, less the savings from reductions in Medicare and Medicaid payments.[2] Since these initial projections were made in 2010, however, national health spending has grown at historically low rates. From 2009 to 2013, national health spending grew at an average annual rate of 3.9 percent.[3] Due to the recent slowdown in spending growth, the current projection of NHE for 2014 to 2019 is $21.0 trillion which is $2.5 trillion lower than under the original ACA forecast in 2010. Both forecasts include the projected costs of the ACA coverage expansion.

The extended debate about the reasons for the recent slowdown in health spending growth has coalesced around two schools of thought. The first contends that the recession and sluggish economic recovery are the dominant reasons for the slowdown.[4,5] This view implies that when the economy rebounds, health expenditure growth will return to previous levels. The second view contends that a range of factors, including but not limited to slow economic growth and low inflation, could have contributed to the slowdown.[6] Factors other than the economy include the movement of more people from private to public insurance with its lower provider payment rates, increased use of higher deductibles and coinsurance in commercial health care plans, a shift to narrow network options in private insurance, patent expirations and increased generic substitution for prescription drugs, and reductions in Medicare payment rates as well as other Medicare initiatives, including those affecting hospital readmissions. These factors generally reduce the flow of revenues and may have caused the health system to make more permanent structural changes to reduce costs. Under this second view, in the absence of very rapid economic growth or a return to looser payment policies by public and private insurers, spending growth rates are likely to remain lower than in the past.

Despite considerable attention to the recent slowdown in spending growth, there has been little focus on how this slowdown has changed future projections of national health spending and how it relates to the cost of the ACA. Although both the original and current forecasts of health spending under the ACA include estimates of the direct effects of major ACA policies expected to affect health spending, they do not account for any potential spillover effects of ACA policies to other payers (e.g., Medicare payment policies on private payers) or other supply-side responses to the new health care environment. Thus, it is possible that the ACA has played an unmeasured role in the recent spending slowdown and the lower projected future spending.

In this paper, we examine the annual health spending projections from the Centers for Medicare and Medicaid Services (CMS) Office of the Actuary beginning just prior to the ACA's passage and explore how those projections have changed over the past several years. We examine the legislative, regulatory, and economic factors that have contributed to changes in the projections over time and consider the potential role of the ACA in the changing trajectory of national health spending.

DATA AND METHODS

We use publicly available reports from the CMS Office of the Actuary beginning with the February 2010 NHE projections prior to the passage of the ACA and followed by projections from September 2010, August 2011, July 2012, October 2013, and October 2014.[7] CMS updates its projections each year with the most recent information on historic health spending, economic conditions, and legislative and regulatory changes. The February 2010 forecast represents the pre-ACA baseline, and the September 2010 projections are the first to include the effects of the ACA (referred to here as the "ACA baseline"). The 2014 forecast (the "current forecast") includes updated information on actual health spending through 2012 as well as legislative and other changes since the original ACA forecast.

We examine projections through 2019 as this is the last year for which we have a pre-ACA prediction. We focus on comparing the current projections for the 2014–19 period to those made just before and just after the passage of the ACA. We examine total NHE as well as Medicare, Medicaid, private health insurance, out-of-pocket (OOP) and other spending. Other spending includes other health insurance programs (Children's Health Insurance Program, US Department of Defense, Veterans Affairs); other third-party payers such as workers' compensation, maternal and child health, and school health programs; public health activity; and investment (e.g., noncommercial research, the value of new construction and new capital equipment in the medical sector). All Medicare projections include the cuts to physician payments required under the sustainable growth rate formula and will therefore understate spending levels if and when the cuts are reversed as they have been each year since 2003.

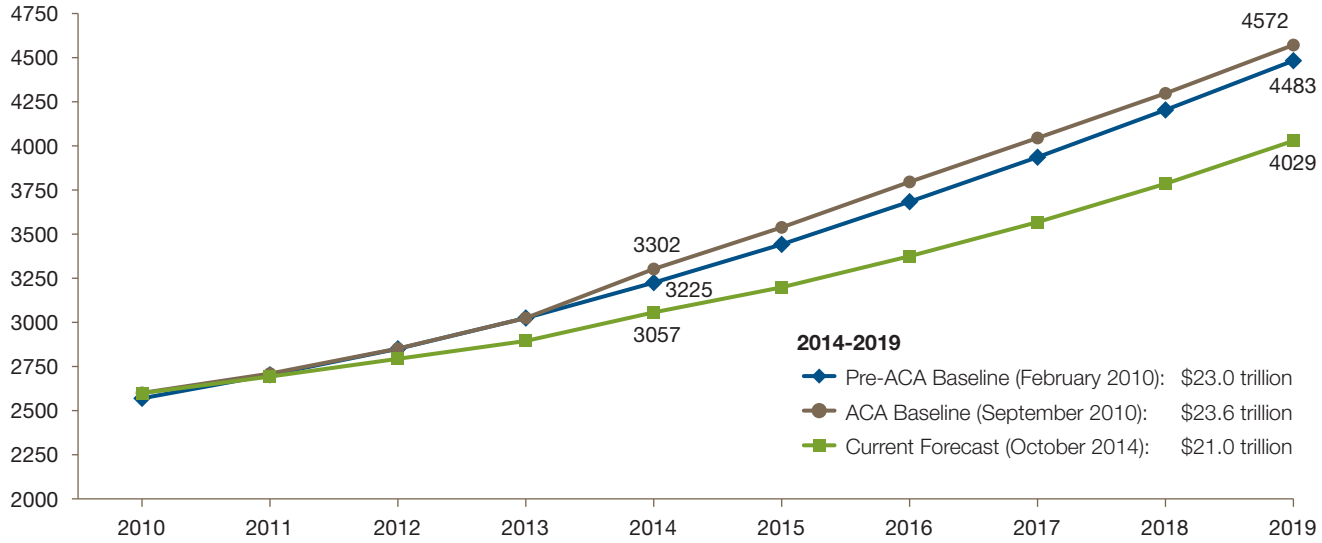
RESULTS

In February 2010, prior to the passage of the ACA, CMS actuaries projected NHE would be $3.2 trillion in 2014, $4.5 trillion in 2019, and $23.0 trillion over the entire 2014–19 period (figure 1). After incorporating estimates of the effects of the ACA, the actuaries increased their projections to $3.3 trillion in 2014, $4.6 trillion in 2019, and $23.6 trillion between 2014 and 2019. Overall, CMS estimated the ACA would increase NHE by $577 billion—or 2.5 percent—from 2014 to 2019.[8] New coverage costs in Medicaid and subsidized private insurance plans were offset somewhat by reductions in Medicare payment rates, Medicare and Medicaid disproportionate share hospital payments, and OOP spending. Under the ACA, Medicaid spending was projected to increase by $564 billion and private health insurance spending by $592 billion from 2014 to 2019, and Medicare and OOP spending were projected to decrease by $309 billion and $202 billion, respectively.

In each subsequent CMS forecast, however, NHE projections were reduced (table 2). In the current forecast, released in October 2014, the spending estimate for 2014 was $3.1 trillion, the 2019 estimate was $4.0 trillion, and the 2014–19 estimate was $21.0 trillion. For the 2014–19 period, these estimates reflect a decline of $2.0 trillion compared to the pre-ACA baseline and a decline of $2.5 trillion compared to the ACA baseline. Medicare spending from 2014 to 2019 is now projected to be $384 billion less than under the ACA baseline. Similarly, private health insurance and Medicaid spending projections for 2014 to 2019 are lower by $927 billion and $688 billion, respectively, than under the ACA baseline (table 1).

Some of these changes can be explained by new legislation and other policy developments (e.g., the Budget Control Act of 2011 and the Supreme Court decision on Medicaid expansion) that have occurred since the ACA baseline forecast in September 2010. But much of the decline in projected spending for the 2014-2019 period seems to be related to the historically low growth in actual health spending that began with the recession in 2008 and has continued to the present. For example, in 2010, health spending growth in 2013 was projected to be a robust 6.1 percent, reflecting the expected economic recovery, but actual health spending growth in 2013 was only 3.6 percent

Figure 1. National Health Expenditure Projections (in $ billions)



Source: CMS Office of the Actuary. All projections include the cuts to physician reimbursement required by the sustainable growth rate formula.

(table 2). As a result of this slow growth, the NHE estimate for 2014 in the current forecast was $246 billion less than it had been in the ACA baseline.[9]

Despite NHE growth that has been at or below gross domestic product growth between 2010 and 2013, however, CMS does not continue to project these low growth rates much beyond 2016. Instead, the current forecast assumes that NHE growth will exceed gross domestic product growth by about half a percentage point in 2016 and 2017, by 0.8 of a percentage point in 2018, and by 1.3 percentage points in 2019. By 2019, the growth in national health spending in the current forecast (6.4 percent) is expected to be the same as in the 2010 ACA baseline. Thus, much of the decline in projected spending for the 2014–19 period is due to the lower spending level in 2014 and slower growth from 2014 to 2016, but not to lower growth rates from 2017 to 2019. But the out-year growth rate projections are considerably higher than recent experience and could prove to be too high for reasons we discuss below. If so, NHE spending between 2014 and 2019 will not reach the current projection of $21.0 trillion.

