

# Estimating the Impact of Repealing the Affordable Care Act on Hospital Revenues and Net Income

*Assumptions and Methodology*

Dobson | DaVanzo

Dobson DaVanzo & Associates, LLC Vienna, VA 703.260.1760 [www.dobsondavanzo.com](http://www.dobsondavanzo.com)

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## Assumptions and Methodology

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The Federation of American Hospitals (FAH)

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Prepared by:

**Dobson | DaVanzo**

Allen Dobson, Ph.D.

Joan DaVanzo, Ph.D.

Randy Haught

Phap-Hoa Luu, M.B.A.

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# Introduction

Dobson DaVanzo & Associates were commissioned by the Federation of American Hospitals (FAH) and the American Hospital Association (AHA) to estimate the financial impact of repealing the Affordable Care Act (ACA) on hospital revenues and net income at the national level. In order to estimate the financial impact of repealing the Affordable Care Act (ACA) on hospital revenues and net income, we first conducted the following steps to estimate changes in hospital revenues and net income that would result from specific insurance coverage expansion provisions under the ACA:

- Step 1: Determine changes in health insurance coverage under the ACA;
- Step 2: Estimate hospital costs associated with the newly insured;
- Step 3: Estimate change in hospital revenues for the newly insured;
- Step 4: Estimate the impact of movement from commercial insurance to Medicaid and Marketplaces (Crowd-out); and
- Step 5: Estimate impact on hospital revenues and net income due to the ACA.

The ACA also included a series of Medicare payment reductions that affect hospitals and reductions to Medicaid Disproportionate Share Hospital (DSH) allotments which also effect payments to hospitals. In this analysis, we estimated the impact on hospital revenues of the payment reductions from 2010 through 2026 for the following ACA provisions:

- Medicare market basket update reductions and productivity adjustments;
- Medicare DSH payment reductions;
- Medicare Hospital Acquired Condition (HAC) Reduction Program;
- Medicare Hospital Readmission Reduction (HRR) Program; and
- Medicaid DSH Allotment Reductions.

Finally, we estimated the impact of ACA repeal, which was modeled by eliminating or reducing hospital revenues associated with specific ACA provisions based on assumptions that we developed regarding the impact of the following elements of the ACA that may be repealed:

- Repeal individual tax penalties for not keeping qualifying health coverage;
- Repeal tax penalties for employers that do not offer qualifying health coverage;
- Repeal premium tax credits;
- Repeal cost-sharing subsidies;
- Repeal the transitional reinsurance program;

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- Repeal the Medicaid expansion;
- Repeal the Medicaid Disproportionate Care Hospital (DSH) reductions; and
- Repeal other taxes specified in the ACA (i.e., medical device tax, prescription drug tax, over-the-counter medication tax, deduction for expenses allocable to Medicare Part D subsidy, taxes on employee health insurance premiums and health plan benefits, limitations on contributions to flexible spending accounts, reduced tax treatment of health savings accounts from 20% to 10%, reduction in chronic care tax from 10% to 7.5%, tax on high-cost insurance plans, and Medicare tax increase on individual wages).

The following sections provide a detailed description of the data, methods and assumptions that were used to produce estimates of the impact of ACA repeal on hospital revenues and net income.

# *Estimating the Impact of ACA on Hospital Revenues*

To estimate the financial impact of repealing the Affordable Care Act (ACA) on hospital revenues and net income, we first conducted the following steps to estimate changes in hospital revenues and net income that would result from specific insurance coverage expansion provisions of the ACA. Our national model follows a 5-step analysis and the following sections describe each of these steps in detail.

These steps aim to use existing projections of changes in insurance coverage under the ACA to estimate the impact of those coverage changes on hospital costs and revenues over the 2014 through 2026 period. Although some of the ACA coverage provisions began in 2010, we selected 2014 as a starting point because the major coverage expansions (i.e., Medicaid expansion and subsidized Marketplace coverage) began in 2014. The Congressional Budget Office (CBO) estimated that the ACA coverage provisions prior to 2014 reduced the uninsured by about one million people.

## **Step 1: Determine Changes in Health Insurance Coverage under the ACA**

Determining the changes in health insurance coverage under Medicaid and through the Marketplaces under the ACA is a crucial part of our model construction, because increases in the number of people who become insured drive reductions in hospital uncompensated care and generate new revenues to hospitals. The methodology we adopted for this analysis required us to estimate the number of people who would become newly insured through the Marketplaces and through Medicaid in states that expanded eligibility under the ACA. The model also required us to estimate the number of people who would substitute Medicaid or subsidized Marketplace coverage for commercial coverage (i.e., crowd-out) since hospital payment levels may be different across these payers. To estimate changes in insurance coverage under the ACA's coverage expansions, we relied on estimates by CBO for the period between 2016 and 2026,<sup>1</sup> and incorporated the Urban Institute's recent analysis of the impact of repealing the

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<sup>1</sup> Congressional Budget Office. Federal Subsidies for Health Insurance Coverage for People under age 65: Tables from CBO's March 2016 baseline. March 2016.

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ACA.<sup>2</sup> The following sections describe our method for developing these coverage change estimates.

## Change in Number of Uninsured

*Exhibit 1* presents our estimates of changes in insurance coverage due to the ACA from 2014 to 2026. The reduction in uninsured is based on CBO estimates from their March 2016 baseline projections for 2016 through 2026. We used earlier estimates from CBO for 2014 and 2015, which were adjusted to be consistent with their latest projections.<sup>3</sup> Estimates of the change in the number of uninsured reflect the difference from the number of people who would have been uninsured in the absence of the ACA that was due solely to the effects of the ACA provisions. Recent estimates from the U.S. Bureau of the Census showed an 8.8 million decline in the number of uninsured between 2013 and 2014 and a 12.8 million decline from 2013 to 2015.<sup>4</sup> However, between 2010 and 2013 CBO estimated that the ACA reduced the number of uninsured by about one million people due to various provisions including early Medicaid expansion options for states, federal high-risk pools, extending dependent coverage through age 26, and small employer tax credits. Also, the Bureau of the Census estimates account for all other factors that may affect coverage in addition to the ACA. Thus, the CBO estimates differ from the annual changes reported by the Bureau of the Census due to the fact that CBO measures the change in the uninsured due solely to the accumulated effect of ACA provisions.

## Movement from Commercial Insurance to Medicaid and Marketplace Plans

CBO estimated that 13 million people would move from commercial employer coverage (9 million) and non-group coverage (4 million) into either Medicaid or Marketplace plans by 2021. However, employer coverage has remained stable after the ACA and has actually increased since 2013.<sup>5</sup> Based on these results, the Urban Institute assumed minimal movement of individuals from commercial to Medicaid or Marketplace plans under the ACA. The CBO argues that as people gain experience with the Marketplaces and their available subsidies that more people will choose plans on the Marketplace. Likewise, as employers gain experience with the Marketplaces and scheduled taxes on high-cost health plans (i.e., “Cadillac Tax”) are implemented then employers may be likely to decline offering coverage in the future and al-

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<sup>2</sup> Urban Institute. Buettgens et al. The Cost of ACA Repeal. June 2016.

<sup>3</sup> Congressional Budget Office letter to Speaker Boehner, July 24, 2012.

<sup>4</sup> Jessica C. Barnett and Marina S. Vornovitsky, “Health Insurance Coverage in the United States: 2015, Current Population Reports”, September 2016

<sup>5</sup> Jessica C. Barnett and Marina S. Vornovitsky, “Health Insurance Coverage in the United States: 2015, Current Population Reports”, September 2016

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low their employees to purchase Marketplace coverage. Finally, persons purchasing individual non-group coverage can only receive subsidies through the Marketplaces which provide a substantial incentive to substitute a Marketplace plan for a non-Marketplace individual plan. Based on this information, we assumed that about 6 million people would leave their existing plan to enroll in Medicaid or the Marketplace by 2021, which is lower than CBO's estimate but higher than the Urban Institute estimate.

We assumed that about one million newly eligible Medicaid enrollees would have commercial coverage in absence of the expansion (as described below). We assume that the remaining 5 million people moving from commercial plans would take coverage through the Marketplaces.

## Estimating Medicaid Enrollment under the ACA

CBO estimated that Medicaid and CHIP enrollment would increase by 13 million in 2016 and grow to 19 million by 2026. They also estimated that Medicaid enrollment for persons newly eligible in states that expanded coverage would be 11 million in 2016 growing to 15 million by 2026. For this analysis, we assumed that the difference between these two numbers would represent enrollment for people currently eligible for Medicaid (i.e. "Woodwork effect"). The woodwork enrollment population is considered to be affected by the ACA due to the increased awareness of Medicaid and the "no wrong door" policy of the Marketplaces that coordinate with state Medicaid agencies to enroll eligible people into Medicaid when they apply through the Marketplaces. We assumed that all woodwork enrollees were previously uninsured.

For the newly eligible Medicaid population, we made two adjustments to CBO's estimates. First, CBO assumed that additional states would opt to expand coverage in the future. We assumed that only the 31 states plus the District of Columbia that have adopted the Medicaid expansion by 2016 would continue and did not attempt to infer which states might expand in the future. Second, since we reduced the number of people CBO estimated that would move from commercial plans into Medicaid or Marketplace plans during the projection period, we reduced Medicaid enrollment accordingly.

