The Future of U.S. Health Care Spending

The Brookings Institution
April 11, 2014
Perspectives on Health Spending Growth

Louise Sheiner

Federal Reserve Board of Governors
Outline

• Health Spending has been rising faster than income for decades: Why?
  • Out of Pocket Spending
  • Public Financing
  • Relative Prices
  • Income Growth

• Spending growth has declined sharply since 2002. Is this the start of something new?
Out-of-Pocket Share of Spending Has Been Declining

Figure 2: Out-of-Pocket Share of Health Spending
Out-of-Pocket Spending Share of GDP Declined even as Health Spending Share Increased
What Caused Declines in OOP?

• Changes in structure of private insurance
  – Deductibles/coinsurance/copays didn’t rise as fast as health spending
• Expansions in public coverage
  – Medicare increasingly used by disabled
  – Medicaid expansions
  – Medicare Part D
Share Uninsured Fell from 1960 to 1980

Figure 3: Share of Population Uninsured
Public Share of Spending Rose

- Other Public
- Medicaid
- Medicare
Endogeneity of out-of-pocket spending

• Out of pocket share had to fall as share of spending to continue to provide reasonable insurance against health shocks

• Government financing expands when financial burdens on low-income increase

• Out-of-pocket share has flattened out recently. But..
  – Implementation of ACA will lower it again
  – Over long run, further expansions to ensure access for all?
Relative medical price inflation?

- Measured medical price inflation has long outpaced general inflation
- Much higher 1975-1992
Partly due to higher compensation in health industry
Nurses not technicians

Mean Compensation of Health Workers
Relative to All Workers

Nurses
Technicians
Increased Compensation Mirrored by Increased Education

Education of Nurses Relative to General Labor Force

- High School Grad
- College +
Physician compensation trended up a bit
But (not shown) not relative to 90th percentile worker

Median Physician Compensation
Relative to all Workers

![Graph showing median physician compensation over time](image-url)
Summary

• Lower out of pocket spending and increased public financing boosted health spending
  – But both of these are **choices** so a reflection of willingness-to-pay

• Higher compensation also increased spending before 1992
  – But quality of staff also improved

• Demand for health increases with technology and income.
  – Endogenous changes to insurance/public financing accommodate increased demand
Health Spending as a Share of GDP
Surprisingly well explained by simple regression of current and 4-years lagged GDP and a dummy for years 1992+
Out of Sample Fits Even Better if Include Health Price Inflation

Predicted and Actual Health Spending Growth with Relative Prices
Regression of Growth in Real Per Capita Health Spending  
1970-2012

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient 1</th>
<th>Coefficient 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP Growth</td>
<td>.11</td>
<td>.12*</td>
</tr>
<tr>
<td></td>
<td>(.07)</td>
<td>(.07)</td>
</tr>
<tr>
<td>GDP Growth L1</td>
<td>.09</td>
<td>.12*</td>
</tr>
<tr>
<td></td>
<td>(.08)</td>
<td>(.07)</td>
</tr>
<tr>
<td>GDP Growth L2</td>
<td>.09</td>
<td>.10</td>
</tr>
<tr>
<td></td>
<td>(.08)</td>
<td>(.07)</td>
</tr>
<tr>
<td>GDP Growth L3</td>
<td>.14*</td>
<td>.13**</td>
</tr>
<tr>
<td></td>
<td>(.08)</td>
<td>(.07)</td>
</tr>
<tr>
<td>GDP Growth L4</td>
<td>.33**</td>
<td>.31**</td>
</tr>
<tr>
<td></td>
<td>(.08)</td>
<td>(.07)</td>
</tr>
<tr>
<td>GDP Growth L5</td>
<td>.05</td>
<td>.05</td>
</tr>
<tr>
<td></td>
<td>(.08)</td>
<td>(.07)</td>
</tr>
<tr>
<td>Post-1991</td>
<td>-.018**</td>
<td>-.014**</td>
</tr>
<tr>
<td></td>
<td>(.003)</td>
<td>(.003)</td>
</tr>
<tr>
<td>Rel. Med. Prices</td>
<td>0.24**</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.09)</td>
</tr>
<tr>
<td>Constant</td>
<td>.034**</td>
<td>.028**</td>
</tr>
<tr>
<td></td>
<td>(.005)</td>
<td>(.005)</td>
</tr>
<tr>
<td>Rsq adj</td>
<td>.68</td>
<td>.73</td>
</tr>
</tbody>
</table>
Robustness Checks?