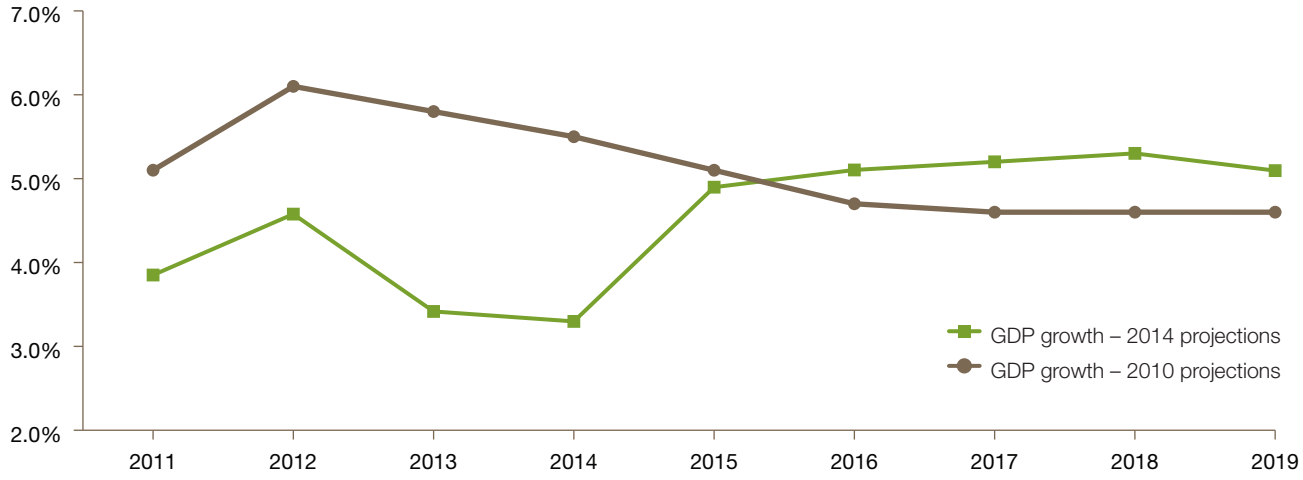
The economy clearly contributed to the observed slowdown since 2010. Gross domestic product growth from 2010 to 2014 was expected to average 5.6 percent in the ACA baseline but actually fell to 3.8 percent in the current forecast (figure 2). In addition to the economy, other likely contributors to the slowdown in health spending growth include Medicare payment and other quality improvement policies, increased prevalence of higher deductibles and narrow networks in private insurance plans, and continued shifts in coverage from employer-sponsored insurance to lower-cost public coverage. The unknown factor, however, is the extent to which the ACA has contributed to the observed slowdown in health spending beyond that incorporated in the ACA baseline.

Both actual and anticipated policy changes under the ACA, including rate reductions and the movement to new payment methods that penalize or shift risk to providers, may have caused private payers to adopt similar policies or have generated cost-cutting responses from providers. If this is true, the observed slowdown in spending growth would not have been as large in the absence of the ACA, and the resulting projections would not have declined so dramatically. To offset the original estimated increase in NHE for the 2014–19 period due to the ACA ($577 billion), the ACA would have to be responsible for approximately 23 percent of the $2.5 trillion decline in projected spending from 2014 to 2019, beyond the cost savings explicitly included in the projections. Although we cannot precisely isolate the ACA impact, it is clear that even with a significant expansion of insurance coverage, current NHE projections are $2.0 trillion less than in the pre-ACA baseline. In the sections that follow we describe some of the observable factors that have contributed to the declining projections since 2010 and consider the extent to which the ACA has also played a role.

Medicare

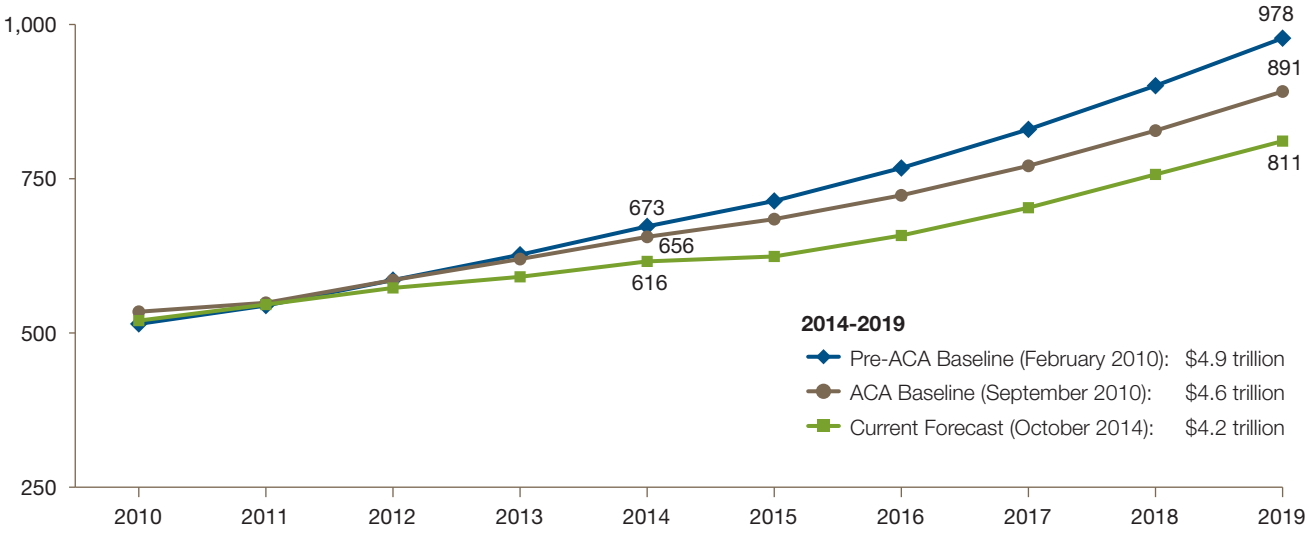
Medicare spending under the ACA was initially forecast to fall by $309 billion (from $4.9 trillion to $4.6 trillion) between 2014 and 2019 compared to the pre-ACA level (figure

Figure 2. Gross Domestic Product (GDP) Annual Growth Rate Projections, 2010-2019



Source: CMS Office of the Actuary. Estimates for 2011-2013 in the 2014 projections are observed GDP growth rates. All others are projections.

Figure 3. Medicare Expenditure Projections (in $ billions)



Source: CMS Office of the Actuary. All projections include the cuts to physician reimbursement required by the sustainable growth rate formula.

3 and table 3). This decrease was primarily due to ACA reductions in payments to Medicare Advantage plans and a requirement to reduce the annual payment updates for most institutional providers by the growth in economy-wide multifactor productivity. In the current forecast, Medicare spending is projected to be an additional $384 billion less between 2014 and 2019 than in the ACA baseline (falling from $4.6 trillion to $4.2 trillion).[10] In 2014, Medicare spending is now projected to be $616 billion, $40 billion less than in the ACA baseline. This decrease is due to lower than expected growth in Medicare spending from 2010 to 2012 which may reflect unanticipated effects of ACA policies including cuts to Medicare Advantage payments in 2011 and reductions in payments to various providers in 2012. Lower spending in 2014 also reflects the effects of the Budget Control Act of 2011 (i.e., sequestration), which required Medicare payments for all types of services to be reduced by 2 percent beginning in April 2013 (table 3). The lower rate of spending growth between 2010 and 2014 in the current forecast compared to the ACA baseline is due entirely to lower growth in spending per enrollee. Enrollment growth averages about 3 percent per year in both forecasts,

but growth in spending per enrollee from 2010 to 2014 averaged 2.3 percent in the ACA baseline compared to 1.2 percent in the current forecast (table 4).

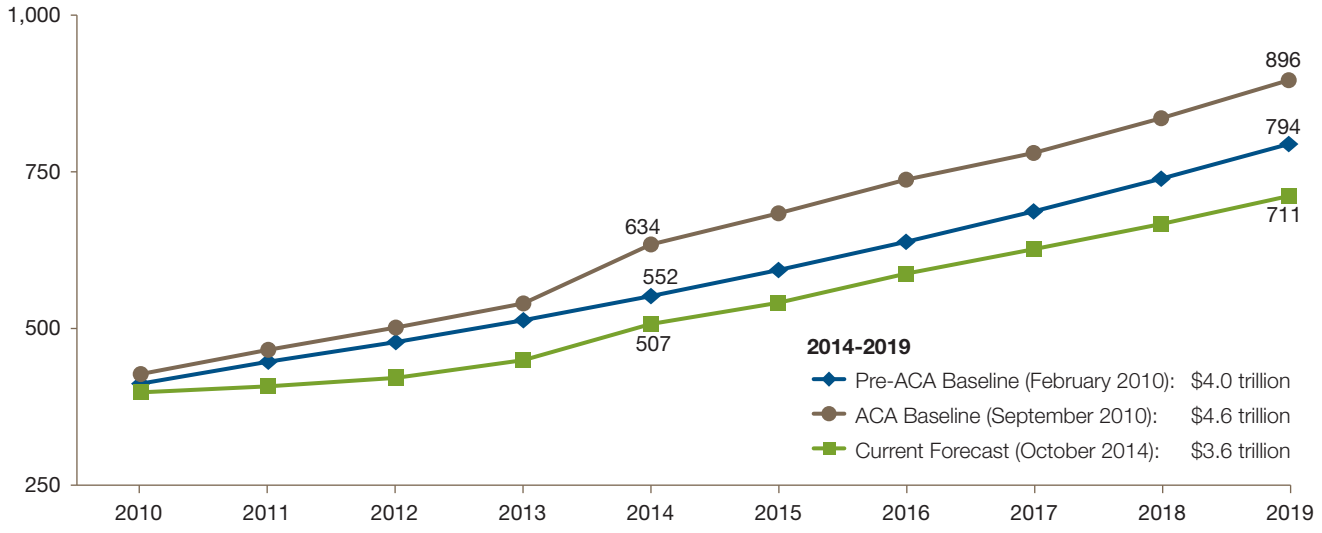
Slow growth is expected to continue in 2015 due primarily to the expiration of the Medicare Advantage Quality Bonus Payment Demonstration.[11] After 2015, however, CMS assumes that Medicare spending growth for both total spending and spending per enrollee will return to rates similar to those included in the ACA baseline. Thus, the large decline in projected spending from 2014 to 2019 in the current forecast compared to the ACA baseline is primarily a result of slow Medicare spending growth in the early part of the decade and the effects of sequestration. It does not appear that CMS assumes any lasting structural changes have contributed to the recent slowdown in Medicare spending growth, but White and colleagues suggest that unanticipated effects of the ACA have contributed to reduced home health spending, hospital readmissions, and utilization of hospital days, outpatient hospital visits, skilled nursing facility days, and advanced imaging prior to 2014.[12] If these and other effects persist and have not been incorporated in the CMS projections, the estimates of Medicare spending from 2014 to 2019 would be overstated.