For the newly eligible Medicaid population, we assumed a crowd-out rate of 10 percent based on Dague's 2012 study of BadgerCarePlus for 2016,<sup>6</sup> and applied this throughout the study

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<sup>6</sup> Dague. Estimates of Crowd-out from a Public Health Insurance Expansion Using Administrative Data. NBER Working Paper Series. May 2011.

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period. The crowd-out assumption implies that 10 percent of the newly eligible Medicaid enrollees would have been covered by a commercial plan in the absence of the Medicaid expansion. *Exhibit 1* presents the projection of Medicaid enrollees that is used for the study.

## Estimating Enrollment on the Marketplaces

Based on recent 2016 open enrollment period data, the Urban Institute estimated that the subsidized enrollment on the marketplace is just over 9 million people. Their projection was similar to CBO's estimate of 10 million in subsidized marketplace coverage. However, CBO estimated a significant increase in future enrollment on the Marketplaces due to the number of people that they assumed would move from commercial insurance into Medicaid and the Marketplaces. The Urban Institute, on the other hand, predicted insignificant growth in the Marketplace coverage after 2016. For this analysis, we used the Urban Institute's more conservative estimate of lower enrollment growth on the Marketplaces and lower reductions in employer-based coverage.

As described above, we assume that 5 million people would move from commercial plans to take coverage through the Marketplaces. We also assume that most of these 5 million individuals would have moved from a non-group plan due to the subsidies that are available only in the Marketplaces. *Exhibit 1* presents the projection of Marketplace enrollees that is used for the study.

**Exhibit 1: Changes in Health Insurance Coverage under the ACA 2014-2026 (in millions)**

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
<b>Change in Uninsured Under the ACA</b>	<b>-12</b>	<b>-16</b>	<b>-22</b>	<b>-24</b>	<b>-23</b>	<b>-23</b>	<b>-23</b>	<b>-23</b>	<b>-24</b>	<b>-24</b>	<b>-24</b>	<b>-24</b>	<b>-24</b>
<b>Enrollment on Health Insurance Marketplaces</b>	<b>9</b>	<b>12</b>	<b>13</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>15</b>	<b>15</b>	<b>16</b>	<b>15</b>	<b>15</b>	<b>16</b>	<b>15</b>
Newly Insured	7	9	10	11	11	11	10	10	11	10	10	11	10
Moved from Commercial	2	3	3	5	5	5	5	5	5	5	5	5	5
<b>Change in Medicaid and CHIP</b>	<b>6</b>	<b>8</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>15</b>						
Newly Eligible Group	5	7	11	11	12	12	12	11	12	11	11	12	11
Newly Insured	4	6	10	10	10	10	10	9	10	10	10	10	10
Moved from Commercial	1	1	1	1	1	1	1	1	1	1	1	1	1
Currently Eligible (Woodwork)	1	1	2	3	2	2	3	4	3	4	4	3	4
<b>Total Number Moved from Commercial</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>6</b>									

Sources: Estimates were based on CBO's estimates of the effects of the ACA on health insurance coverage for people under age 65 - (See CBO. Federal Subsidies for Health Insurance Coverage for People under Age 65: Tables for CBO's March 2016 Baseline; and CBO. Elmendorf. Letter to Boehner. July 24, 2012); and Urban Institute's recent estimates of new enrollment on the Marketplaces - (See Buettgens et al. The Cost of ACA Repeal. Urban Institute. June 2016). Totals may not sum due to rounding.

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## Step 2: Estimate Hospital Costs Associated with the Newly Insured

At the time of this report, data on hospital costs associated with the newly insured was unavailable. Therefore, to estimate hospital costs for newly insured individuals, we examined several data sources and methods. The first method builds up costs based on hospital uncompensated care costs and applies assumed increases in hospital utilization as people become insured. The second method uses hospital utilization and payments for an employer sponsored insurance (ESI) population adjusted to match the demographic mix of the newly insured and converts payments to costs.

### Cost Build Up From Uncompensated Care Data

This method required a multi-step process. First, we estimated the reduction in hospital uncompensated care costs at the national level based using a model developed by ASPE that estimates the change in hospital uncompensated care costs based on changes in the number of uninsured and the number of Medicaid enrollees (DeLeire et al.).<sup>7</sup> Using this model, we estimated the reduction in hospital uncompensated care between 2014 and 2026, accounting for the projected change in the number of uninsured and the number of Medicaid enrollees. Since total hospital uncompensated care is associated with both insured and uninsured patients, this model provides a measure of costs associated only with the newly insured population while they were uninsured. The model estimated that the ACA would result in a reduction of \$324 billion in hospital uncompensated care costs between 2014 and 2026 (*Exhibit 2*).

This total amount results in a reduction in hospital uncompensated care costs of \$937 per newly insured person in 2016 (\$20.6 billion/22 million people). However, not all hospital care for the uninsured is free care. We assume that about 27 percent of hospital care for the uninsured was paid out of pocket, according to an earlier study by the Institute of Medicine.<sup>8</sup> Thus, we estimate that initial hospital costs for this population while uninsured would be \$1,278 per person.

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<sup>7</sup> ASPE Issue Brief. DeLeire et al. Impact of Insurance Expansion on Hospital Uncompensated Care Costs in 2014. Sept 2014.

<sup>8</sup> Institute of Medicine (US) Committee on the Consequences of Uninsurance. Hidden Costs, Values Lost: Uninsurance in America. Washington (DC): National Academies Press (US); 2003. 3, Spending on Health Care for Uninsured Americans: How Much, and Who Pays? Available from: <http://www.ncbi.nlm.nih.gov/books/NBK221653/>

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## Exhibit 2: Estimated Reduction in Hospital Uncompensated Care Costs for Newly Insured 2014-2026

Year	Estimated Reduction in Hospital Uncompensated Care (in billions)
2014	\$5.7
2015	\$14.6
2016	\$20.6
2017	\$23.0
2018	\$23.2
2019	\$23.9
2020	\$26.4
2021	\$28.1
2022	\$29.3
2023	\$31.0
2024	\$31.7
2025	\$32.4
2026	\$34.3
<b>Total 2014-26</b>	<b>\$324.2</b>

Sources and Notes: Projections of change in hospital uncompensated care at the national level under the ACA were based on ASPE's 2014 study – DeLeire et al. Impact of Insurance Expansion on Hospital Uncompensated Care Costs. Sept 2014. Inflation factors are based on CMS' projections of market basket index for period 2014-2025, with the 2025 rate being assumed to continue into 2026.

Newly insured persons are expected to increase their utilization of hospital services. There have been a number of studies that have estimated the potential utilization increase as uninsured persons become insured. For this analysis, we relied on the results of analyses by McKinsey as the basis for our assumption for the newly insured's utilization increase.<sup>9</sup> We then used a distribution ratio of service utilization, calculated based on the Price Waterhouse's capitation rate setting for 2014,<sup>10</sup> to aggregate the service level utilization increase estimates to a single utilization increase ratio of 44% across all sites of care (*Exhibit 3*).

<sup>9</sup> Levine et al. The Impact of Coverage Shifts on Hospital Utilization. McKinsey. May 2013. The McKinsey, in 2013, conducted a study of existing literature on change in the newly insured' utilization behavior, and then built their own model to estimate potential utilization increases by type of service (i.e., inpatient, outpatient, and emergency) as the uninsured gain their coverage.

<sup>10</sup> PWC. Commonwealth of Virginia. Department Of Medical Assistance Services. Medallion 3.0. Data Book and Capitation Rates Fiscal Year 2015: Rates Effective July 1, 2014.

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## Exhibit 3: Estimated Increase in Hospital Utilization for Newly Insured

Type of Service	Projected Increase in Utilization <sup>1</sup>	Proportion of Revenue by Type of Service <sup>2</sup>
Hospital Inpatient	35%	0.48
Emergency Department	15%	0.26
Hospital Outpatient	87%	0.27
<b>Weighted Average Utilization Increase Estimate</b>	<b>44%</b>	

1) Levine et al. The Impact of Coverage Shifts on Hospital Utilization. McKinsey. May 2013;

2) PWC. Commonwealth of Virginia. Department Of Medical Assistance Services. Medallion 3.0. Data Book and Capitation Rates Fiscal Year 2015: Rates Effective July 1, 2014.

## Estimating Cost Based on an ESI Population

To estimate costs using this method, we used summary data from the Health Care Cost and Utilization Project for 2014.<sup>11</sup> This report provided per-capita hospital spending amounts (hospital inpatient and outpatient, including emergency room) for an ESI population in 2014 by age group. We applied these per-capita amounts to estimates of the newly insured by age from the Urban Institute study (described above) to estimate a per-capita amount specific to the demographic distribution of the newly insured. We then adjusted the spending to reflect costs using 2014 hospital private payer payment-to-cost ratios (143.7%) and inflated to 2016 by hospital market basket inflation from 2014 to 2016. This method yielded a cost per person of \$1,724 for 2016 which is roughly comparable to our estimate using the uncompensated care build-up method of \$1,839 (*Exhibit 4*).