• Out of sample (2000-2012) prediction quite good

• Look at **STATE**-level regressions: growth in state health spending on growth in state personal income, with state and year fixed effects
  – GDP affects health spending with current and 3 years of lags
  – Near-term coefficients about the same; 3\textsuperscript{rd} year lag smaller and 4\textsuperscript{th} year lag insignificant
Conclusion

• Changes in GDP mostly responsible for recent slowdown

• Unusual episode appears to be early in early 2000s
  – Not why so low now, but why so high then?

• Same story for Medicare and Medicaid?
  – Separating by payer might miss aspects of NHE regressions (e.g., changing characteristics of Medicare/Medicaid beneficiaries over business cycle)
Medicare and Medicaid Regressions Different

- Increases in GDP boost Medicare and Medicaid with much longer lags (five to eight years)

- Medicaid shows no time trends or post 1991 effect

- Medicare shows strong negative time trend, unlike NHE—growth declines .2% per year

- Recent Medicare can be explained with GDP, Medicare prices, and time trend (but need time trend)
Medicare and non-Medicare used to move together over the long run, but recent pattern is different.
Projecting Excess Cost Growth

• Recent decline in NHE consistent with continued excess cost growth of about 1½ percent—about unchanged since 1992

• Looking forward, we know this must decline. But we have no way to pin down timing.

• Some analysts point to less new technology in the pipeline:
  – But if the result of general productivity slowdown, won’t help

• Are recent Medicare growth rates sustainable? Or should we expect a bounceback toward private?
  – If private slows over time, Medicare can too without creating access problems for beneficiaries.
  – Sustainability of Medicare cuts in ACA depends on timing of slowdown in private.
Understanding the Slowdown in Health Care Spending Growth

Discussant: Charles Roehrig

Panel One
Understanding the Slowdown in Health Care Spending Growth

Brookings Future of Health Care Spending Conference

Charles Roehrig
Altarum Center for Sustainable Health Spending
April 11, 2014
Health care spending has historically risen faster than income because of the combination of new technology and willingness to pay.

Health care spending responds to changes in income but the effects are spread over a number of years.

Spending slowdown since 2002 is largely the result of the two recessions, not innovation.

We are left with uncertainty about future growth - when will willingness to pay diminish?
The recession’s impact on health spending – how big and for how long?

When an economic downturn persists, it seems likely that health spending would adjust toward the new reality. How long do you think it should take to fully adjust? Econometric results suggest about 6 years. But while health spending is adjusting downward, GDP is adjusting upward (the slow recovery). When do they meet?
Acceleration in health spending begins in mid-2013, prior to expanded coverage. Rates for January and February 2014 are very preliminary and include government estimates of expanded coverage effects.
Since 1990, we have spent about 30% of our annual increase in per capita income on health. A continuation translates into an underlying growth rate of GDP+1 in 2013, declining to GDP+0.8 in 2025 and GDP+0.5 in 2050.

http://altarum.org/health-policy-blog/u-s-health-spending-as-a-share-of-gdp-where-are-we-headed
Long run implications of 30% marginal share

http://altarum.org/health-policy-blog/u-s-health-spending-as-a-share-of-gdp-where-are-we-headed
Understanding the Slowdown in Health Care Spending Growth

Discussant: Amitabh Chandra

Panel One
Comments on: Perspectives on Health Care Spending Growth

Amitabh Chandra
Harvard University
Healthcare Growth = GDP Growth + 2.4%
Real Per Enrollee and Per Capita Spending, By Payer