Medicaid

Medicaid spending from 2014 to 2019 under the ACA was originally expected to increase by about $564 billion (from $4.0 trillion to $4.6 trillion) compared to the pre-ACA forecast (figure 4 and table 5). This increase primarily reflects the ACA expansion of Medicaid eligibility to those with incomes below 138 percent of the federal poverty level. In the current forecast, Medicaid spending is projected to be $927 billion lower than the original ACA estimate (falling from $4.6 trillion to $3.6 trillion). This difference is due in large part to much slower than anticipated spending growth from 2010 to 2012. For example, Medicaid spending grew only 2.4 percent in 2011 compared to the ACA baseline projection of 9.1 percent (table 5). CMS attributes this slow growth to the expiration of enhanced federal match rates in 2011 and state efforts to contain costs.

The Supreme Court decision allowing states to opt out of the ACA Medicaid expansion has also contributed to the drop in projected spending since 2010. The current enrollment estimate for 2014 is about 66 million, compared to approximately 79 million in the ACA baseline, but CMS also assumes continued growth in Medicaid enrollment after 2014 such that for 2019 the current enrollment projection is only 3.3 million less than in the ACA baseline (table 6). This estimate most likely reflects an assumption that many more states will adopt the ACA Medicaid expansion over time. Using the difference in annual enrollment between the current forecast and the ACA baseline and Urban Institute estimates of spending per enrollee for the expansion population, we estimate that the Supreme Court decision reduced projected spending during the 2014–19 period by about $210 billion (data not shown). Thus, most of the reduction in projected Medicaid spending is not due to lower enrollment, but to lower spending per enrollee. Mainly as a result of the slow growth from 2010 to 2012, spending per enrollee in 2019 is now projected to be $9,250, compared to $11,175 in the ACA baseline. But the projected growth in spending per

Figure 4. Medicaid Expenditure Projections (in $ billions)



Source: CMS Office of the Actuary.

enrollee from 2016 to 2019 is similar to the ACA baseline estimates, which suggests again that CMS does not assume any lasting effects from the slow growth in spending in the early part of the decade.

Private Health Insurance

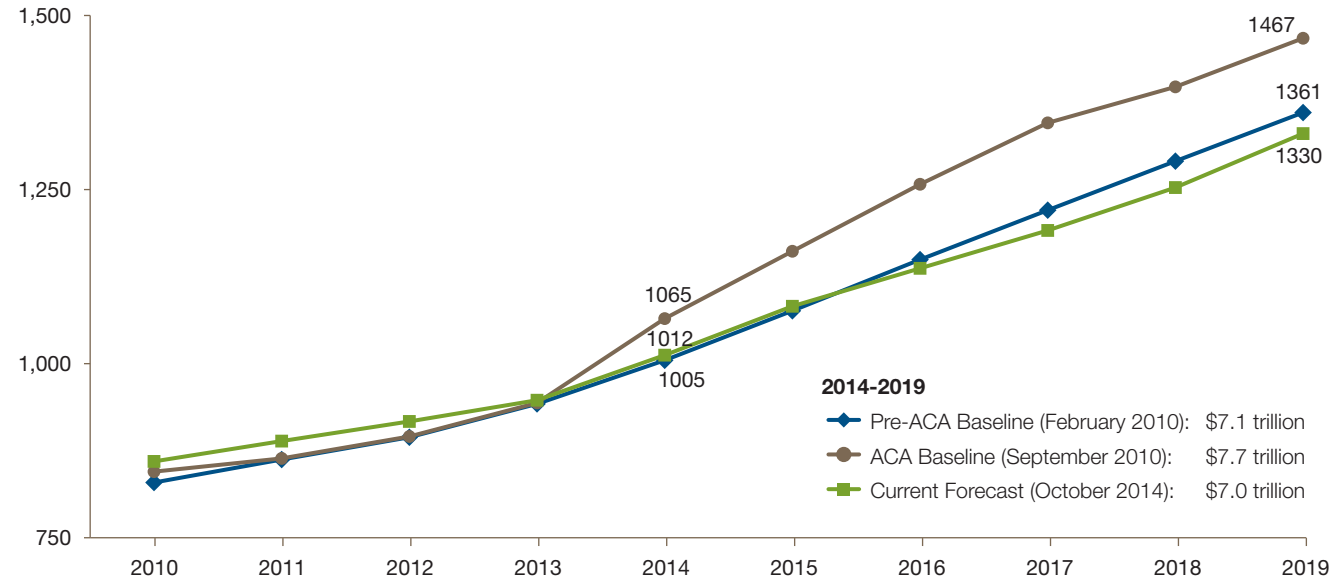
In the original ACA baseline, private health insurance spending was projected to increase by $592 billion (from $7.1 trillion to $7.7 trillion) for the 2014-2019 period compared to the pre-ACA forecast (figure 5 and table 7). This increase was due mostly to the ACA expansion of private coverage through federally subsidized exchange plans.[13] In the most recent forecast, however, private spending is projected to be $688 billion less than the ACA baseline estimate for the 2014–19 period (falling from $7.7 trillion to $7.0 trillion). This difference reflects slower expected spending growth in both the pre- and post-2014 periods (table 7). In the pre-2014 period, this slower spending growth seems to have been due to slower economic recovery than originally expected and declines in prescription drug spending related to patent expirations and increased generic substitution, as well as a shift toward higher deductibles and cost sharing in private plans. From 2010 to 2014, growth in enrollment and spending per enrollee are both lower in the current forecast than in the ACA baseline (table 8).

Both total spending and spending per enrollee are currently projected to grow faster beginning in 2014 compared to the pre-2014 period. This faster growth is due to increased enrollment in private health insurance through the exchanges as well as expanded benefits for those transitioning from the pre-ACA individual market. The continued economic recovery is also expected to spur faster growth in private spending, but this growth is tempered by the excise tax on high-cost plans and an expectation that some employers of low-wage workers will stop offering insurance. Nonetheless, the current projections are considerably lower than those in the ACA baseline. For example, average growth in spending per enrollee from 2014 to 2019 is 4.2 percent in the current forecast compared to 5.7 percent in the ACA baseline. The current estimate includes lower growth rates from 2014 to 2017 compared to the ACA baseline, but higher growth rates in 2018 and 2019 because the expected effect of the excise tax on high cost insurance plans has been reduced. It is not clear whether the forecast has been affected by lower than expected marketplace premiums. Thus, even the current projections may prove too high.

Out-of-Pocket and Other Health Spending

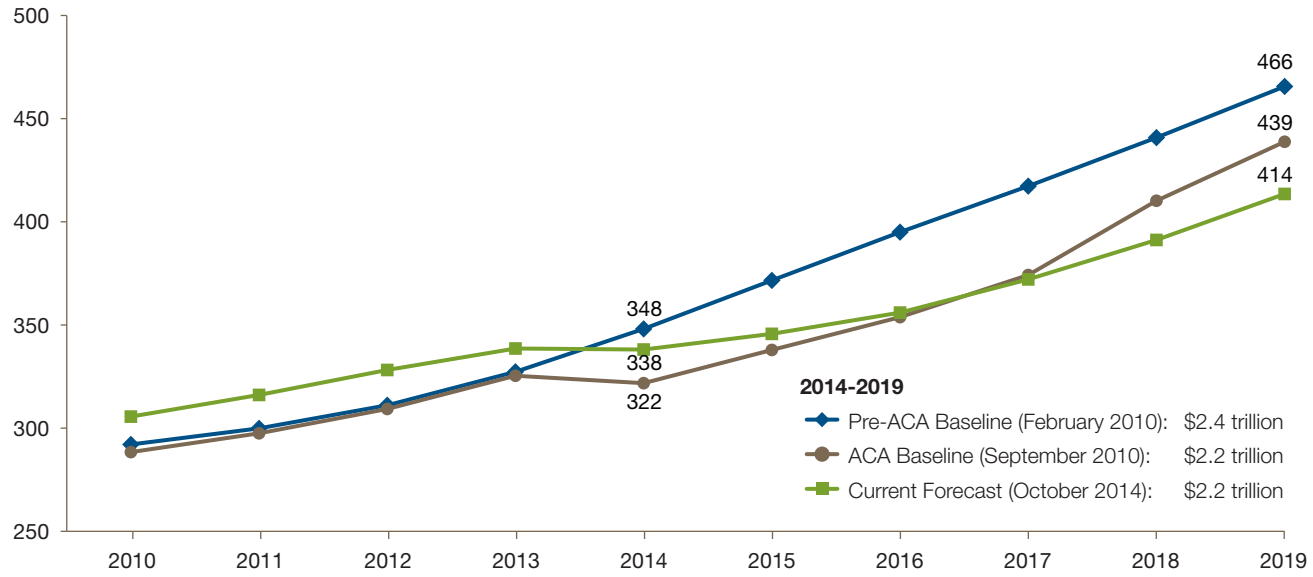
In the ACA baseline, OOP costs during the 2014–19 period were projected to fall by $202 billion (from $2.4 trillion to $2.2 trillion) compared to the pre-ACA forecast (figure 6 and table 9). This estimated decline was attributed to the coverage expansions under the ACA as well as the provision of additional cost-sharing subsidies to low-income individuals with private coverage through the marketplace. The current forecast predicts that OOP spending from 2014 to 2019 will be $20 billion lower than the ACA baseline estimate. This change reflects lower growth rates for OOP spending for most of the 2012-17 period (table 9). The effects of the 2018 excise tax on OOP spending are

Figure 5. Private Health Insurance Expenditure Projections (in $ billions)