<sup>11</sup> Health Care Cost Institute (HCCI), "2014 Health Care Cost and Utilization Report", October 2015

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## Exhibit 4: Estimated Hospital Cost Per Newly Insured

Age Group	Hospital Spending Per Capita 2014 <sup>1</sup>	Age Distribution of Newly Insured <sup>2</sup>
Under 18	\$1,257	13%
19-25	\$1,386	18%
26-44	\$2,033	40%
45-54	\$3,072	17%
55-64	\$4,713	13%
Total	\$2,353	100%
Reduced to Costs (143.7 PTC) <sup>3</sup>	\$1,638	
<b>Inflated 2014 to 2016 (5.3%) <sup>4</sup></b>	<b>\$1,724</b>	

1/ Health Care Cost Institute (HCCI), “2014 Health Care Cost and Utilization Report”, October 2015

2/ Urban Institute. Buettgens et al. The Cost of ACA Repeal. June 2016

3/ American Hospital Association, “Trendwatch Chartbook 2016: Trends Affecting Hospitals and Health Systems”

4/ <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MedicareProgramRatesStats/MarketBasketData.html>

For this analysis, we used the results from the uncompensated care cost build-up method to estimate the impact of the ACA on hospitals. This method provided us with an estimate of total hospital costs for this population as well as an estimate of the costs associated with their increased utilization of hospitals services which is necessary for determining the additional costs hospitals will incur for treating these patients.

### Adjustment for Pent-up Demand for Health Care Service

Pent-up demand is defined as a spike in the demand for health care that occurs after obtaining insurance because of delaying or foregoing care while uninsured or underinsured.<sup>12</sup> Actuaries have typically included an estimate of pent-up demand in their rating for new Marketplace enrollees. The theory is that after a period of lack of access to health insurance, members would immediately seek care at a rate that exceeded the use of care by members who had continuous access to health insurance, even after adjusting for other factors such as morbidity and demographics.<sup>13</sup>

Findings on pent-up demand for health care have been somewhat mixed, but seem to share the common fact that pent-up demand is transitory (i.e., would decline after a certain time fol-

<sup>12</sup> Fertig et al. Pent-up Health Care Demand among New Medicaid Enrollees after the Affordable Care Act. 2016.

<sup>13</sup> Owen et al. Society of Actuaries. Indications of Pent-up Demand. New ACA enrollee use of preference-sensitive services. April 2015.

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lowing enrollment and become comparable to the demand of members experiencing continuous coverage).<sup>14,15</sup> This phase-out period could range from 3 months in the case of Indiana's Medicaid Expansion;<sup>16,17</sup> to 6 months in Minnesota's Medicaid Expansion;<sup>18</sup> or one year in California's Medicaid Expansion,<sup>19</sup> and as reported by the Robert Johnson Foundation.<sup>20</sup>

A number of studies reported that pent-up demand was insignificant among people who enrolled in the public Marketplaces in 2014,<sup>21</sup> Medicaid beneficiaries,<sup>22</sup> and even among the uninsured near elderly who were approaching Medicare eligibility.<sup>23</sup> It was also found that pent-up demand seemed to exist for physician care, but not for hospital inpatient care,<sup>24</sup> and that the newly insured were more likely to use preference-sensitive treatment, but the impact of overall cost increase was marginal.<sup>25</sup>

Some studies yielded different results. Blue Cross Blue Shield (BCBS)'s study of utilization of medical services among newly enrolled BCBS members versus previously enrolled members and commercial insurance individuals for the period of 2014-2015 revealed that pent-up demand averaged 38 percent for inpatient care, 10 percent for emergency, and 10 percent for outpatient services.<sup>26</sup> In addition, Milliman, in their actuarial assessment of the Medicaid Expansion in Indiana, estimated that newly insured individuals could incur an approximate increase of 20 percent in overall spending and between 20 and 40 percent in hospital inpatient and outpatient.<sup>27</sup>

As studies to date on the pent-up demand among ACA's new coverage, which show such a wide range of estimates, could be constrained by the lack of data and the inadequate timeframe for observation following ACA implementation, we believe we might not yet have

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<sup>14</sup> Owen et al. Society of Actuaries. Indications of Pent-up Demand. New ACA enrollee use of preference-sensitive services. April 2015.

<sup>15</sup> Lo et al. 2014. Increased Service Use Following Medicaid Expansion is Mostly Temporary: Evidence from California's Low Income Health Program. UCLA Center for Health Policy Research.

<sup>16</sup> Rob Damler. Society of Actuaries. Health Watch. October 2013 – Issue 73.

<sup>17</sup> Rob Damler. Milliman. Experience under the Healthy Indiana Plan: The short-term cost challenges of expanding coverage to the uninsured. August 2009.

<sup>18</sup> Fertig et al. Pent-up Health Care Demand among New Medicaid Enrollees after the Affordable Care Act. 2016.

<sup>19</sup> Lo et al. 2014. Increased Service Use Following Medicaid Expansion is Mostly Temporary: Evidence from California's Low Income Health Program. UCLA Center for Health Policy Research.

<sup>20</sup> Robert Wood Johnson Foundation. Issue Brief. Health Plans Prepare for Pent-up Demand under Medicaid Expansion. November 2014.

<sup>21</sup> Beth Umland. Pent-up Demand for Care Not There. Mercer Signal. Jan 20, 2015. <http://ushealthnews.mercer.com/article/312/pent-up-demand-for-care-not-there>.

<sup>22</sup> Fertig et al. Pent-up Health Care Demand among New Medicaid Enrollees after the Affordable Care Act. 2016.

<sup>23</sup> Chen et al. (2004). Pent-up Demand: Health Care Use of the Uninsured near Elderly. Economic Research Initiative on the Uninsured. July 2004.

<sup>24</sup> Chen et al. (2004). Pent-up Demand: Health Care Use of the Uninsured near Elderly. Economic Research Initiative on the Uninsured. July 2004.

<sup>25</sup> Owen et al. Society of Actuaries. Indications of Pent-up Demand. New ACA enrollee use of preference-sensitive services. April 2015.

<sup>26</sup> Blue Cross Blue Shield. The Health of America Report. Newly Enrolled Members in the Individual Health Insurance Market After Health Care Reform: The Experience from 2014 and 2015. March 2016. [http://www.bcbs.com/healthofamerica/newly\\_enrolled\\_individuals\\_after\\_aca.pdf](http://www.bcbs.com/healthofamerica/newly_enrolled_individuals_after_aca.pdf)

<sup>27</sup> Rob Damler. Society of Actuaries. Health Watch. October 2013 – Issue 73.

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an accurate and full picture of the impact of the ACA on the newly insured's spending behavior and pent-up demand, in particular. We decided to adopt a rate of 24 percent in pent-up demand for all hospital care among all of the newly insured. This pent-up demand estimate was calculated as a weighted average based on the Blue Cross Blue Shield (BCBS)'s study of utilization of medical services among their newly enrolled members over a one year period.<sup>28</sup> Given the transitory nature of pent-up demand, we assumed that this 24 percent utilization surge would only persist for the first 12 months following enrollment in our model.

## Calculating Total Hospital Costs for the Newly Insured

For this analysis, we assume that newly insured Medicaid and Marketplace enrollees have similar risk profiles and incur similar per-capita hospital cost. Therefore, total hospital costs associated with newly insured individuals is calculated as the number of newly insured multiplied by the average annual hospital cost. Based on these assumptions, we estimate that total hospital costs associated with the newly insured would be \$643.0 billion over the 2014 to 2026 period (*Exhibit 5*).

A portion of these costs for newly insured persons are already being incurred by hospitals through uncompensated care, but hospitals will now receive payment for that care. However, as the newly insured increase their utilization of hospital services, this new utilization will result in additional costs to hospitals in order to provide this additional care. We estimated the incremental cost to hospitals resulting from utilization increase and pent-up demand. These will be new costs incurred by hospitals of treating this population and thus will have an impact on hospital net income.

As described above, we assumed that the newly insured would increase their use of hospital services similar to the level of an insured person, which would result in a 44 percent increase. In addition we assume that there will be a level of higher use during their first year of coverage due to pent-up demand for certain hospital services. We estimated that hospitals' total incremental costs from serving newly insured individuals under ACA implementation could approximate \$200.7 billion between 2014 and 2026. (*Exhibit 5*).