![Graph showing real per enrollee and per capita spending by payer from 2001 to 2012. The graph includes lines for Medicare Per Enrollee, Medicaid Per Enrollee, Average Private Premium, and Total Health Per Capita.]
Table A2. Real, Per Capita Spending Growth by Payer vs. GDP Growth Rate, 1970–2012
(Independent variable: growth in real, per capita costs paid by)

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Personal</th>
<th>Medicare</th>
<th>Medicaid</th>
<th>Private Insurance</th>
<th>Out-of-pocket spending</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Panel A: no lags</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Real, per capita GDP</td>
<td>0.165</td>
<td>0.0625</td>
<td>-0.217</td>
<td>-0.370</td>
<td>0.512**</td>
<td>0.508***</td>
</tr>
<tr>
<td>(Current period)</td>
<td>(0.105)</td>
<td>(0.0939)</td>
<td>(0.256)</td>
<td>(0.433)</td>
<td>(0.233)</td>
<td>(0.168)</td>
</tr>
<tr>
<td>R2 (Model 1)</td>
<td>0.044</td>
<td>0.007</td>
<td>0.017</td>
<td>0.022</td>
<td>0.089</td>
<td>0.164</td>
</tr>
</tbody>
</table>
### Table 3. Growth Rates of Prices, Utilization and Enrollments by Payer, 2007–11

<table>
<thead>
<tr>
<th></th>
<th>Price growth (real)</th>
<th>Utilization growth</th>
<th>Enrollment growth</th>
<th>Share of payments</th>
<th>Share of enrollees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicare</td>
<td>0.9</td>
<td>1.4</td>
<td>2.5</td>
<td>30</td>
<td>16</td>
</tr>
<tr>
<td>Medicaid</td>
<td>−0.4</td>
<td>−0.1</td>
<td>4.7</td>
<td>22</td>
<td>19</td>
</tr>
<tr>
<td>Private</td>
<td>2.7</td>
<td>0.7</td>
<td>−1.3</td>
<td>48</td>
<td>65</td>
</tr>
<tr>
<td><strong>Total (weighted)</strong></td>
<td><strong>1.5</strong></td>
<td><strong>0.7</strong></td>
<td><strong>0.4</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: The GDP deflator was 1.6 percent and was subtracted from column 1.

a. Price growth in Medicare is based on estimates of nominal price growth of 2.5 percent per year between 2007 and 2010 by Levine and Buntin (2013).

b. Medicaid price growth is taken from Zuckerman and Goin (2012), who estimate that physician fees have risen by 4.9 percent in Medicaid between 2008 and 2012, which is an annualized growth rate of 1.2 percent.


To estimate aggregate price growth, we take a weighted average of component growth rates for the years 2007–2011, where the weights are total spending by component-year.
Proton Beam Accelerator Facilities Operating, Planned, or Under Construction
Changes in the way doctors and hospitals are paid -- how much and by whom -- have begun to curb the steady rise of health care costs in the New York region. Costs are still going up faster than overall inflation, but the annual rate of increase is the lowest in 21 years...

Egged on by cost-conscious employers, some patients are asking doctors to disclose the charges before agreeing to a test or procedure. And managed care companies often telephone to press doctors for reduced fees...

U.S. Healthcare, Cigna, Sanus and Prudential, are paying family doctors, pediatricians and internists a pre-set monthly amount for each health plan member, replacing the traditional fee for each visit, test or procedure. As a result, these primary care physicians are careful to avoid unnecessary services.
Figure 10. Difference between Yearly Growth in National Health Spending and GDP, 2007–13

Yearly growth rate (smoothed)

Sources: Monthly Health Expenditure Data are calculated by the Altarum Institute, and monthly GDP is estimated by Macroeconomic Advisors. Graph is smoothed using a kernel density estimator with an Epanechnikov kernel and a bandwidth of 2 months.
Why Health Spending Growth Matters to the Federal Budget

Author: Bill Gale

Panel Two
Federal Health Spending and the Budget Outlook:

Some Alternative Scenarios

Alan J. Auerbach, William G. Gale and Benjamin H. Harris

Presentation at

Brookings Institution

April 11, 2014
Federal Health Care Outlays, 1962-2013 (As Percent of GDP)

Source: OMB Historical Table 16-1 FY15.