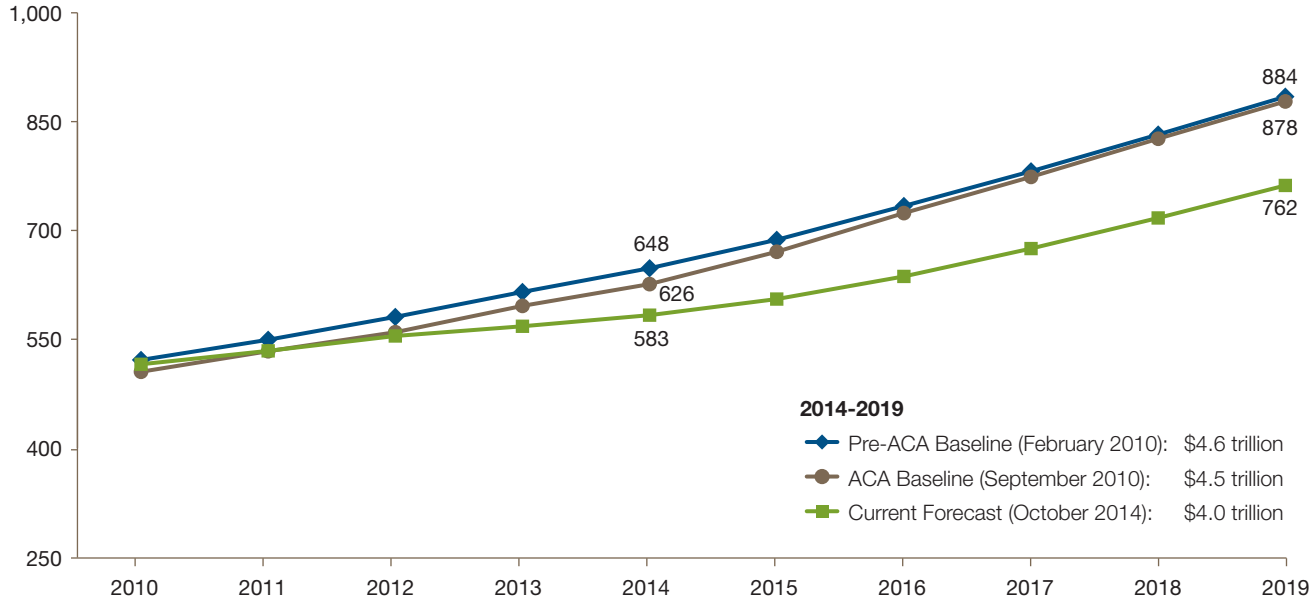
Source: CMS Office of the Actuary.

Figure 6. Out-of-Pocket Expenditure Projections (in $ billions)



Source: CMS Office of the Actuary.

Figure 7. Other Health Expenditure Projections (in $ billions)



Source: CMS Office of the Actuary.

projected to be smaller in the current forecast than in the original ACA baseline. This estimate seems to parallel the projections for private insurance spending, because lower projected private premiums will diminish the effects of the excise tax.

The residual "other" category of NHE consists of spending on a wide range of programs, including the Children's Health Insurance Program, US Department of Defense and Veterans Affairs health programs, public health activity, and investments such as new construction and capital equipment in the medical sector. The original ACA forecast predicted a relatively small ($68 billion) decline from the pre-ACA baseline in other spending during the 2014–19 period; the current forecast projects an additional reduction in other spending of $519 billion (from $4.5 trillion to $4.0 trillion) compared to the ACA baseline, much of which seems to reflect reductions in projected investment spending (figure 7 and table 10).

The slower growth in this category in the current forecast is a significant contributor to the overall decline in the NHE projections for the 2014–19 period. Given the varied components of this spending category, however, it is difficult to disentangle what might have contributed to the lower projections or whether any of the savings could be attributed to the ACA.

DISCUSSION

The ACA was originally estimated to add $577 billion to NHE over the 2014–19 period. This included the cost of the coverage expansions (over $1.1 trillion according to the CMS actuaries) less reductions in Medicare and Medicaid spending. Current projections suggest that NHE will be $2.5 trillion less than the original ACA estimate for 2014 to 2019. Much of this decrease is due to slower growth in expenditures between 2010 and 2014, but projections for spending growth between 2014 and 2019 are also lower than in the original ACA estimate, particularly for private and OOP spending.

The Congressional Budget Office (CBO) also projects declines in federal expenditures on exchange subsidies, Medicaid and the Children's Health Insurance Program, and Medicare relative to their original ACA forecast. CBO estimates are limited to the ACA expansion population, both those individuals entering the exchanges or newly enrolled in Medicaid. In 2010, CBO forecast the gross cost of the coverage provisions to be $921 billion from 2014 to 2019 (table 11). By March 2015, the forecast had been reduced to $686 billion, a reduction of 25.5 percent. In its 2010 forecast, CBO projected that exchange subsidies would be $458 billion over the 2014–19 period. In the most recent forecast, they project $333 billion, a 27.3 percent reduction. For Medicaid, CBO's original forecast was $441 billion in federal expenditures on the ACA expansion population from 2014 to 2019. In 2015, this forecast had been reduced to $347 billion. Much of this reduction is related to the Supreme Court decision. CBO also projects Medicare spending to be $443 billion lower during the 2014–19 period than in their original post-ACA forecast.

CMS does not seem to attribute any of the reduction in projected expenditures to the effects of the ACA, though they had incorporated some ACA cost containment provisions into their original projections (e.g., Medicare payment reductions, the excise tax on high-cost plans).[14] But there are several ways in which the ACA could have contributed to the slowdown in spending growth prior to 2014 and thereby to the reduced projections. First, the ACA Medicare payment adjustments that began in 2011 appear to have had a greater impact on utilization than anticipated, with reductions in hospital days, outpatient hospital visits, skilled nursing facility days, and advanced imaging prior to 2014.[15] Second, lower payment rates in Medicare may have affected payment rates by other payers. Recent research has suggested that payment policy changes by Medicare affect payments by private payers.[16] For example, commercial insurer negotiations over physician payment rates are affected by Medicare rates. Likewise, hospital payment rates by private payers also tend to reflect changes in Medicare payments, and contrary to a theory of cost shifting, private payment rates do not appear to increase in response to cuts in Medicare payments.[17] Third, other Medicare policies under the ACA, including financial penalties for hospital readmissions, may have spilled over to other payers and contributed to slower spending growth. It is unlikely that accountable care organizations, medical homes, and other delivery system reforms have played a significant role in the observed slowdown in spending growth, despite some claims to the contrary.[18] But taken together, the various components of the ACA could have contributed to a cultural shift that has affected provider behavior and, in turn, spending. Finally, the uncertainty associated with the pending implementation of various ACA provisions along with anticipated cost containment efforts by private payers may have caused providers to be more cautious with regard to investments and thereby constrained spending growth.

Components of the ACA not included in the CMS projections could result in even lower future expenditures than in the current forecast. First, premiums in marketplaces are well below expectations (due to strong competition, intense negotiations on provider payment rates, and narrower networks), and these lower premium costs should further mitigate the cost of expanded coverage.[19] Second, if the constraints on Medicare payment rates continue to reduce utilization, the current Medicare projections may be too high. Finally, in markets throughout the country, employers have offered their workers high-deductible and narrow network products that have dampened spending growth, and they are likely to continue shifting their plans in this direction. The net effect is that the $21.0 trillion estimate of national health spending for the 2014–19 period could be an overestimate.

Of course, other factors suggest the current projections will prove to be an underestimate of future spending. One such factor is the emergence of a new class of specialty pharmaceuticals, such as Sovaldi and Harvoni, which could lead to increased growth in prescription drug spending. Another is a potential backlash, both by consumers and regulatory agencies, against the narrow networks and high deductibles that have helped to hold down spending growth in recent years. Last, many of the factors that have contributed to the decline in spending projections have lowered the level of spending, but history would suggest that sustaining lower growth rates may be more difficult. Thus, if growth rates rebound faster than expected, the current forecast may be optimistic.

To offset the original $577 billion ACA cost estimate for 2014 to 2019, the ACA would have to be responsible for approximately 23 percent of the $2.5 trillion decline in projected spending during that period, beyond the ACA cost savings that have already been included in the projections. Although it is impossible to quantify how much the ACA has truly contributed to the reduced spending projections over time, it is clear that NHE levels through 2019 are projected to be substantially lower than the levels forecast just a few years ago and that this decline in projected spending has occurred along with a successful coverage expansion.

ENDNOTES

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9. The current forecast was released at the end of 2014, but it is based on actual data through 2012. Thus, the 2013 and 2014 estimates are projections.
10. Because the ACA baseline forecast included the cuts to physician payments required under the sustainable growth rate (SGR) formula, we use a version of the current forecast that also includes the SGR cuts. If the SGR cuts were not included in the current forecast, Medicare spending for the 2014–19 period would increase by $57 billion.
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Table 2. National Health Expenditure Projections 2010-2019