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<sup>28</sup> Blue Cross Blue Shield. The Health of America Report. Newly Enrolled Members in the Individual Health Insurance Market after Health Care Reform: The Experience from 2014 and 2015. March 2016. [http://www.bcbs.com/healthofamerica/newly\\_enrolled\\_individuals\\_after\\_aca.pdf](http://www.bcbs.com/healthofamerica/newly_enrolled_individuals_after_aca.pdf)

**Exhibit 5: Estimate of Hospital Costs Associated with the Newly Insured and the Incremental Cost due to Increased Utilization and Pent-up Demand (in millions)**

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2014-2026
<b>Hospital Costs for Newly Insured (millions)</b>														
New Enrollment on Marketplaces	\$7,709	\$16,767	\$18,882	\$20,960	\$21,796	\$22,402	\$22,551	\$23,974	\$26,743	\$25,474	\$26,058	\$29,618	\$28,022	\$290,956
Newly Eligible Medicaid	\$4,224	\$11,353	\$19,378	\$18,833	\$19,815	\$20,365	\$22,551	\$21,576	\$24,347	\$25,219	\$25,797	\$26,574	\$28,022	\$268,055
Currently Eligible Medicaid (Woodwork)	\$1,090	\$1,884	\$3,915	\$5,650	\$3,963	\$4,073	\$6,765	\$9,590	\$7,304	\$10,190	\$10,423	\$7,972	\$11,209	\$84,028
<b>Total Costs for Newly Insured</b>	<b>\$13,024</b>	<b>\$30,004</b>	<b>\$42,175</b>	<b>\$45,443</b>	<b>\$45,574</b>	<b>\$46,840</b>	<b>\$51,868</b>	<b>\$55,140</b>	<b>\$58,394</b>	<b>\$60,883</b>	<b>\$62,278</b>	<b>\$64,164</b>	<b>\$67,253</b>	<b>\$643,039</b>
<b>Cost Due to Increased Utilization and Pent-up Demand</b>														
<b>New Hospital Costs due to Increased Utilization for Newly Insured (millions)</b>														
New Enrollment on Marketplaces	\$3,106	\$5,524	\$5,971	\$6,585	\$6,647	\$6,832	\$6,878	\$7,312	\$8,429	\$7,769	\$7,947	\$9,336	\$8,546	\$90,882
Newly Eligible Medicaid	\$1,702	\$3,899	\$6,722	\$5,765	\$6,043	\$6,211	\$6,878	\$6,580	\$7,699	\$7,692	\$7,868	\$8,135	\$8,546	\$83,740
Currently Eligible Medicaid (Woodwork)	\$439	\$647	\$1,358	\$1,730	\$1,209	\$1,242	\$2,063	\$2,925	\$2,310	\$3,108	\$3,179	\$2,440	\$3,419	\$26,068
<b>Incremental Costs for Newly Insured</b>	<b>\$5,248</b>	<b>\$10,070</b>	<b>\$14,051</b>	<b>\$14,080</b>	<b>\$13,899</b>	<b>\$14,285</b>	<b>\$15,819</b>	<b>\$16,817</b>	<b>\$18,437</b>	<b>\$18,568</b>	<b>\$18,994</b>	<b>\$19,911</b>	<b>\$20,511</b>	<b>\$200,690</b>

Source: Dobson | DaVanzo estimates

# Impact of ACA on Hospital Revenues

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## Step 3: Estimate change in hospital revenues for the newly insured

We calculated new hospital revenues associated with the newly insured by multiplying the annual costs for this population by the average payment to cost ratio (PCR) depending upon the program in which they enrolled.

For the newly insured covered under Medicaid, we assumed hospitals would be paid at Medicaid rates, which are typically less than the cost of treating these patients. Our Medicaid PCRs were calculated from CMS' Medicare hospital cost report 2014 (Worksheet S-10) for acute, rehabilitation and long-term care hospitals. We excluded Medicaid DSH, since these additional payments would not be made for the expansion population. However, we included Medicaid supplemental payments assuming these additional payments would be made for new enrollees.<sup>29</sup> Since a national average PCR would be heavily weighted toward expansion states, we computed a weighted average using the estimated costs for Medicaid enrollees (newly eligible and woodwork population) by state based on our model. We then projected the Medicaid PCRs through 2026 using the historical change in Medicaid PCRs between 2010 and 2014 from the AHA Trend Watch Chart Book as shown in *Exhibit 6*.

Commercial payment to cost ratios (PCRs) were obtained from the AHA Trend Watch Chart Book, which were determined to be 143.7 percent in 2014.<sup>30</sup> For this analysis, we assume that most people moving from commercial plans into either Medicaid or Marketplace plans would move from individual non-group insurance. We projected these PCRs through 2026 using the average annual change in Commercial PCRs between 2004 and 2014.

We assumed that PCRs for Marketplace plans are lower than Commercial rates, but higher than Medicaid reimbursement. A recent analyses of unsubsidized Marketplace plan premiums found them to be about 10 percent lower than premiums in commercial employer-based plans after adjusting for age, actuarial value of the plans and utilization.<sup>31</sup> As a matter of fact, since insurers have been competing by lowering payments to providers, providers have to make up the difference by increased patient volume due to narrow networks, thereby reducing the cost of the plans.<sup>32,33</sup> Also the medical loss ratio for non-group plans (80%) is lower than for employer plans (85%), meaning that for each premium dollar, non-group plans can spend less on

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<sup>29</sup> We calculated Medicaid PTCs with and without DSH and Supplemental payments (DSH and supplemental payments are counted as a single category in the cost reports) by including only hospitals that reported not receiving DSH or Supplemental payments or reported these payments separately from regular Medicaid payments. We then estimated PCRs including supplemental payments by interpolating between PCRs with and without DSH and supplemental payments using the ratio of supplemental payments to total DSH and supplemental payments by state from the Medicaid Financial Management Report for FY 2014.

<sup>30</sup> American Hospital Association, "Trendwatch Chartbook 2016: Trends Affecting Hospitals and Health Systems"

<sup>31</sup> Blumberg, Holahan, Wengle, "Are Nongroup Marketplace Premiums Really High? Not in Comparison with Employer Insurance", September 2016.

<sup>32</sup> Rabin. Doctors Complain They Will Be Paid Less by Exchange Plans. Kaiser Health News. Nov 19, 2013.

<sup>33</sup> Couture. Health Care Providers Are Opting Out of Obamacare Exchange Plans. American Action Forum. Oct 27, 2014.

# Impact of ACA on Hospital Revenues

provider payments than employer plans. For this analysis, we assume that these premium differences have a direct effect on provider payment levels. Therefore, we reduced the commercial PTC by 15 percent for each year of the study period to better reflect hospital payment levels by Marketplace plans. This assumption is also consistent with CBO’s recent analysis when they projected hospitals’ profit margins under different payment reduction scenarios.<sup>34</sup>

**Exhibit 6: Hospital Payment to Cost Ratios by Payer 2014-2016**

Year	Commercial Non-Group	Medicaid (Expansion States' PCRs) without DSH	Health Insurance Marketplaces
2014	143.7%	79.4%	120.9%
2015	144.6%	79.6%	121.6%
2016	145.5%	79.9%	122.4%
2017	146.4%	80.1%	123.2%
2018	147.4%	80.3%	123.9%
2019	148.3%	80.6%	124.7%
2020	149.2%	80.8%	125.5%
2021	150.2%	81.0%	126.3%
2022	151.1%	81.3%	127.1%
2023	152.1%	81.5%	127.9%
2024	153.0%	81.7%	128.7%
2025	154.0%	81.9%	129.5%
2026	155.0%	82.2%	130.3%

Sources: American Hospital Association, “Trendwatch Chartbook 2016: Trends Affecting Hospitals and Health Systems” Dobson | DaVanzo estimates using the FY 2014 Medicare Hospital Cost Report data.

Hospital revenues for newly insured Medicaid enrollees were calculated by multiplying the annual hospital costs associated with this population by the average Medicaid PCR for expansion states. Similarly, hospital revenues for the newly insured Marketplace enrollees was calculated by multiplying the annual hospital costs associated with the newly insured Marketplace population by our assumed Marketplace PCR.

Hospital revenues for the newly insured Marketplace enrollees assume that some portion of their utilization would result in bad debt due to the fact that most Marketplace enrollees choose either the Silver or Bronze plans, which are high deductible plans. We estimated that

<sup>34</sup> Congressional Budget Office. Hayford et al. Projecting Hospitals’ Profit Margins under Several Illustrative Scenarios. Sept 2016.

# Impact of ACA on Hospital Revenues

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high deductibles would account for approximately 30% of the average cost of an inpatient stay and that about 40% of patient responsibilities in high deductible health plans would be written off as bad debt.<sup>35</sup> Thus, we assume that 12% (30% deductible as percent of stay X 40% bad debt) of costs for newly insured enrollees on the Marketplaces would result as bad debt.

## **Step 4: Estimate the impact of movement from commercial insurance to Medicaid and Marketplaces at the national level (Crowd-out)**

As described above, our analysis assumes that there will be about 6 million people by 2017 that move from their current commercial plans into either Medicaid or the Marketplaces (i.e., “crowd-out”). The impact on hospital revenues due to crowd-out is calculated as the difference in PCRs between commercial insurance versus Medicaid and Marketplace plans, multiplied by the estimated hospital costs for this population. We estimate that crowd-out would lower hospital revenues by approximately \$51.6 billion during the period between 2016 and 2026 (*Exhibit 7*).

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<sup>35</sup> Estimates are from Monte Medical Center: “White Paper on the Impact of Consumer Directed Healthcare on Providers”. Oct 2008.