Federal Health Care Outlays are composed of the Net Medicare Spending, Medicaid, Defense Health Program, Veterans Medical Care, Net Federal Employees Health Benefits, Health Insurance Assistance and Other Health Spen
Figure 3. Health Care Spending Under Four Scenarios, 2014-2088 (As Percent of GDP)

Source: Auerbach and Gale (2014), Louise Sheiner
Figure 5. Federal Debt Under Four Scenarios, 2014-2040 (As Percent of GDP)

Source: Authors’ calculations.
<table>
<thead>
<tr>
<th>Policy Start Date</th>
<th>Target Date</th>
<th>Debt Target</th>
<th>No ECG</th>
<th>2.5% ECG</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>Permanent</td>
<td>Current</td>
<td>2.6</td>
<td>33.3</td>
</tr>
<tr>
<td>2014</td>
<td>2040</td>
<td>Current</td>
<td>1.3</td>
<td>4.0</td>
</tr>
<tr>
<td>2019</td>
<td>2040</td>
<td>Current</td>
<td>1.6</td>
<td>4.8</td>
</tr>
<tr>
<td>2019</td>
<td>2040</td>
<td>36% of GDP</td>
<td>3.1</td>
<td>6.3</td>
</tr>
</tbody>
</table>
Why Health Spending Growth Matters to State and Local Government

Author: Don Boyd

Panel Two
Alternative Health Spending Scenarios and State & Local Government Budgets

The Future of Health Care Spending Conference

The Brookings Institution
Washington, DC

Don Boyd, Senior Fellow
Rockefeller Institute
boydd@rockinst.org

April 11, 2014
State & local health care spending plays important role in the economy and in state-local finances

<table>
<thead>
<tr>
<th>State and local government expenditures on health care consumption, 2012:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditures, billions of dollars</td>
</tr>
<tr>
<td>Expenditures per capita, dollars</td>
</tr>
<tr>
<td>% of gross domestic product</td>
</tr>
<tr>
<td>% of total national health care consumption expenditures</td>
</tr>
<tr>
<td>% of state &amp; local government spending from own funds</td>
</tr>
<tr>
<td>% of state &amp; local government tax revenue</td>
</tr>
</tbody>
</table>

Source: Author's estimates based upon data from Centers for Medicare & Medicaid Services (National Health Expenditure Accounts), Census Bureau (population, and state & local finances), and Bureau of Economic Analysis (state & local finances, NIPA Table 3.3)
Medicaid plus worker and retiree health insurance are two largest components of SLG health spending (p.4)

### State and local government expenditures on health care consumption, 2012

<table>
<thead>
<tr>
<th></th>
<th>Billions of dollars</th>
<th>Percentage of state &amp; local total</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicaid</td>
<td>$188.8</td>
<td>39.7%</td>
<td>Excludes federal share; dominated by state governments</td>
</tr>
<tr>
<td>Employer contrib. to health ins. premiums</td>
<td>152.5</td>
<td>32.1%</td>
<td>likely dominated by local governments</td>
</tr>
<tr>
<td>Employee health insurance *</td>
<td>114.3</td>
<td>24.0%</td>
<td>likely dominated by local governments</td>
</tr>
<tr>
<td>Retiree health insurance (OPEB)**</td>
<td>38.2</td>
<td>8.0%</td>
<td>primarily state &amp; local health departments</td>
</tr>
<tr>
<td>Public health activity</td>
<td>64.1</td>
<td>13.5%</td>
<td>includes maternal and child health, vocational rehabilitation, general assistance, school health, S-CHIP, and other state and local programs</td>
</tr>
<tr>
<td>Other programs</td>
<td>58.5</td>
<td>12.3%</td>
<td></td>
</tr>
<tr>
<td>Employer contribution to Medicare trust fund</td>
<td>11.4</td>
<td>2.4%</td>
<td>Excludes research, equipment, and structures ($21.8b)</td>
</tr>
<tr>
<td>Grand total</td>
<td>$475.4</td>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>