	National Health Spending ($ billions)											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Cumulative Spending 2010-2014 *(AAGR)*	Cumulative Spending 2014-2019 *(AAGR)*
A. Pre-ACA Baseline (Feb. 2010)	2570	2703	2850	3025	3225	3442	3684	3936	4204	4483	14373	22973
Growth rate		*5.2%*	*5.4%*	*6.1%*	*6.6%*	*6.7%*	*7.0%*	*6.8%*	*6.8%*	*6.6%*	*5.8%*	*6.8%*
B. ACA Baseline (Sept. 2010)	2600	2710	2852	3025	3302	3538	3796	4045	4298	4572	14489	23550
Growth rate		*4.2%*	*5.2%*	*6.1%*	*9.2%*	*7.1%*	*7.3%*	*6.6%*	*6.3%*	*6.4%*	*6.2%*	*6.7%*
C. August 2011 Forecast	2584	2708	2824	2980	3227	3418	3632	3850	4080	4347	14324	22553
Growth rate		*4.8%*	*4.3%*	*5.5%*	*8.3%*	*5.9%*	*6.3%*	*6.0%*	*6.0%*	*6.5%*	*5.7%*	*6.1%*
D. July 2012 Forecast	2594	2695	2809	2916	3130	3308	3514	3723	3952	4207	14143	21835
Growth rate		*3.9%*	*4.2%*	*3.8%*	*7.4%*	*5.7%*	*6.3%*	*5.9%*	*6.2%*	*6.5%*	*4.8%*	*6.1%*
E. October 2013 Forecast	2600	2701	2807	2915	3078	3258	3442	3643	3870	4121	14100	21412
Growth rate		*3.9%*	*3.9%*	*3.9%*	*5.6%*	*5.8%*	*5.7%*	*5.8%*	*6.2%*	*6.5%*	*4.3%*	*6.0%*
F. Current Forecast (Oct. 2014)	2599	2693	2793	2895	3057	3199	3375	3568	3785	4029	14037	21012
Growth rate		*3.6%*	*3.7%*	*3.6%*	*5.6%*	*4.6%*	*5.5%*	*5.7%*	*6.1%*	*6.4%*	*4.1%*	*5.7%*
GDP in Current Forecast	14958	15534	16245	16800	17354	18204	19133	20128	21195	22275	80891	118289
GDP Growth Rate		*3.9%*	*4.6%*	*3.4%*	*3.3%*	*4.9%*	*5.1%*	*5.2%*	*5.3%*	*5.1%*	*3.8%*	*5.1%*
ACA Baseline Relative to Pre-ACA Baseline												
Difference (B–A)	31	7	1	0	77	96	112	109	94	89	116	577
Percent change	1.2%	0.3%	0.0%	0.0%	2.4%	2.8%	3.0%	2.8%	2.2%	2.0%	0.8%	2.5%
Current Forecast Relative to Pre-ACA Baseline												
Difference (F–A)	29	-10	-57	-130	-169	-243	-309	-368	-418	-454	-336	-1,961
Percent change	1.1%	-0.4%	-2.0%	-4.3%	-5.2%	-7.1%	-8.4%	-9.3%	-9.9%	-10.1%	-2.3%	-8.5%
Current Forecast Relative to ACA Baseline												
Difference (F–B)	-1	-17	-58	-130	-246	-340	-421	-477	-512	-543	-452	-2,538
Percent change	0.0%	-0.6%	-2.0%	-4.3%	-7.4%	-9.6%	-11.1%	-11.8%	-11.9%	-11.9%	-3.1%	-10.8%

Source: CMS Office of the Actuary.

Note: AAGR is average annual growth rate. All projections include the cuts to physician reimbursement required by the SGR formula.

Table 3. Medicare Expenditure Projections, 2010-2019

	Medicare Spending ($ billions)											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Cumulative Spending 2010-2014 *(AAGR)*	Cumulative Spending 2014-2019 *(AAGR)*
A. Pre-ACA Baseline (Feb. 2010)	515	544	586	627	673	714	767	830	901	978	2944	4863
Growth rate		*5.8%*	*7.6%*	*7.0%*	*7.3%*	*6.1%*	*7.5%*	*8.2%*	*8.5%*	*8.5%*	*6.9%*	*7.8%*
B. ACA Baseline (Sept. 2010)	534	549	586	620	656	685	723	771	828	891	2945	4554
Growth rate		*2.7%*	*6.7%*	*5.8%*	*5.8%*	*4.4%*	*5.6%*	*6.6%*	*7.4%*	*7.7%*	*5.3%*	*6.3%*
C. Current Forecast (Oct. 2014)	520	546	573	591	616	624	658	703	757	811	2846	4170
Growth rate		*5.0%*	*4.8%*	*3.3%*	*4.2%*	*1.3%*	*5.4%*	*6.9%*	*7.7%*	*7.1%*	*4.3%*	*5.7%*
ACA Baseline Relative to Pre-ACA Baseline												
Difference (B–A)	20	5	0	-7	-17	-30	-44	-59	-73	-86	0	-309
Percent change	3.8%	0.8%	0.0%	-1.1%	-2.5%	-4.1%	-5.8%	-7.1%	-8.1%	-8.8%	0.0%	-6.4%
Current Forecast Relative to Pre-ACA Baseline												
Difference (C–A)	6	2	-13	-36	-57	-90	-110	-127	-143	-166	-98	-693
Percent change	1.1%	0.3%	-2.3%	-5.7%	-8.5%	-12.6%	-14.3%	-15.3%	-15.9%	-17.0%	-3.3%	-14.3%
Current Forecast Relative to ACA Baseline												
Difference (C–B)	-14	-3	-13	-29	-40	-61	-65	-68	-71	-80	-99	-384
Percent change	-2.7%	-0.5%	-2.3%	-4.6%	-6.1%	-8.8%	-9.0%	-8.8%	-8.5%	-9.0%	-3.3%	-8.4%

Source: CMS Office of the Actuary.

Note: AAGR is average annual growth rate. All projections include the cuts to physician reimbursement required by the SGR formula.

Table 4. Medicare Spending, Enrollment and Spending Per Enrollee Projections, 2010-2019

	Medicare Spending and Enrollment											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Average Spending/ Enrollment 2010-2014 *(AAGR)*	Average Spending/ Enrollment 2014-2019 *(AAGR)*
Medicare Spending ($ billions)												
ACA Baseline	534	549	586	620	656	685	723	771	828	891	589	759
Growth rate		*2.7%*	*6.7%*	*5.8%*	*5.8%*	*4.4%*	*5.6%*	*6.6%*	*7.4%*	*7.7%*	*5.3%*	*6.3%*
Current Forecast	520	546	573	591	616	624	658	703	757	811	569	695
Growth rate		*5.0%*	*4.8%*	*3.3%*	*4.2%*	*1.3%*	*5.4%*	*6.9%*	*7.7%*	*7.1%*	*4.3%*	*5.7%*
Medicare Enrollment (millions)												
ACA Baseline	46.8	47.9	49.3	50.9	52.4	53.9	55.4	57.1	58.8	60.5	49	56
Growth rate		*2.4%*	*2.9%*	*3.2%*	*2.9%*	*2.9%*	*2.8%*	*3.1%*	*3.0%*	*2.9%*	*2.9%*	*2.9%*
Current Forecast	46.6	47.7	49.7	51.0	52.7	54.4	56.0	57.7	59.4	61.1	50	57
Growth rate		*2.4%*	*4.2%*	*2.6%*	*3.3%*	*3.2%*	*2.9%*	*3.0%*	*2.9%*	*2.9%*	*3.1%*	*3.0%*
Medicare Spending Per Enrollee ($)												
ACA Baseline	11,419	11,459	11,880	12,177	12,515	12,699	13,052	13,501	14,082	14,734	11,890	13,431
Growth rate		*0.4%*	*3.7%*	*2.5%*	*2.8%*	*1.5%*	*2.8%*	*3.4%*	*4.3%*	*4.6%*	*2.3%*	*3.3%*
Current Forecast	11,163	11,451	11,519	11,592	11,687	11,471	11,748	12,187	12,751	13,280	11,482	12,187
Growth rate		*2.6%*	*0.6%*	*0.6%*	*0.8%*	*-1.9%*	*2.4%*	*3.7%*	*4.6%*	*4.1%*	*1.2%*	*2.6%*

Source: CMS Office of the Actuary.

Note: AAGR is average annual growth rate. All projections include the cuts to physician reimbursement required by the SGR formula.

Table 5. Medicaid Expenditure Projections, 2010-2019

	Medicaid Spending ($ billions)											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Cumulative Spending 2010-2014 *(AAGR)*	Cumulative Spending 2014-2019 *(AAGR)*
A. Pre-ACA Baseline (Feb. 2010)	412	447	478	513	552	593	638	687	739	794	2402	4003
Growth rate		*8.5%*	*7.0%*	*7.3%*	*7.5%*	*7.5%*	*7.6%*	*7.6%*	*7.6%*	*7.5%*	*7.6%*	*7.6%*
B. ACA Baseline (Sept. 2010)	427	466	502	540	634	684	738	780	836	896	2569	4567
Growth rate		*9.1%*	*7.6%*	*7.7%*	*17.4%*	*7.8%*	*7.9%*	*5.8%*	*7.1%*	*7.3%*	*10.4%*	*7.2%*
C. Current Forecast (Oct. 2014)	398	408	421	450	507	541	588	627	667	711	2184	3640
Growth rate		*2.4%*	*3.3%*	*6.7%*	*12.8%*	*6.7%*	*8.6%*	*6.6%*	*6.4%*	*6.7%*	*6.2%*	*7.0%*
ACA Baseline Relative to Pre-ACA Baseline												
Difference (B–A)	15	19	23	27	82	91	99	93	97	102	167	564
Percent change	3.7%	4.3%	4.9%	5.2%	14.9%	15.3%	15.5%	13.6%	13.1%	12.8%	6.9%	14.1%
Current Forecast Relative to Pre-ACA Baseline												
Difference (C–A)	-14	-39	-57	-64	-45	-52	-51	-60	-72	-83	-219	-363
Percent change	-3.4%	-8.8%	-11.9%	-12.4%	-8.1%	-8.8%	-8.0%	-8.8%	-9.8%	-10.4%	-9.1%	-9.1%
Current Forecast Relative to ACA Baseline												
Difference (C–B)	-29	-58	-80	-91	-127	-143	-150	-154	-169	-185	-385	-927
Percent change	-6.8%	-12.5%	-16.0%	-16.8%	-20.0%	-20.9%	-20.3%	-19.7%	-20.2%	-20.6%	-15.0%	-20.3%

Source: CMS Office of the Actuary.

Note: AAGR is average annual growth rate.