## Exhibit 7: Estimate of Change in Hospital Revenues Due to Crowd-out

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2014-2026
<b>New Enrollment on Marketplaces</b>														
Number Moved from Commercial (millions)	2	3	3	5	5	5	5	5	5	5	5	5	5	
Average cost per person	\$937	\$1,780	\$1,839	\$1,880	\$1,981	\$2,037	\$2,255	\$2,397	\$2,395	\$2,547	\$2,606	\$2,653	\$2,802	
Marketplace PCR	121%	122%	122%	123%	124%	125%	126%	126%	127%	128%	129%	130%	130%	
Revenues at Marketplace Levels	\$2,298	\$5,649	\$6,528	\$11,578	\$11,788	\$12,192	\$13,586	\$15,140	\$14,614	\$15,965	\$16,434	\$17,182	\$18,263	
Commercial non-group PCR	144%	145%	146%	146%	147%	148%	149%	150%	151%	152%	153%	154%	155%	
Revenues at Commercial Levels	\$2,733	\$6,717	\$7,762	\$13,767	\$14,016	\$14,497	\$16,154	\$18,002	\$17,377	\$18,984	\$19,541	\$20,430	\$21,715	
<b>Change in Revenues (millions)</b>	<b>(\$434)</b>	<b>(\$1,068)</b>	<b>(\$1,234)</b>	<b>(\$2,189)</b>	<b>(\$2,229)</b>	<b>(\$2,305)</b>	<b>(\$2,569)</b>	<b>(\$2,862)</b>	<b>(\$2,763)</b>	<b>(\$3,018)</b>	<b>(\$3,107)</b>	<b>(\$3,248)</b>	<b>(\$3,453)</b>	<b>(\$30,480)</b>
<b>Change in Medicaid and CHIP</b>														
Number Moved from Commercial (millions)	1	1	1	1	1	1	1	1	1	1	1	1	1	
Average cost per person	\$937	\$1,780	\$1,839	\$1,880	\$1,981	\$2,037	\$2,255	\$2,397	\$2,395	\$2,547	\$2,606	\$2,653	\$2,802	
Medicaid PCR	79%	80%	80%	80%	80%	81%	81%	81%	81%	81%	82%	82%	82%	
Revenues at Medicaid Levels	\$744	\$1,417	\$1,616	\$1,506	\$1,910	\$1,969	\$2,186	\$1,942	\$2,336	\$2,283	\$2,342	\$2,174	\$2,303	
Commercial non-group PCR	144%	145%	146%	146%	147%	148%	149%	150%	151%	152%	153%	154%	155%	
Revenues at Commercial Levels	\$1,346	\$2,574	\$2,944	\$2,753	\$3,504	\$3,624	\$4,039	\$3,600	\$4,344	\$4,262	\$4,387	\$4,086	\$4,343	
<b>Change in Revenues (millions)</b>	<b>(\$602)</b>	<b>(\$1,156)</b>	<b>(\$1,328)</b>	<b>(\$1,247)</b>	<b>(\$1,594)</b>	<b>(\$1,655)</b>	<b>(\$1,852)</b>	<b>(\$1,658)</b>	<b>(\$2,009)</b>	<b>(\$1,978)</b>	<b>(\$2,045)</b>	<b>(\$1,912)</b>	<b>(\$2,040)</b>	<b>(\$21,077)</b>
<b>Change in Hospital Revenues due to Crowd-out (Millions)</b>	<b>(\$1,037)</b>	<b>(\$2,224)</b>	<b>(\$2,562)</b>	<b>(\$3,436)</b>	<b>(\$3,823)</b>	<b>(\$3,960)</b>	<b>(\$4,421)</b>	<b>(\$4,520)</b>	<b>(\$4,772)</b>	<b>(\$4,997)</b>	<b>(\$5,152)</b>	<b>(\$5,160)</b>	<b>(\$5,493)</b>	<b>(\$51,557)</b>

Source: Dobson | DaVanzo estimates

# Impact of ACA on Hospital Revenues

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## **Step 5: Estimate impact on hospital revenues and net income due to the ACA**

Using the above information on changes in hospital revenue due to the newly insured, changes in hospital revenue due to crowd-out, and increased costs to hospitals due to new utilization we estimated the net impact on hospital revenue and net income due to the coverage provisions of the ACA. The impacts presented here do not take into account the Medicare payment reductions specified in the ACA nor the Medicaid DSH cuts. Estimates of these impacts are presented in the following section.

*Exhibit 8* shows the increase in hospital revenues from patients who become newly insured through the Marketplaces and Medicaid, which we estimate will total \$608.5 billion over the 2014 to 2026 period. We estimate the impact of crowd-out as persons move from commercial coverage into Medicaid and Marketplace plans, which we assume will reimburse hospitals at lower rates, will result in a reduction of \$51.6 billion over the same period. Thus, the net effect on hospital revenues we estimate will be \$557.0 billion increase over the 2014 to 2026 period.

As described above, we assume that hospitals will incur additional costs of \$200.7 billion as the newly insured increase their utilization of hospital services. The difference between new revenues received by hospitals and the increased costs results in an increase of \$356.3 billion in hospital net income over the 2014 to 2026 period.

## Exhibit 8: Estimate of the Impact on Hospital Revenues and Net Income Due to Coverage Provisions under the ACA (in millions)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2014-2026
<b>Change in Hospital Revenues from New Coverage</b>	<b>\$12,420</b>	<b>\$28,487</b>	<b>\$38,941</b>	<b>\$42,328</b>	<b>\$42,872</b>	<b>\$44,274</b>	<b>\$48,592</b>	<b>\$51,896</b>	<b>\$55,628</b>	<b>\$57,525</b>	<b>\$59,112</b>	<b>\$62,070</b>	<b>\$64,383</b>	<b>\$608,527</b>
New Coverage on Marketplaces	\$8,199	\$17,944	\$20,336	\$22,716	\$23,772	\$24,586	\$24,907	\$26,646	\$29,911	\$28,672	\$29,514	\$33,760	\$32,142	<b>\$323,105</b>
Medicaid Newly Eligible	\$3,355	\$9,042	\$15,478	\$15,086	\$15,917	\$16,406	\$18,219	\$17,481	\$19,782	\$20,550	\$21,080	\$21,777	\$23,030	<b>\$217,203</b>
Medicaid Currently Eligible (Woodwork)	\$866	\$1,500	\$3,127	\$4,526	\$3,183	\$3,281	\$5,466	\$7,769	\$5,935	\$8,303	\$8,517	\$6,533	\$9,212	<b>\$68,219</b>
<b>Change in Hospital Revenues, Net of Crowd-out Impact</b>	<b>(\$1,037)</b>	<b>(\$2,224)</b>	<b>(\$2,562)</b>	<b>(\$3,436)</b>	<b>(\$3,823)</b>	<b>(\$3,960)</b>	<b>(\$4,421)</b>	<b>(\$4,520)</b>	<b>(\$4,772)</b>	<b>(\$4,997)</b>	<b>(\$5,152)</b>	<b>(\$5,160)</b>	<b>(\$5,493)</b>	<b>(\$51,557)</b>
Commercial to Marketplaces	(\$434)	(\$1,068)	(\$1,234)	(\$2,189)	(\$2,229)	(\$2,305)	(\$2,569)	(\$2,862)	(\$2,763)	(\$3,018)	(\$3,107)	(\$3,248)	(\$3,453)	(\$30,480)
Commercial to Medicaid	(\$602)	(\$1,156)	(\$1,328)	(\$1,247)	(\$1,594)	(\$1,655)	(\$1,852)	(\$1,658)	(\$2,009)	(\$1,978)	(\$2,045)	(\$1,912)	(\$2,040)	(\$21,077)
<b>Total Net Change in Hospital Revenues (Millions of Dollars) under ACA</b>	<b>\$11,383</b>	<b>\$26,263</b>	<b>\$36,378</b>	<b>\$38,891</b>	<b>\$39,050</b>	<b>\$40,313</b>	<b>\$44,171</b>	<b>\$47,376</b>	<b>\$50,856</b>	<b>\$52,528</b>	<b>\$53,961</b>	<b>\$56,910</b>	<b>\$58,891</b>	<b>\$556,971</b>
<b>Change in Hospital Costs due to Increased Utilization by Newly Insured</b>	<b>\$5,248</b>	<b>\$10,070</b>	<b>\$14,051</b>	<b>\$14,080</b>	<b>\$13,899</b>	<b>\$14,285</b>	<b>\$15,819</b>	<b>\$16,817</b>	<b>\$18,437</b>	<b>\$18,568</b>	<b>\$18,994</b>	<b>\$19,911</b>	<b>\$20,511</b>	<b>\$200,690</b>
New Coverage on Marketplaces	\$3,106	\$5,524	\$5,971	\$6,585	\$6,647	\$6,832	\$6,878	\$7,312	\$8,429	\$7,769	\$7,947	\$9,336	\$8,546	<b>\$90,882</b>
Medicaid Newly Eligible	\$1,702	\$3,899	\$6,722	\$5,765	\$6,043	\$6,211	\$6,878	\$6,580	\$7,699	\$7,692	\$7,868	\$8,135	\$8,546	<b>\$83,740</b>
Medicaid Currently Eligible (Woodwork)	\$439	\$647	\$1,358	\$1,730	\$1,209	\$1,242	\$2,063	\$2,925	\$2,310	\$3,108	\$3,179	\$2,440	\$3,419	<b>\$26,068</b>
<b>Hospitals' Net Income from New Coverage and Crowd-out under ACA</b>	<b>\$6,135</b>	<b>\$16,193</b>	<b>\$22,327</b>	<b>\$24,811</b>	<b>\$25,150</b>	<b>\$26,028</b>	<b>\$28,352</b>	<b>\$30,559</b>	<b>\$32,419</b>	<b>\$33,960</b>	<b>\$34,967</b>	<b>\$36,999</b>	<b>\$38,379</b>	<b>\$356,280</b>

Source: Dobson | DaVanzo estimates

# Medicare and Medicaid Cuts under the ACA

The ACA included a number of provisions that affect Medicare payments to hospitals. In this analysis, we estimated the impact on hospital revenues of these payment reductions from 2010 through 2026 for the following ACA provisions:

- Medicare market basket update reductions and productivity adjustments;
- Medicare DSH payment reductions;
- Medicare Hospital Acquired Condition (HAC) Reduction Program;
- Medicare Hospital Readmission Reduction (HRR) Program; and
- Medicaid DSH Allotment Reductions.