* Estimated by author from Medical Expenditure Panel Survey

** Estimated by subtracting employee health insurance estimate from total employer contributions

Source: Author’s analysis of National Health Expenditure Accounts, Centers for Medicare & Medicaid Services; and Medical Expenditure Panel Survey, Agency for Healthcare Research and Quality.
Near-doubling of last 25 years driven both by Medicaid and non-Medicaid

State and local government expenditures on health care consumption as % of Gross Domestic Product

Sources: Author’s analysis of data from National Health Expenditure Accounts, Centers for Medicare and Medicaid Services, and from Bureau of Economic Analysis
Huge variation in SLG-financed health care: We know Medicaid. (Don’t have details on non-Medicaid.)

Medicaid spending relative to state GDP in 2009
Each state's percent of GDP minus national average

Sources: Centers for Medicare and Medicaid Services (Medicaid) and Bureau of Economic Analysis (State GDP)
### Summary of key assumptions underlying projections (p.8)

#### Average annual growth rate (AAGR), 2014 to 2034

<table>
<thead>
<tr>
<th>Description</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population, total</td>
<td>0.78%</td>
</tr>
<tr>
<td>Population, age 0-19</td>
<td>0.60%</td>
</tr>
<tr>
<td>Population, age 20-64</td>
<td>0.31%</td>
</tr>
<tr>
<td>Population, age 65+</td>
<td>2.63%</td>
</tr>
<tr>
<td>Real GDP per capita</td>
<td>1.39%</td>
</tr>
<tr>
<td>Price inflation</td>
<td>2.09%</td>
</tr>
</tbody>
</table>

#### Excess cost growth:

- **Baseline**: 1.25%
- **High cost-growth scenario**: 2.50%
- **Low cost-growth**: 0.00%

#### Medicaid assumptions

- **Average cost in dollars per enrollee in 2014, overall**: $7,570
  - Child: $3,353
  - Adult: $5,357
  - Aged: $18,492
  - Disabled: $21,051

- **Affordable Care Act expansion population enrollment**: 10 million in 2014, rising to 18 million in 2022
- **Adults as % of expansion population (remainder are children)**: 78%
- **Expansion population average cost as % of non-expansion average cost**: 70%

#### Federal share of Medicaid costs (Federal Medical Assistance Percentage):

- **FMAP - Base population**: 54 to 55%
- **FMAP - Expansion population**: 100% in 2014, falling to 90% in 2020+
Over 20 years, spending rises 1.2 %-pts of GDP in baseline, 2.3 ppts in high cost-growth scenario.

State & local government health care consumption expenditures as % of GDP

Three cost-growth scenarios

Source: Author’s analysis based on assumptions and methods described in the text
Increases driven both by Medicaid (aged, disb; NOT expansion) & non-Medicaid (esp. employee, retiree HI)

**Baseline results: State & local government health care consumption spending as % of GDP**

<table>
<thead>
<tr>
<th></th>
<th>Spending as % of GDP</th>
<th>Change in spending as % of GDP</th>
<th>2014 to 2034</th>
<th>Share of % change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2014</td>
<td>2024</td>
<td>2034</td>
<td>2014 to 2024</td>
</tr>
<tr>
<td>State &amp; local government health care total</td>
<td>3.04</td>
<td>3.67</td>
<td>4.22</td>
<td>0.64</td>
</tr>
<tr>
<td>Child</td>
<td>0.24</td>
<td>0.27</td>
<td>0.30</td>
<td>0.03</td>
</tr>
<tr>
<td>Aged</td>
<td>0.25</td>
<td>0.37</td>
<td>0.47</td>
<td>0.12</td>
</tr>
<tr>
<td>Expansion enrollment</td>
<td>-</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
</tr>
<tr>
<td>Employee health insurance</td>
<td>0.73</td>
<td>0.84</td>
<td>0.94</td>
<td>0.10</td>
</tr>
<tr>
<td>Public health activity</td>
<td>0.41</td>
<td>0.47</td>
<td>0.53</td>
<td>0.06</td>
</tr>
</tbody>
</table>

Source: Author's analysis based on assumptions and methods described in text.
### How big are potential increases in health care spending?