Table 6. Medicaid Spending, Enrollment and Spending Per Enrollee Projections, 2010-2019

	Medicaid Spending and Enrollment											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Average Spending/ Enrollment 2010-2014 *(AAGR)*	Average Spending/ Enrollment 2014-2019 *(AAGR)*
Medicaid Spending ($ billions)												
ACA Baseline	427	466	502	540	634	684	738	780	836	896	514	761
Growth rate		*9.1%*	*7.6%*	*7.7%*	*17.4%*	*7.8%*	*7.9%*	*5.8%*	*7.1%*	*7.3%*	*10.4%*	*7.2%*
Current Forecast	398	408	421	450	507	541	588	627	667	711	437	607
Growth rate		*2.4%*	*3.3%*	*6.7%*	*12.8%*	*6.7%*	*8.6%*	*6.6%*	*6.4%*	*6.7%*	*6.2%*	*7.0%*
Medicaid Enrollment (millions)												
ACA Baseline	54.9	56.0	56.6	57.2	78.8	78.3	78.1	78.3	79.4	80.2	61	79
Growth rate		*2.0%*	*1.1%*	*1.1%*	*37.8%*	*-0.6%*	*-0.3%*	*0.3%*	*1.4%*	*1.0%*	*9.5%*	*0.4%*
Current Forecast	53.1	57.1	57.7	58.0	65.9	69.7	74.4	75.5	76.4	76.9	58	73
Growth rate		*7.5%*	*1.1%*	*0.5%*	*13.6%*	*5.8%*	*6.7%*	*1.5%*	*1.2%*	*0.7%*	*5.5%*	*3.1%*
Medicaid Spending Per Enrollee ($)												
ACA Baseline	7,783	8,321	8,860	9,441	8,047	8,733	9,443	9,963	10,523	11,175	8,491	9,647
Growth rate		*6.9%*	*6.5%*	*6.5%*	*-14.8%*	*8.5%*	*8.1%*	*5.5%*	*5.6%*	*6.2%*	*0.8%*	*6.8%*
Current Forecast	7,497	7,140	7,300	7,750	7,697	7,763	7,897	8,298	8,726	9,250	7,477	8,272
Growth rate		*-4.8%*	*2.2%*	*6.2%*	*-0.7%*	*0.9%*	*1.7%*	*5.1%*	*5.2%*	*6.0%*	*0.7%*	*3.7%*

Source: CMS Office of the Actuary.

Note: AAGR is average annual growth rate.

Table 7. Private Health Insurance Expenditure Projections, 2010-2019

	Private Health Insurance Spending ($ billions)											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Cumulative Spending 2010-2014 *(AAGR)*	Cumulative Spending 2014-2019 *(AAGR)*
A. Pre-ACA Baseline (Feb. 2010)	829	862	894	942	1005	1076	1149	1220	1291	1361	4533	7102
Growth rate		*4.0%*	*3.7%*	*5.4%*	*6.6%*	*7.1%*	*6.8%*	*6.2%*	*5.8%*	*5.4%*	*4.9%*	*6.3%*
B. ACA Baseline (Sept. 2010)	845	864	895	944	1065	1161	1258	1346	1398	1467	4613	7694
Growth rate		*2.2%*	*3.6%*	*5.4%*	*12.8%*	*9.1%*	*8.3%*	*7.0%*	*3.8%*	*5.0%*	*6.0%*	*6.6%*
C. Current Forecast (Oct. 2014)	860	889	917	948	1012	1082	1137	1191	1253	1330	4625	7006
Growth rate		*3.4%*	*3.2%*	*3.3%*	*6.8%*	*6.9%*	*5.0%*	*4.8%*	*5.2%*	*6.2%*	*4.2%*	*5.6%*
ACA Baseline Relative to Pre-ACA Baseline												
Difference (B–A)	16	2	1	1	60	86	108	125	107	107	80	592
Percent change	1.9%	0.2%	0.1%	0.1%	6.0%	7.9%	9.4%	10.3%	8.3%	7.8%	1.8%	8.3%
Current Forecast Relative to Pre-ACA Baseline												
Difference (C–A)	30	27	23	5	7	7	-13	-29	-38	-30	92	-96
Percent change	3.7%	3.1%	2.5%	0.6%	0.7%	0.6%	-1.1%	-2.4%	-2.9%	-2.2%	2.0%	-1.3%
Current Forecast Relative to ACA Baseline												
Difference (C–B)	15	25	22	4	-53	-79	-121	-155	-145	-137	13	-688
Percent change	1.7%	2.9%	2.4%	0.4%	-4.9%	-6.8%	-9.6%	-11.5%	-10.3%	-9.3%	0.3%	-8.9%

Source: CMS Office of the Actuary.

Note: AAGR is average annual growth rate.

Table 8. Private Health Insurance Spending, Enrollment and Spending Per Enrollee Projections, 2010-2019

	Private Health Insurance Spending and Enrollment											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Average Spending/ Enrollment 2010-2014 *(AAGR)*	Average Spending/ Enrollment 2014-2019 *(AAGR)*
Private Health Insurance Spending ($ billions)												
ACA Baseline	845	864	895	944	1065	1161	1258	1346	1398	1467	923	1282
Growth rate		*2.2%*	*3.6%*	*5.4%*	*12.8%*	*9.1%*	*8.3%*	*7.0%*	*3.8%*	*5.0%*	*6.0%*	*6.6%*
Current Forecast	860	889	917	948	1,012	1,082	1,137	1,191	1,253	1,330	925	1168
Growth rate		*3.4%*	*3.2%*	*3.3%*	*6.8%*	*6.9%*	*5.0%*	*4.8%*	*5.2%*	*6.2%*	*4.2%*	*5.6%*
Private Health Insurance Enrollment (millions)												
ACA Baseline	189.2	187.1	188.4	190.7	198.1	200.6	203.7	206.4	206.5	207.1	191	204
Growth rate		*-1.1%*	*0.7%*	*1.2%*	*3.9%*	*1.3%*	*1.5%*	*1.3%*	*0.0%*	*0.3%*	*1.2%*	*0.9%*
Current Forecast	186.3	187.3	188.0	188.5	190.0	197.0	199.1	200.1	201.7	203.2	188	199
Growth rate		*0.5%*	*0.4%*	*0.3%*	*0.8%*	*3.7%*	*1.1%*	*0.5%*	*0.8%*	*0.7%*	*0.5%*	*1.4%*
Private Spending Per Enrollee ($)												
ACA Baseline	4,466	4,617	4,753	4,948	5,375	5,790	6,174	6,520	6,768	7,085	4,832	6,285
Growth rate		*3.4%*	*2.9%*	*4.1%*	*8.6%*	*7.7%*	*6.6%*	*5.6%*	*3.8%*	*4.7%*	*4.7%*	*5.7%*
Current Forecast	4,614	4,745	4,878	5,027	5,327	5,494	5,710	5,954	6,212	6,547	4,918	5,874
Growth rate		*2.8%*	*2.8%*	*3.1%*	*6.0%*	*3.1%*	*3.9%*	*4.3%*	*4.3%*	*5.4%*	*3.7%*	*4.2%*

Source: CMS Office of the Actuary.

Note: AAGR is average annual growth rate.

Table 9. Out-of-Pocket Expenditure Projections, 2010-2019

	Out-of-Pocket Spending ($ billions)											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Cumulative Spending 2010-2014 *(AAGR)*	Cumulative Spending 2014-2019 *(AAGR)*
A. Pre-ACA Baseline (Feb. 2010)	292	300	311	327	348	372	395	417	441	466	1579	2438
Growth rate		*2.7%*	*3.7%*	*5.2%*	*6.4%*	*6.8%*	*6.3%*	*5.6%*	*5.6%*	*5.6%*	*4.5%*	*6.0%*
B. ACA Baseline (Sept. 2010)	288	298	309	325	322	338	354	374	410	439	1542	2237
Growth rate		*3.2%*	*4.0%*	*5.2%*	*-1.1%*	*5.0%*	*4.7%*	*5.8%*	*9.6%*	*7.0%*	*2.8%*	*6.4%*
C. Current Forecast (Oct. 2014)	306	316	328	339	338	346	356	372	391	414	1627	2217
Growth rate		*3.4%*	*3.8%*	*3.2%*	*-0.1%*	*2.2%*	*3.0%*	*4.5%*	*5.1%*	*5.7%*	*2.6%*	*4.1%*
ACA Baseline Relative to Pre-ACA Baseline												
Difference (B–A)	-4	-2	-2	-2	-26	-34	-41	-43	-31	-27	-36	-202
Percent change	-1.3%	-0.8%	-0.6%	-0.6%	-7.6%	-9.1%	-10.4%	-10.3%	-6.9%	-5.8%	-2.3%	-8.3%
Current Forecast Relative to Pre-ACA Baseline												
Difference (C–A)	14	16	17	11	-10	-26	-39	-45	-50	-52	48	-222
Percent change	4.6%	5.4%	5.5%	3.5%	-2.9%	-7.0%	-9.9%	-10.8%	-11.3%	-11.2%	3.0%	-9.1%
Current Forecast Relative to ACA Baseline												
Difference (C–B)	17	19	19	13	16	8	2	-2	-19	-25	84	-20
Percent change	6.0%	6.3%	6.1%	4.1%	5.1%	2.3%	0.6%	-0.6%	-4.6%	-5.8%	5.5%	-0.9%

Source: CMS Office of the Actuary.

Note: AAGR is average annual growth rate.

Table 10. Other Health Expenditure Projections, 2010-2019

	Other Health Spending ($ billions)											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Cumulative Spending 2010-2014 *(AAGR)*	Cumulative Spending 2014-2019 *(AAGR)*
A. Pre-ACA Baseline (Feb. 2010)	521.5	549.3	580.8	615.2	647.9	687.1	733.7	781.5	832.2	884.4	2915	4567
Growth rate		*5.3%*	*5.7%*	*5.9%*	*5.3%*	*6.1%*	*6.8%*	*6.5%*	*6.5%*	*6.3%*	*5.6%*	*6.4%*
B. ACA Baseline (Sept. 2010)	505.2	533.5	559.7	596.0	626.0	670.6	723.9	773.8	826.4	877.8	2820	4499
Growth rate		*5.6%*	*4.9%*	*6.5%*	*5.0%*	*7.1%*	*7.9%*	*6.9%*	*6.8%*	*6.2%*	*5.5%*	*7.0%*
C. Current Forecast (Oct. 2014)	515.5	534.0	554.5	567.9	583.2	605.4	636.6	675.0	717.2	762.0	2755	3979
Growth rate		*3.6%*	*3.8%*	*2.4%*	*2.7%*	*3.8%*	*5.2%*	*6.0%*	*6.3%*	*6.2%*	*3.1%*	*5.5%*
ACA Baseline Relative to Pre-ACA Baseline												
Difference (B–A)	-16	-16	-21	-19	-22	-17	-10	-8	-6	-7	-94	-68
Percent change	-3.1%	-2.9%	-3.6%	-3.1%	-3.4%	-2.4%	-1.3%	-1.0%	-0.7%	-0.7%	-3.2%	-1.5%
Current Forecast Relative to Pre-ACA Baseline												
Difference (C–A)	-6	-15	-26	-47	-65	-82	-97	-107	-115	-122	-160	-587
Percent change	-1.2%	-2.8%	-4.5%	-7.7%	-10.0%	-11.9%	-13.2%	-13.6%	-13.8%	-13.8%	-5.5%	-12.9%
Current Forecast Relative to ACA Baseline												
Difference (C–B)	10	1	-5	-28	-43	-65	-87	-99	-109	-116	-65	-519
Percent change	2.0%	0.1%	-0.9%	-4.7%	-6.8%	-9.7%	-12.1%	-12.8%	-13.2%	-13.2%	-2.3%	-11.5%

Source: CMS Office of the Actuary.