To estimate the impacts, we used data from MedPAC for 2010 to 2014 on Medicare fee-for-service (FFS) spending for hospital inpatient services covered by the acute care inpatient prospective payment system; psychiatric, rehabilitation, long-term care, cancer, and children's hospitals and units; and hospital outpatient services. The payment data included payments to providers from both the Medicare program and beneficiary cost sharing.<sup>36</sup> We then used data from CBO to calculate the annual change from 2014 to 2026 and applied these growth factors to the 2014 spending from MedPAC.<sup>37</sup> These data were used as our baseline Medicare spending for estimating the amount of the cuts.

We estimate that these cuts will amount to \$475.1 billion reduction in hospital payments between 2010 and 2016 (*Exhibit 9*). The following sections describe each of the reductions and our method for estimating the impact on hospitals.

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<sup>36</sup> Medicare Payment Advisory Commission (MedPAC), A Data Book: Health Care Spending and the Medicare Program, June 2016

<sup>37</sup> Congressional Budget Office (CBO), Medicare Baseline, March 2016

# Medicare and Medicaid Cuts

**Exhibit 9: Impact of the ACA Medicare and Medicaid Payment Reductions on Hospital Revenues 2010-2026 (in billions)**

Fiscal Year	ACA MB Cuts and Productivity Adjustments	Medicare DSH Reduction	Hospital Acquired Condition Penalties	Hospital Readmission Reduction Program	Impact of Medicaid DSH Cuts <sup>1</sup>	Total Impact of All Cuts
2010	\$0.4	n/a	n/a	n/a	n/a	\$0.4
2011	\$0.9	n/a	n/a	n/a	n/a	\$0.9
2012	\$3.1	n/a	n/a	n/a	n/a	\$3.1
2013	\$4.7	n/a	n/a	\$0.3	n/a	\$5.0
2014	\$6.5	\$0.5	n/a	\$0.4	n/a	\$7.4
2015	\$8.1	\$2.5	\$0.5	\$0.6	n/a	\$11.6
2016	\$9.8	\$3.8	\$0.5	\$0.6	n/a	\$14.6
2017	\$12.4	\$4.8	\$0.5	\$0.7	n/a	\$18.4
2018	\$16.1	\$5.1	\$0.5	\$0.7	\$1.7	\$24.1
2019	\$20.8	\$5.4	\$0.5	\$0.9	\$2.8	\$30.3
2020	\$24.0	\$5.7	\$0.5	\$0.9	\$4.0	\$35.1
2021	\$27.5	\$6.1	\$0.5	\$1.1	\$5.2	\$40.3
2022	\$31.5	\$6.5	\$0.6	\$1.1	\$6.3	\$46.0
2023	\$35.7	\$6.9	\$0.6	\$1.3	\$7.6	\$52.2
2024	\$40.6	\$7.3	\$0.6	\$1.4	\$8.9	\$58.9
2025	\$45.5	\$7.8	\$0.6	\$1.5	\$8.9	\$64.2
2026	\$52.0	\$8.3	\$0.7	\$1.6	n/a	\$62.5
<b>2010-2026</b>	<b>\$339.5</b>	<b>\$70.7</b>	<b>\$6.4</b>	<b>\$13.1</b>	<b>\$45.5</b>	<b>\$475.1</b>

<sup>1/</sup> Reductions to hospitals is estimated to be \$45.5 and reductions to IMDs is estimated to be \$8.7.

Source: Dobson | DaVanzo estimates using Medicare IPPS Impact files for 2013-2017.

## Medicare Market Basket Update Reductions and Productivity Adjustments

The ACA includes specific reductions to the annual market basket payment rate increases for acute care, rehabilitation, and psychiatric hospitals of 0.25 percent in both 2010 and 2011, 0.1 percent for 2012 and 2013, 0.3 percent for 2014, 0.2 percent for 2015 and 2016 and 0.75 percent for 2017 through 2019. These reductions were the same for long-term care hospitals except that the reduction was 0.5 percent in 2011 instead of 0.2 percent.

In addition, Section 3401 of the Affordable Care Act (ACA) requires that the market basket updates under the Medicare prospective payment systems be reduced annually by the productivity adjustment. The ACA defines the productivity adjustment to be equal to “the 10-year moving average of changes in annual economy-wide private nonfarm business multifactor

# Medicare and Medicaid Cuts

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productivity (as projected by the Secretary for the 10-year period ending with the applicable fiscal year, year, cost-reporting period, or other annual period).” The productivity adjustments applied by CMS to hospital market basket updates were 1.0 percent in 2012, 0.7 percent in 2013, 0.5 percent for 2014 through 2016 and 0.3 percent in 2017. For the 2018 through 2026 period, we assumed an average productivity adjustment of 0.8 percent to be consistent with CBO projections.<sup>38</sup>

The nature of the payment update adjustments are that they accumulate over time. Applying the market basket update reductions and the productivity adjustments to our Medicare baseline spending data for each provider type and year, we estimate that these cuts will reduce Medicare payments to hospitals by \$339.5 billion over the 2010 to 2026 period (*Exhibit 9*).

## Medicare DSH Payment Reductions

The ACA (Section 3133) specifies a change to the formula for determining Medicare DSH payments to hospitals. Under this new formula, hospitals receive 25 percent of the amount they previously would have received under the current Medicare DSH formula effective for discharges occurring on or after FY 2014. Hospitals will receive an additional payment for Uncompensated Care equal to 75 percent of what otherwise would have been paid as Medicare DSH.<sup>39</sup> The amount of uncompensated care payments available to hospitals is reduced each year for changes in the percentage of individuals that are uninsured.<sup>40</sup> Each Medicare DSH hospital will receive an uncompensated care payment based on its share of insured low income days (that is, the sum of Medicaid days and Medicare SSI days) reported by Medicare DSH hospitals.

We modeled the revised formula for DSH and uncompensated care payments using our baseline Medicare spending for DSH. Aggregate baseline Medicare DSH payments were separated into the DSH portion (25%) and the uncompensated care portion (75%). The uncompensated care portions were reduced using the factors: 0.9430 for 2014, 0.7619 for 2015, 0.6369 for 2016 and 0.5536 for 2017. For 2018 through 2019 we assumed the same 0.5536 factor since the CBO estimate for the reduction in the number of uninsured is virtually unchanged from 2017 through 2026. For 2020 through 2026 we assumed the same factor but excluded the 0.2 percent reduction specified in the Act.

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<sup>38</sup> Hayford, Nelson and Diorio, “Projecting Hospitals’ Profit Margins Under Several Illustrative Scenarios”, Congressional Budget Office Working Paper Series, September 2016

<sup>39</sup> Federal Register, August 22, 2016 pp. 56761-57438

<sup>40</sup> The uncompensated care payment amount is reduced by 1 minus the percent change in the percent of individuals under the age of 65 who are uninsured (minus 0.1 percentage points for FY 2014, and minus 0.2 percentage points for FY 2015 through FY 2017).

# Medicare and Medicaid Cuts

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Based on these assumptions, we estimate that the Medicare DSH reductions under the ACA will reduce payments to hospitals by \$70.7 billion over the 2010 to 2026 period (*Exhibit 9*).

## Medicare Hospital Acquired Condition (HAC) Reduction Program

Beginning in Fiscal Year 2015, the HAC Reduction Program requires the Secretary of the Department of Health and Human Services to adjust payments to applicable hospitals that rank in the worst-performing quartile of all acute care (subsection (d)) hospitals with respect to risk-adjusted HAC quality measures. These hospitals will have their payments reduced to 99 percent of what would otherwise have been paid for their Medicare discharges.<sup>41</sup>

To estimate the impact of the HAC Reduction Program of Medicare payments to hospitals, we obtained a list of the hospitals that were in the highest quartile of hospitals based on their total HAC quality score.<sup>42</sup> We then matched the list of high-HAC hospitals with the Medicare Inpatient Prospective Payment System (IPPS) Impact file for 2017 to calculate the amount of a one-percent payment reduction for those hospitals relative to payments for all IPPS hospitals. This resulted in an overall reduction of 0.39 percent in Medicare payments to all hospitals. We applied this reduction factor to our Medicare baseline spending data for acute care hospitals for FY 2015 through 2026 which resulted in a reduction of \$6.4 billion over the 2015 to 2026 period (*Exhibit 9*).