<table>
<thead>
<tr>
<th>Comparison</th>
<th>Percent of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>State tax increases enacted in and near 2001 recession</td>
<td>0.15</td>
</tr>
<tr>
<td>Eliminate all cash assistance spending</td>
<td>0.16</td>
</tr>
<tr>
<td>State tax increases enacted in and near 2007 recession</td>
<td>0.24</td>
</tr>
<tr>
<td><strong>Low health care cost-growth scenario</strong></td>
<td><strong>0.28</strong></td>
</tr>
<tr>
<td>Eliminate all state &amp; local government-financed fire protection in the United States</td>
<td>0.28</td>
</tr>
<tr>
<td>State tax increases enacted in and near 1980-82 recessions</td>
<td>0.48</td>
</tr>
<tr>
<td>State tax increases enacted in and near 1990 recession</td>
<td>0.56</td>
</tr>
<tr>
<td>Eliminate all state &amp; local government police and prison spending</td>
<td>1.13</td>
</tr>
<tr>
<td><strong>Baseline health care cost-growth scenario</strong></td>
<td><strong>1.18</strong></td>
</tr>
<tr>
<td>Eliminate all state &amp; local spending on highways and judicial systems</td>
<td>1.31</td>
</tr>
<tr>
<td>Increase state &amp; local sales taxes by 75%</td>
<td>1.75</td>
</tr>
<tr>
<td>50% cut in ALL K-12 spending</td>
<td>1.89</td>
</tr>
<tr>
<td>20% cut in all non-health state &amp; local spending financed from own sources</td>
<td>2.00</td>
</tr>
<tr>
<td><strong>High health care cost-growth scenario</strong></td>
<td><strong>2.33</strong></td>
</tr>
<tr>
<td>Increase in K-12 spending between 1950 and 1970 to educate baby boomers</td>
<td>2.97</td>
</tr>
<tr>
<td>Increase in SLG taxes 1950-1970 to finance education of baby boomers</td>
<td>2.99</td>
</tr>
<tr>
<td>(taxes were 37% lower in 1950 vs. economy than now)</td>
<td></td>
</tr>
</tbody>
</table>
If financed by taxes, high cost-growth would require 20+% increase above highest level of last 7 decades.
Concluding observations

• SLG health care expend. approx doubled last 25 years, now $475 billion; 18% of national HCX$, 24% of SLG own-funds spending.
• Baseline scenario \(\rightarrow\) +1.2% of GDP over 20yrs, high-growth \(\rightarrow\) +2.3%
• These increases are large enough to \(\rightarrow\) very difficult policy choices; high cost-growth scenario likely to require significant spending cuts.
### Key factors assumed to drive projected health care expenditures

#### Enrollment, population, and workload projections
- Medicaid enrollment
  - Child
  - Adults
  - Aged
  - Disabled
- State & local government workers covered by health insurance
- State & local government retirees covered by retiree health insurance
- Public health activity - workload
- Other health programs - workload

#### Enrollment, population, or workload grows at same rate as:
- Population, age 0-19
- Population, age 20-64
- Population, age 65+
- Population, total

#### Health care costs
- Cost per member of relevant population (enrollee, worker, retiree, etc.) or per unit of workload

#### Nominal costs per unit grow at following rate:
- growth in real GDP per capita
- + general price inflation
- + excess cost growth for the scenario in question
State & local government health care consumption spending as % of GDP  
Comparison of three cost-growth scenarios