Note: AAGR is average annual growth rate.

Table 11: Congressional Budget Office Expenditure Projections, 2010 and 2015

	2010 Report: 2014–2019 ($ Billions)	2015 Report: 2014–2019 ($ Billions)	Difference (2010-2015)	
			$	%
Outlays				
Exchange Subsidies & Related Spending	458	333	-125	-27.3%
Medicaid and CHIP Outlays	441	347	-94	-21.3%
Gross Cost of Coverage Provisions	921	686	-235	-25.5%
Medicare				
Total Mandatory Outlays	4485	4,042	-443	-9.9%
Net Mandatory Outlays	3816	3,378	-438	-11.5%

Sources: Congressional Budget Office, The Budget and Economic Outlook: an Economic Update, August 2010. Congressional Budget Office, Updated Budget Projections: 2015 to 2025.

Notes: CHIP is Children's Health Insurance Program. Estimates are for federal spending and revenues only. Medicaid and CHIP estimates only include ACA expansion population.

About the Authors and Acknowledgements

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State Health Insurance Marketplace Plans: New Opportunities to Help Smokers Quit

AMERICAN LUNG ASSOCIATION®

Evidence suggests that smoking rates may be high among people enrolled in state marketplace plans:

Individuals eligible for marketplace plan subsidies are likely to have a higher smoking rate than those with higher incomes.

- In 2012, 22.4 percent of Americans earning between 100 to 400 percent of the Federal Poverty Level (FPL) smoked, compared to 12.8 percent of those earning more than 400 percent of the FPL.[1]

In 2012, smoking rates were also higher among the uninsured. The majority of marketplace enrollees in 2014 were previously uninsured.[2]

- In 2012, 30.0 percent of Americans who were uninsured were current smokers, compared to 17.8 percent of similarly aged people with insurance coverage.[3]

Introduction

Millions of Americans are now enrolled in health insurance purchased through marketplaces created by the Affordable Care Act (ACA). These marketplaces, 14 of which are state-run marketplaces and 37 of which are federally-facilitated marketplaces,[1] primarily offer subsidized health coverage to people with lower incomes and who may have previously been uninsured and lacked access to quality healthcare.[2]

This newly insured population presents an opportunity to connect tobacco users with treatments that are proven to help them quit. Tobacco use is the number one preventable cause of disease and death in the United States, and is responsible for almost 500,000 deaths each year. Another 16 million people are living with a tobacco related disease.[5] It costs over $289 billion annually in smoking-related healthcare expenses and lost productivity.[6] Helping smokers quit smoking will save lives and money.

This report finds that the coverage provided through state health insurance marketplaces is failing to give smokers all the help they need to quit, including access to all seven FDA-approved tobacco cessation medications required by federal guidance.

Seven FDA-Approved Tobacco Cessation Medications:

- Nicotine Patch
- Nicotine Gum
- Nicotine Lozenge
- Nicotine Nasal Spray
- Nicotine Inhaler
- Bupropion
- Varenicline

All Marketplace Plans Must Cover Tobacco Cessation Treatments

The ACA requires health insurance plans purchased through marketplaces to cover Essential Health Benefits, which include all preventive services given an 'A' or 'B' rating by the U.S. Preventive Services Task Force (USPSTF). The USPSTF, an independent panel of experts in prevention- and evidence-based medicine, has given tobacco cessation interventions for adults an 'A' grade. This makes coverage of tobacco cessation treatments required for all marketplace plans—regardless of whether the federal or state government runs the marketplace.

On May 2, 2014, the U.S. Departments of Health and Human Services, Labor and Treasury issued a Frequently Asked Questions (FAQ) guidance document translating the USPSTF recommendation into insurance coverage policy. The guidance stated: "The Departments will consider a group health plan or health insurance issuer to be in compliance with the requirement to cover tobacco use counseling and interventions, if, for example, the plan or issuer covers without cost-sharing:

1. Screening for tobacco use; and,
2. For those who use tobacco products, at least two tobacco cessation attempts per year. For this purpose, covering a cessation attempt includes coverage for:
    - Four tobacco cessation counseling sessions of at least 10 minutes each (including telephone counseling, group counseling and individual counseling) without prior authorization; and
    - All Food and Drug Administration (FDA)-approved tobacco cessation medications (including both prescription and over-the-counter medications) for a 90-day treatment regimen when prescribed by a healthcare provider without prior authorization.

This guidance is based on the Public Health Service-sponsored Clinical Practice Guideline, Treating Tobacco Use and Dependence: 2008 Update."[7] The guidance was applied to plans immediately.

Purpose of this Report

This report examines state implementation of tobacco cessation requirements in the ACA, specifically whether issuers of state marketplace plans are providing coverage of all seven FDA-approved tobacco cessation medications as required by the Formularies for every issuer of marketplace plans in each state and Washington, D.C. Formularies were reviewed using publically available links to see which tobacco cessation medications were listed. Information from the formularies about cost-sharing and prior authorization was also collected, as these policies are prohibited in the guidance. Additionally, it was noted whether there was a direct link to each formulary provided on the marketplace website in order to capture how easily consumers shopping for plans could find this information.

The American Lung Association is currently unable to track coverage of tobacco cessation counseling in these plans because public links are not available to documents that would note this coverage.

Federally-Facilitated Marketplaces: These marketplaces are state-based, and state-specific requirements and policies (like Essential Health Benefit requirements) still apply; the federal government is facilitating the marketplace. Consumers shop for plans and apply for coverage through Healthcare.gov. For the purposes of this report, plans in this category include federally-supported state-based marketplaces and state-partnership marketplaces because consumers use Healthcare.gov to purchase coverage in these states.

State-Run Marketplaces: The individual states perform all marketplace functions. Consumers shop for plans and apply for coverage through marketplace sites that the states have created.

In this report, plans identified as "marketplace plans" or "state marketplace plans" include plans sold in both types of marketplaces listed above, unless otherwise specified.

Formulary: A list of medications a health insurance plan covers. Sometimes called a "drug list," "preferred drug list" or "PDL."

Results

Based on the formulary information found in publicly available documents, coverage in the vast majority of state marketplace plans is not consistent with federal requirements in terms of covering all seven tobacco cessation medications. Compliance was marginally higher in state-run marketplaces than in federally-facilitated marketplaces:

- Only 60 plan issuers (17.2 percent) indicated full compliance with the tobacco cessation guidance, meaning all seven FDA-approved tobacco cessation medications were listed on the formulary with no prior authorization or cost-sharing indicated.
- Overall, 41.4 percent of the issuers selling marketplace plans listed all seven tobacco cessation medications as covered on formularies.
- Of the 252 issuers selling plans in federally-facilitated marketplaces, 101 (40.1 percent) listed all seven tobacco cessation medications as covered on formularies.
- Of the 96 issuers selling plans in state-run marketplaces, 43 (44.8 percent) listed all seven tobacco cessation medications as covered on formularies.

Tobacco cessation treatments are required by the ACA to be covered without cost-sharing, however the vast majority of plan issuers did not indicate tobacco cessation medications were provided at no cost on their formularies. In many cases, tobacco cessation medications were listed on formularies organized by tiers, implying, at least to the patient who is unaware of this requirement, that cost-sharing is charged. If these plans have removed cost-sharing in some other way, but are not indicating it on their plan documents, then patients are not getting accurate information about the plans' formularies.

- Overall, 63 issuers (18.1 percent) listed all seven tobacco cessation medications and indicated that none of them had cost-sharing.
- In federally-facilitated marketplaces, 44 issuers (17.5 percent) indicated that they cover all seven tobacco cessation medications without cost-sharing.
- In state-run marketplaces, 19 issuers (19.8 percent) indicated that they cover all seven tobacco cessation medications without cost-sharing.

Compliance with tobacco cessation requirements varies by state.

- West Virginia is the only state with all marketplace plans (there is only one plan in the state) that included the seven tobacco cessation medications on their formularies.
- In 21 states, at least half of issuers listed all seven tobacco cessation medications on their formularies.
- In 18 states, less than one-third of issuers listed all seven tobacco cessation medications on their formularies.
- In five states, Arkansas, Hawaii, Mississippi, South Dakota and Vermont, no plan issuers listed all tobacco cessation medications on their formularies.

The guidance specifies plans should not require prior authorization for tobacco cessation treatments. Most issuers appeared to be complying with this part of the guidance.

- Overall, only 10.1 percent of issuers required prior authorization for any or all of the tobacco cessation medications that they included on their

formularies.

- Nicotine inhalers, nicotine nasal spray, and varenicline were the medications that most commonly required prior authorization.

In both types of marketplaces, tobacco cessation medications requiring a prescription were listed on formularies more frequently than over-the-counter medications.

- Bupropion and varenicline are the most commonly listed medications on formularies. 344 issuers (98.9 percent) list bupropion and 299 (85.9 percent) list varenicline on their formularies.
- Nicotine nasal spray and nicotine inhalers are the next most commonly listed medications. 244 issuers (70.1 percent) list nicotine nasal spray and 253 issuers (72.7 percent) list nicotine inhalers.
- The over-the-counter tobacco cessation medications (nicotine gum, patch and lozenge) were listed on formularies least often. Of issuers, 196 (56.3 percent) listed nicotine gum, 211 issuers (60.6 percent) listed nicotine patches and 191 issuers (54.9 percent) listed nicotine lozenges.