## Medicare Hospital Readmission Reduction (HRR) Program

Section 3025 of the ACA established the HRR Program, which requires CMS to reduce payments to IPPS hospitals with excess readmissions. Beginning in FY 2013 hospitals with excess 30-day readmission for acute myocardial infarction (AMI), heart failure (HF), and pneumonia (PN) received a payment reduction. Beginning in FY 2015 the HRR program was expanded to include patients admitted for an acute exacerbation of chronic obstructive pulmonary disease (COPD), elective total hip arthroplasty (THA) and total knee arthroplasty (TKA). Beginning in FY 2017 the HRR program was expanded again to include patients admitted for coronary artery bypass graft (CABG) surgery in the calculation of a hospital's readmission payment adjustment factor and to include additional pneumonia diagnoses: (i) patients with aspiration pneumonia; and (ii) sepsis patients coded with pneumonia present on admission (but not including severe sepsis).<sup>43</sup>

To estimate the impact of the HRR Program on Medicare payments to hospitals, we used the IPPS Impact files for FY 2013 to 2017 to calculate the amount of HRR penalties relative to

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<sup>41</sup> <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/HAC-Reduction-Program.html>

<sup>42</sup> <https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier2&cid=1228774189166>

<sup>43</sup> <https://www.cms.gov/medicare/medicare-fee-for-service-payment/acuteinpatientpps/readmissions-reduction-program.html>

# Medicare and Medicaid Cuts

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payments for all IPPS hospitals. The IPPS Impact File contains the CMS calculated HRR reduction factor for each hospital for the applicable year. This analysis resulted in an overall reduction in Medicare payments to hospitals of 0.29 percent in 2013, 0.32 percent in 2014, 0.49 percent in 2015 and 2016, and 0.6 percent in 2017. For subsequent years, we assumed that CMS would continue to add conditions every other year and this would increase the overall hospital payment reduction by 0.1 percentage point for each condition expansion. We applied these annual reduction factors to our Medicare baseline spending data for acute care hospitals for FY 2013 through 2026 which resulted in a reduction of \$13.1 billion over the 2013 to 2026 period (*Exhibit 9*).

## Medicaid DSH Allotment Reductions

Medicaid DSH payments are made to hospitals and Institutions for Mental Disease (IMDs) that treat a high proportion of Medicaid and other low-income patients to help offset uncompensated care costs for Medicaid and uninsured patients treated by these facilities. Medicaid DSH payments are funded by state governments and the states receive federal matching funds for each dollar spent based on the states' Federal Medical Assistance Percentages (FMAP). However, Medicaid DSH payments are limited by annual federal allotments that are specific to each state. These allotments vary widely and are based on states' historical DSH spending.<sup>44</sup>

The ACA specified scheduled reductions in federal Medicaid DSH allotments, which have been about \$12 billion annually, in order to account for the decrease in uncompensated care anticipated under the ACA's coverage expansions. As enacted, the Medicaid DSH allotment reductions would have ended after FY 2020 and allotments would have reverted to their pre-ACA levels. However, several pieces of legislation have been enacted since 2010 that have delayed, altered and extended the ACA's original Medicaid DSH reduction schedule.<sup>45</sup> As a result, the current schedule and amounts for the Medicaid DSH reductions are as follows:

- \$2.0 billion in FY 2018;
- \$3.0 billion in FY 2019;
- \$4.0 billion in FY 2020;
- \$5.0 billion in FY 2021;
- \$6.0 billion in FY 2022;
- \$7.0 billion in FY 2023; and,

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<sup>44</sup> Medicaid and CHIP Payment and Access Commission, "Medicaid Report to Congress on Medicaid Disproportionate Share Hospital Payments", February 2016

<sup>45</sup> <https://www.macpac.gov/subtopic/disproportionate-share-hospital-payments/>

# Medicare and Medicaid Cuts

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- \$8.0 billion in FYs 2024 and 2025.

To determine the impact that the reduction in federal allotments will have on Medicaid DSH payments to hospitals, we first estimated the amount of the reductions for each state by year. The ACA requires the Secretary of Health and Human Services to develop a methodology to implement the reductions that meets specific requirements that will affect states differently. For this analysis, we used MACPAC's estimate of the percent reduction in federal allotments by state for 2018, applied these state-level reduction factors to our projection of federal DSH allotments by state from 2018 to 2025, and adjusted them to meet the targeted cuts for each year.

Not all states make DSH payments to hospitals up to the full amount of their allotment. In some cases the allotment reduction may not affect states' actual DSH payments to hospitals if they are already spending less than the reduced DSH allotments. Therefore, we developed the following method to estimate the impact of the Medicaid DSH allotment reductions on payments to hospitals accounting for states spending below their allotments:

- Obtained total Medicaid DSH payments to hospitals and IMDs for each state from 2010 actual spending from the Medicaid Budget and Expenditure System Reports (CMS-64) and projected actual DSH spending to 2026 using CPI-U inflation rates;
- Projected the unreduced Medicaid DSH allotments for each state from 2018 to 2025, and applied the state's FMAP rate to determine total DSH dollars available;
- Calculated the amount of Medicaid DSH spending that was below the cap for each state from 2018 to 2026;
- Applied the state's FMAP rate to the calculated state-level allotment reductions to estimate total state and federal dollars that would be reduced by the cuts;
- Calculated the effect of the allotment reductions on DSH payments to hospitals as the difference between total reduction (state and federal) and the amount of spending under the cap.

# Medicare and Medicaid Cuts

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The following table provides an example of the above calculations:

1	Federal Allotment Amount Before Reduction	\$50,000,000
2	State's FMAP	70%
3	Estimated Federal Allotment Reduction	\$4,000,000
4	Actual DSH Spending (State + Federal)	\$68,000,000
<b>Calculations of Impact Estimates</b>		
5	Total DSH Spending Cap (State + Federal) (#1 / #2)	\$71,428,571
6	Spending Gap (#5 - #4, minimum of \$0)	\$3,428,571
7	Allotment Reductions (State + Federal) (#3 / #2)	\$5,714,286
8	Impact on DSH Payments (#7 - #6, minimum of \$0)	\$2,285,714

Using this methodology, we estimate that the impact of the federal Medicaid DSH allotment reductions would be \$54.2 billion over the 2018 through 2025 period (*Exhibit 9*). Assuming that DSH payments to hospitals and IMDs are distributed the same as actual 2010 amounts for each state, we estimate that Medicaid DSH payments to hospitals would be reduced by \$45.5 billion and DSH payments to IMDs would be reduced by \$8.7 billion. Since we did not include IMDs in this analysis, we reported only DSH cuts to hospitals of \$45.5 billion.

# *Estimating the Impact of ACA Repeal on Hospital Revenues*

Using the itemized estimates of the financial impact on hospitals due to the coverage expansions of the ACA, which represents current law, we estimate the effect on hospital revenues and net income if certain provisions of the ACA are repealed. For this analysis we based our specifications for ACA repeal on H.R. 3762, the Restoring America's Healthcare Freedom Reconciliation Act covering the period of 2018 – 2026, the end of the ten year budget window. The following features were removed/repealed under that bill, which would be effective January 1, 2018 without a phase-out period:

- Repeal individual tax penalties for not keeping qualifying health coverage;
- Repeal tax penalties for employers that do not offer qualifying health coverage;
- Repeal premium tax credits;
- Repeal cost-sharing subsidies;
- Repeal the transitional reinsurance program;
- Repeal the Medicaid expansion;
- Repeal the Medicaid Disproportionate Care Hospital (DSH) reductions; and
- Repeal other taxes specified in the ACA (i.e., medical device tax, prescription drug tax, over-the-counter medication tax, deduction for expenses allocable to Medicare Part D subsidy, taxes on employee health insurance premiums and health plan benefits, limitations on contributions to flexible spending accounts, reduced tax treatment of health savings accounts from 20% to 10%, reduction in chronic care tax from 10% to 7.5%, tax on high-cost insurance plans, and Medicare tax increase on individual wages).

We examined and built our assumptions and model based on the assumptions, estimates, and findings of a number of key studies – the most important of which include the Congressional Budget Office (CBO)'s estimates of budgetary and economic effects of repealing the

# Impact of ACA Repeal on Hospitals

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ACA,<sup>46,47,48,49</sup> the Office of Assistant Secretary for Planning and Evaluation (ASPE)'s study on the impact of insurance expansion on hospital uncompensated care costs;<sup>50</sup> and the Urban Institute's recently-published work on the cost of ACA repeal.<sup>51</sup>

Our estimates of ACA repeal are based on the assumption that the Medicaid expansion, premium tax credits, cost-sharing subsidies and penalties were the primary driver for the reduction in the number of uninsured and individuals moving from their existing commercial plans into subsidized Marketplace coverage or the Medicaid expansion in states that adopted the expansion. Therefore, if these provisions are repealed then we assume that coverage would return to pre-ACA levels which would lead to a loss of coverage for a large number of individuals who had just gained coverage under ACA implementation and a reverse movement of a number of the insured from the Marketplaces and Medicaid back to Commercial coverage.