<table>
<thead>
<tr>
<th></th>
<th>Spending as % of GDP</th>
<th>Change in spending as % of GDP</th>
<th>2014 to 2034 Share of % change</th>
<th>Baseline scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2014</td>
<td>2024</td>
<td>2034</td>
<td>2014 to 2024</td>
</tr>
<tr>
<td>State &amp; local government health care total</td>
<td>3.04</td>
<td>3.67</td>
<td>4.22</td>
<td>0.64</td>
</tr>
<tr>
<td>Medicaid state &amp; local total</td>
<td>1.18</td>
<td>1.48</td>
<td>1.71</td>
<td>0.30</td>
</tr>
<tr>
<td>Non-Medicaid total</td>
<td>1.85</td>
<td>2.19</td>
<td>2.51</td>
<td>0.34</td>
</tr>
</tbody>
</table>

High cost-growth scenario

<table>
<thead>
<tr>
<th></th>
<th>Spending as % of GDP</th>
<th>Change in spending as % of GDP</th>
<th>2014 to 2034 Share of % change</th>
<th>Baseline scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2014</td>
<td>2024</td>
<td>2034</td>
<td>2014 to 2024</td>
</tr>
<tr>
<td>State &amp; local government health care total</td>
<td>3.07</td>
<td>4.14</td>
<td>5.40</td>
<td>1.07</td>
</tr>
<tr>
<td>Medicaid state &amp; local total</td>
<td>1.20</td>
<td>1.67</td>
<td>2.18</td>
<td>0.47</td>
</tr>
<tr>
<td>Non-Medicaid total</td>
<td>1.87</td>
<td>2.47</td>
<td>3.21</td>
<td>0.60</td>
</tr>
</tbody>
</table>

Low cost-growth scenario

<table>
<thead>
<tr>
<th></th>
<th>Spending as % of GDP</th>
<th>Change in spending as % of GDP</th>
<th>2014 to 2034 Share of % change</th>
<th>Baseline scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2014</td>
<td>2024</td>
<td>2034</td>
<td>2014 to 2024</td>
</tr>
<tr>
<td>State &amp; local government health care total</td>
<td>2.99</td>
<td>3.18</td>
<td>3.27</td>
<td>0.19</td>
</tr>
<tr>
<td>Medicaid state &amp; local total</td>
<td>1.17</td>
<td>1.29</td>
<td>1.32</td>
<td>0.12</td>
</tr>
<tr>
<td>Non-Medicaid total</td>
<td>1.83</td>
<td>1.90</td>
<td>1.95</td>
<td>0.07</td>
</tr>
</tbody>
</table>

Source: Author's analysis based on assumptions and methods described in text.
## High cost-growth scenario: State & local government health care consumption spending as % of GDP

<table>
<thead>
<tr>
<th></th>
<th>Spending as % of GDP</th>
<th>Change in spending as % of GDP</th>
<th>2014 to 2034</th>
<th>Share of change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2014</td>
<td>2024</td>
<td>2034</td>
<td>2014 to 2024</td>
</tr>
<tr>
<td>State &amp; local government health care total</td>
<td>3.07</td>
<td>4.14</td>
<td>5.40</td>
<td>1.07</td>
</tr>
<tr>
<td>Medicaid state &amp; local total</td>
<td>1.20</td>
<td>1.67</td>
<td>2.18</td>
<td>0.47</td>
</tr>
<tr>
<td>Child</td>
<td>0.24</td>
<td>0.30</td>
<td>0.38</td>
<td>0.06</td>
</tr>
<tr>
<td>Adult</td>
<td>0.19</td>
<td>0.23</td>
<td>0.28</td>
<td>0.04</td>
</tr>
<tr>
<td>Aged</td>
<td>0.25</td>
<td>0.41</td>
<td>0.60</td>
<td>0.16</td>
</tr>
<tr>
<td>Disabled</td>
<td>0.52</td>
<td>0.68</td>
<td>0.87</td>
<td>0.16</td>
</tr>
<tr>
<td>Expansion enrollment</td>
<td>-</td>
<td>0.04</td>
<td>0.05</td>
<td>0.04</td>
</tr>
<tr>
<td>Non-Medicaid total</td>
<td>1.87</td>
<td>2.47</td>
<td>3.21</td>
<td>0.60</td>
</tr>
<tr>
<td>Employee health insurance</td>
<td>0.74</td>
<td>0.94</td>
<td>1.20</td>
<td>0.20</td>
</tr>
<tr>
<td>Retiree health insurance (OPEB)</td>
<td>0.26</td>
<td>0.42</td>
<td>0.61</td>
<td>0.16</td>
</tr>
<tr>
<td>Public health activity</td>
<td>0.42</td>
<td>0.53</td>
<td>0.67</td>
<td>0.11</td>
</tr>
<tr>
<td>All other</td>
<td>0.45</td>
<td>0.58</td>
<td>0.73</td>
<td>0.12</td>
</tr>
</tbody>
</table>