A majority of issuers provide a direct, public link to their formulary for consumers shopping for health insurance, but not all of them do. Consumers are more likely to find public links to formularies in states with federally-facilitated marketplaces than state-run marketplaces.

- In federally-facilitated marketplaces, 82.5 percent of issuers provided direct links to their formularies through the Healthcare.gov website. Plans are supposed to provide these links to the Department of Health and Human Services (HHS), and the requirements for this are supposed to become stricter in coming plan years.
- In state-run marketplaces, only 57.3 percent of issuers provided direct links to their formularies through the state marketplace website.
    - All of the issuers in the marketplace websites in Connecticut and Idaho provided direct links to their formularies through their state marketplace websites.
    - The marketplace websites in Colorado, Kentucky, Massachusetts, Maryland, New York, Rhode Island and Vermont did provide links, but some issuers either did not submit a link or linked to more general plan information instead of the formulary.
    - The marketplace websites in California, District of Columbia, Hawaii, Minnesota and Washington did not provide any links to formularies for consumers shopping for insurance on their site.

Methodology

Data in this report and its associated appendix were collected between January 15 and February 11, 2015. Many plans and plan issuers change the information on their formularies throughout the year. These data are intended to reflect a "snapshot" in time of marketplace plans' drug coverage during the 2015 plan year open enrollment period. Note that any possible changes to formularies made after February 11, 2015 are not reflected in this report.

The data collection method differed between federally-facilitated marketplaces and state-run marketplaces. Lists of issuers, plans and formulary links for federally-facilitated marketplaces and the three federally-supported state-based marketplaces were downloaded from Healthcare.gov on January 15, 2015 and January 26, 2015, respectively.[8] This is the same information available to consumers searching for plans through the Healthcare.gov portal. The links to formularies provided were used to gather these data. If the link provided was broken or directed only to a general issuer site, the issuer was recorded as not providing a direct link to the formulary, and the issuer's website was searched for the most current formulary available for marketplace plans, and the data found was used in the report.

For state-run marketplaces, the marketplace website was searched for public links to formularies, and used to record data when available. When public links were not available through the state-run marketplace website, these issuers were recorded as not providing public links, and researchers then searched issuer websites for the most current formulary available for marketplace plans.

In many cases, plan issuers sold multiple plan products in the same marketplace, with different names and different levels (platinum, gold, silver, bronze). A preliminary analysis determined that medications listed on the formulary did not differ between issuer products—only tiering structure and cost-sharing levels differed. Therefore, data in this report was collected at the plan issuer level.

Medications were considered to be included on the formulary if they were listed in the formulary document, regardless of any limitations or tier assigned to them. Medications were considered to be covered with no cost-sharing if the formulary specifically indicated no cost-sharing or contained a link to a document that had a list of preventive medications with no cost-sharing that included the medication. If different versions of the medication (generic versus brand name) had different restrictions or pricing, the least restrictive and cheapest were used in the analysis. Bupropion, the generic name for a medication that is used to treat depression under the brand name Wellbutrin, and used for tobacco cessation under the brand name Zyban, was recorded as covered if it was listed as bupropion or Zyban on the formulary.

This analysis contains several potential weaknesses:

- The FAQ guidance states that tobacco cessation counseling must also be covered by insurance plans as preventive care. Information about covered counseling is not available on formularies, and researchers were not able to universally access the documents needed to record coverage of counseling for all marketplace plans. Therefore, this analysis does not include coverage of this critical component of a comprehensive tobacco cessation benefit. This demonstrates the need for HHS and state marketplaces to require plans and issuers to be more transparent about coverage information and with important plan documents.

- Most issuers note that their formularies change throughout the year. Since this analysis took place during a specific time period, it does not capture any changes to issuer formularies after February 11, 2015.
- This analysis only takes into account information found on publically available formularies. In some cases, there may be other documents or policies associated with plans that give more detail or clarification about coverage of tobacco cessation treatments—for instance, treatments that are provided with no cost-sharing. The data in this report is *only* intended to indicate information found on the formulary, and information on cost-sharing or medications coverage in formularies may in fact differ from the actual patient experience. However, the process used to collect data in this report mirrors what consumers experience when shopping for coverage and making purchasing decisions, which is why the Lung Association used this analysis model.

Conclusions

Based on the information in publicly accessible formularies, the vast majority of state marketplace plan issuers' implementation of tobacco cessation coverage is not consistent with the requirements under the ACA and the provisions of the May 2014 guidance. Fewer than half of the issuers of marketplace plans list all seven tobacco cessation medications as covered and even fewer indicate that these medications are available with no cost-sharing, which is a provision of the ACA.

Furthermore, this analysis shows the critical need for more transparency in the marketplace websites and plan issuer formularies and materials. Consumers need easy access to formularies in order to make informed decisions about which health plan will best meet their needs. Access to additional plan policy documents prior to enrollment, such as member handbooks, and evidence of coverage documents is also crucial to determine which non-pharmacological treatments are covered, like tobacco cessation counseling.

Coverage of Tobacco Cessation Medications in State Health Insurance Marketplaces

		Number of Issuers Covering:							
State	Total Number of Issuers	Nicotine Gum	Nicotine Patch	Nicotine Lozenge	Nicotine Nasal Spray	Nicotine Inhaler	Bupropion	Varenicline	In Full Compliance with Guidance*
Alabama	3	1	1	1	2	2	3	2	0
Alaska	2	1	1	1	1	1	1	1	0
Arizona	13	10	10	10	11	11	13	12	1
Arkansas	4	2	2	2	0	1	4	4	0
California	10	9	8	8	7	7	10	8	6
Colorado	10	4	4	4	4	4	10	5	1
Connecticut	4	1	1	1	1	1	4	2	1
District of Columbia	4	1	2	1	2	3	3	2	1
Delaware	3	1	3	1	3	3	3	3	0
Florida	14	7	8	5	9	10	14	13	2
Georgia	9	4	4	4	5	6	9	8	1
Hawaii	2	2	2	0	1	2	2	2	0
Idaho	5	2	3	2	5	5	5	5	0
Illinois	10	4	5	4	8	8	10	9	1
Indiana	9	5	4	5	4	4	9	7	0
Iowa	4	2	3	2	4	3	4	4	0
Kansas	5	3	5	3	5	4	5	5	0
Kentucky	5	1	1	1	4	3	5	5	0
Louisiana	6	3	3	3	5	5	6	5	3
Maine	3	1	1	1	2	2	3	3	1
Maryland	7	4	4	4	4	5	7	4	3
Massachusetts	11	5	5	5	7	8	11	10	0
Michigan	16	12	11	12	12	13	16	14	4
Minnesota	5	4	4	4	5	5	5	5	3
Mississippi	3	1	1	1	1	1	3	2	0
Missouri	7	2	4	2	5	4	7	6	0
Montana	4	3	3	3	4	4	4	4	0
Nebraska	4	3	3	3	4	4	4	4	0
Nevada	5	3	2	3	3	3	5	4	2
New Hampshire	5	3	2	3	4	4	5	5	1

continued

Updated

*Full compliance with the guidance is defined as: all seven FDA-approved tobacco cessation medications were listed on the formulary with no prior authorization indicated and no cost-sharing specifically indicated.

Blue indicates that the state has a federally-facilitated marketplace, as defined on page 2 of this report.

Orange indicates that the state has a state-run marketplace, as defined on page 2 of this report.

For more information and details of coverage for individual plan issuers, please download the Appendix (PDF), available at Lung.org/assets/documents/publications/other-reports/state-health-insurance-report-appendix.pdf

		Number of Issuers Covering:							
State	Total Number of Issuers	Nicotine Gum	Nicotine Patch	Nicotine Lozenge	Nicotine Nasal Spray	Nicotine Inhaler	Bupropion	Varenicline	In Full Compliance with Guidance*
New Jersey	6	2	4	2	5	5	6	5	0
New Mexico	5	4	4	4	5	4	5	5	2
New York	18	13	13	13	11	15	18	16	2
North Carolina	3	1	2	1	2	2	3	2	0
North Dakota	3	2	2	2	2	2	3	2	1
Ohio	16	6	6	6	8	9	16	13	1
Oklahoma	4	4	3	4	4	4	4	4	0
Oregon	10	5	5	5	7	7	9	9	2
Pennsylvania	15	10	12	10	12	12	15	14	4
Rhode Island	3	1	1	1	1	1	3	1	0
South Carolina	5	4	4	4	5	5	5	5	1
South Dakota	3	1	1	1	1	0	3	1	0
Tennessee	5	3	3	3	4	5	5	5	1
Texas	15	10	10	10	11	11	15	13	3
Utah	6	2	4	2	6	6	6	6	1
Vermont	2	0	0	0	0	1	2	2	0
Virginia	9	4	7	4	7	8	9	8	2
Washington	10	7	7	7	7	6	9	9	2
West Virginia	1	1	1	1	1	1	1	1	0
Wisconsin	15	11	11	11	11	11	15	13	7
Wyoming	2	1	1	1	2	2	2	2	0

Updated

*Full compliance with the guidance is defined as: all seven FDA-approved tobacco cessation medications were listed on the formulary with no prior authorization indicated and no cost-sharing specifically indicated.

Blue indicates that the state has a federally-facilitated marketplace, as defined on page 2 of this report.

Orange indicates that the state has a state-run marketplace, as defined on page 2 of this report.

For more information and details of coverage for individual plan issuers, please download the Appendix (PDF), available at Lung.org/assets/documents/publications/other-reports/state-health-insurance-report-appendix.pdf

Notes:

1. For the purposes of this report, all marketplaces that use Healthcare.gov for enrollment are considered to be federally-facilitated marketplaces, including federally-supported state-based marketplaces and state-partnership marketplaces.
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