The one exception would be for the Medicaid woodwork population who were currently eligible for Medicaid and gained coverage due to increased awareness and coordination between the Marketplaces and Medicaid. Our estimated 2 million individuals who enrolled prior to 2018 would continue to be eligible for Medicaid and would not be affected by repeal. However, the additional wood-work population that we estimate to enroll after 2018 are assumed not to be enrolled and would result in a loss of revenue to hospitals for this group.

We estimate that repealing the Medicaid expansion, premium tax credits, cost-sharing subsidies and penalties would result in a reduction of approximately \$399.8 billion in hospital revenues between 2018 and 2026 as people would lose coverage or take other coverage options (*Exhibit 10*). As people become uninsured, we estimate that there would be a reduction in utilization of hospital services for an estimated reduction of about \$139.4 billion in hospital costs between 2018 and 2026.

Hospitals would see increased Medicaid DSH payments of \$45.0 billion as the scheduled reductions in the state DSH allotments are repealed. In addition, hospitals would also see increased Medicare DSH payments of \$49.5 billion. The formula used by the Centers for Medicare and Medicaid Services (CMS) to determine Medicare DSH payments is tied to the change in the percent of persons under age 65 that are uninsured for the current year compared to 2013. Under an ACA repeal, we assume that the percent of uninsured would return to

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<sup>46</sup> Congressional Budget Office. Federal Subsidies for Health Insurance Coverage for People under age 65: Tables from CBO's March 2016 baseline. March 2016.

<sup>47</sup> Congressional Budget Office. Updated Budget Projections: 2016 to 2026. March 2016.

<sup>48</sup> Congressional Budget Office. Budgetary and Economic Effects of Repealing the Affordable Care Act. June 2015.

<sup>49</sup> Congressional Budget Office. Updated Estimates of the Effects of the Insurance Coverage Provisions of the Affordable Care Act. April 2014.

<sup>50</sup> ASPE Issue Brief. DeLeire et al. Impact of Insurance Expansion on Hospital Uncompensated Care Costs in 2014. Sept 2014.

<sup>51</sup> Urban Institute. Buettgens et al. The Cost of ACA Repeal. June 2016.

# *Impact of ACA Repeal on Hospitals*

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2013 levels except for people currently eligible for Medicaid who enroll due to the wood-work effect. This would effectively eliminate most of the Medicare DSH reductions. Thus, the net impact of repeal on hospital net income would be a reduction of \$165.8 billion over the 2018 to 2026 period.

## Exhibit 10: Estimate of the Impact on Hospital Revenues and Net Income under Repeal of the ACA (in millions)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2014-2026
<b>Impact on Hospital Revenues from Newly Uninsured</b>	<b>(\$29,767)</b>	<b>(\$40,992)</b>	<b>(\$44,948)</b>	<b>(\$48,012)</b>	<b>(\$51,672)</b>	<b>(\$53,373)</b>	<b>(\$54,854)</b>	<b>(\$57,714)</b>	<b>(\$59,778)</b>	<b>(\$441,109)</b>
New Coverage on Exchanges	(\$17,829)	(\$24,586)	(\$24,907)	(\$26,646)	(\$29,911)	(\$28,672)	(\$29,514)	(\$33,760)	(\$32,142)	(\$247,967)
Medicaid Newly Eligible	(\$11,938)	(\$16,406)	(\$18,219)	(\$17,481)	(\$19,782)	(\$20,550)	(\$21,080)	(\$21,777)	(\$23,030)	(\$170,263)
Medicaid Currently Eligible (Woodwork)	\$0	\$0	(\$1,822)	(\$3,885)	(\$1,978)	(\$4,151)	(\$4,259)	(\$2,178)	(\$4,606)	(\$22,879)
<b>Impact on Hospital Revenues due to Crowd-out Population</b>	<b>\$2,867</b>	<b>\$3,960</b>	<b>\$4,421</b>	<b>\$4,520</b>	<b>\$4,772</b>	<b>\$4,997</b>	<b>\$5,152</b>	<b>\$5,160</b>	<b>\$5,493</b>	<b>\$41,341</b>
Commercial to Exchanges	\$1,671	\$2,305	\$2,569	\$2,862	\$2,763	\$3,018	\$3,107	\$3,248	\$3,453	\$24,997
Commercial to Medicaid	\$1,195	\$1,655	\$1,852	\$1,658	\$2,009	\$1,978	\$2,045	\$1,912	\$2,040	\$16,345
<b>Impact of Repeal on Hospital Revenues</b>	<b>(\$26,900)</b>	<b>(\$37,032)</b>	<b>(\$40,527)</b>	<b>(\$43,491)</b>	<b>(\$46,900)</b>	<b>(\$48,377)</b>	<b>(\$49,702)</b>	<b>(\$52,554)</b>	<b>(\$54,285)</b>	<b>(\$399,768)</b>
<b>Impact of Reduced Hospital Utilization for Newly Uninsured</b>	<b>(\$9,518)</b>	<b>(\$13,043)</b>	<b>(\$14,403)</b>	<b>(\$15,250)</b>	<b>(\$16,704)</b>	<b>(\$16,669)</b>	<b>(\$17,057)</b>	<b>(\$18,158)</b>	<b>(\$18,555)</b>	<b>(\$139,358)</b>
New Coverage on Exchanges	(\$4,986)	(\$6,832)	(\$6,878)	(\$7,312)	(\$8,429)	(\$7,769)	(\$7,947)	(\$9,336)	(\$8,546)	(\$68,035)
Medicaid Newly Eligible	(\$4,532)	(\$6,211)	(\$6,878)	(\$6,580)	(\$7,699)	(\$7,692)	(\$7,868)	(\$8,135)	(\$8,546)	(\$64,141)
Medicaid Currently Eligible (Woodwork)	\$0	\$0	(\$647)	(\$1,358)	(\$577)	(\$1,209)	(\$1,242)	(\$688)	(\$1,462)	(\$7,183)
<b>Impact of ACA Repeal on Hospital Net Income before DSH Changes</b>	<b>(\$17,382)</b>	<b>(\$23,989)</b>	<b>(\$26,125)</b>	<b>(\$28,241)</b>	<b>(\$30,196)</b>	<b>(\$31,707)</b>	<b>(\$32,645)</b>	<b>(\$34,396)</b>	<b>(\$35,730)</b>	<b>(\$260,410)</b>
Impact on Medicare DSH Payment	\$3,261	\$4,590	\$4,895	\$5,215	\$5,561	\$5,931	\$6,301	\$6,687	\$7,097	\$49,537
Impact from Repealing Medicaid DSH Reductions	\$1,280	\$2,814	\$3,974	\$5,152	\$6,345	\$7,639	\$8,937	\$8,894	\$0	\$45,034
<b>Impact of ACA Repeal on Hospital Net Income after DSH Changes</b>	<b>(\$12,841)</b>	<b>(\$16,586)</b>	<b>(\$17,256)</b>	<b>(\$17,874)</b>	<b>(\$18,290)</b>	<b>(\$18,138)</b>	<b>(\$17,408)</b>	<b>(\$18,815)</b>	<b>(\$28,633)</b>	<b>(\$165,839)</b>

Source: Dobson | DaVanzo estimates

However, much of the Medicare hospital cuts would continue after January 2018 under repeal. Of the \$475.1 billion in cuts estimated above, about \$407.6 billion would be incurred by hospitals from January 2018 through 2026 (*Exhibit 11*).

**Exhibit 11: Medicare and Medicaid Payment Cuts to Hospitals Following Repeal in 2018 (in billions)**

Fiscal Year	ACA MB Cuts and Productivity Adjustments	Medicare DSH Reduction	Hospital Acquired Condition Penalties	Hospital Re-admission Reduction Program	Impact of Medicaid DSH Cuts	Total Impact of All Cuts
2018	\$12.0	\$3.8	\$0.4	\$0.5	\$1.3	\$18.0
2019	\$20.8	\$5.4	\$0.5	\$0.9	\$2.8	\$30.3
2020	\$24.0	\$5.7	\$0.5	\$0.9	\$4.0	\$35.1
2021	\$27.5	\$6.1	\$0.5	\$1.1	\$5.2	\$40.3
2022	\$31.5	\$6.5	\$0.6	\$1.1	\$6.3	\$46.0
2023	\$35.7	\$6.9	\$0.6	\$1.3	\$7.6	\$52.2
2024	\$40.6	\$7.3	\$0.6	\$1.4	\$8.9	\$58.9
2025	\$45.5	\$7.8	\$0.6	\$1.5	\$8.9	\$64.2
2026	\$52.0	\$8.3	\$0.7	\$1.6	n/a	\$62.5
<b>2010-2026</b>	<b>\$289.5</b>	<b>\$57.8</b>	<b>\$4.9</b>	<b>\$10.3</b>	<b>\$45.0</b>	<b>\$407.6</b>

Source: Dobson | DaVanzo estimates.

Overall, we estimate the financial impact to hospitals from 2018 through 2026 would be a loss of \$573.4 billion: \$165.8 billion in net income due to repeal of ACA coverage expansion, plus a loss of \$407.6 billion in original Medicare cuts under ACA. The reduction in net income of \$165.8 billion reflects the return of \$94.6 billion in Medicare/Medicaid DSH cuts that are restored under ACA repeal. Thus for accounting purposes, these cuts are retained in the estimates in *Exhibit 11*.