Source: Author's analysis based on assumptions and methods described in text.
Why Health Spending Growth Matters to Employers and Households

Author: Paul Ginsburg

Panel Two
Health Spending Scenarios: Implications for Employers and Working Households

Paul B. Ginsburg, Ph.D.
Norman Topping Chair in Medicine and Public Policy
Models of Employer Behavior (1)

• Earlier thinking about response to rising health spending
  – A burden on employers—reduced profits
  – Passed on to customers—higher prices
    • Concerns about international competitiveness
Models of Employer Behavior (2)

- Recent research shows most is shifted to employees
  - Less offering of coverage
  - Offering less comprehensive coverage
  - Paying smaller share of premium
  - Smaller wage increases
  - Impacts strongest for lower-paid workers
Why Employers Offer Coverage

- Tax savings from funding benefits from pre-tax source
- Creation of stable risk pools enabling all employees to afford coverage
- Purchase coverage at lower cost than individuals
- Much more attractive proposition for large high-wage employers
- All translates into “essential tool for recruiting and retention”
Results from Literature

• Offering responds to premiums
  – Greater sensitivity in small firms—elasticity to tax price around -0.8 for small firms—but some in larger
• Shift of premium increases to wages
  – 10 percent premium increase lowers wages 2.3 percent
  – For 2000-2009, proportion of compensation gains going to health benefits for fourth decile: 37 percent
Annual Growth in Components of Worker Compensation, 2000-2009

Source: Romer and Duggan 2010, using data from the Employer Costs for Employment Compensation survey
Expanding Option Set for Employers (1)

- Employment practices
  - Shift towards part-time or contract employees and outsource more functions

- Changes in benefit design
  - Rapid growth in high deductibles
    - Percent of workers with single deductible > $1000
      - 10 percent in 2006 to 38 percent in 2013
      » From 16 percent to 58 percent in small firms
    - But only modest change in proportion of premium paid--explain
Expanding Option Set for Employers (2)

• Innovations in provider networks
  – Greater use of limited networks by small employers
    • Public exchange experience may accelerate
      – Estimate of 23 percent lower premiums
• Development of private exchanges
  – More plan choice makes lower-cost options more acceptable
  – From defined benefit to defined contribution
    • Ability of employees to limit additional contributions
Implications for Working Households

- Direct implications of employer policies on offering coverage, benefit design, contribution strategy, wage trends
- Benefit design changes will reduce utilization of health care and financial protection
  - Increasing concerns about incidence of spending exceeding 10 percent of annual income
- Household sector affected by spending trends in Medicare and Medicaid and tax expenditure for ESI
Conclusion

• Substantial implications of spending for employers and working households
  – Substantial ability of employers to shift higher premiums to workers
  – Recent developments increasing ease of responding
• Continuation of slowdown in health spending trends would have great benefits for working households
Why Health Spending Growth Matters to Employers and Households

Discussant: Amanda Kowalski

Panel Two
Discussion of
Alternative Health Spending Scenarios: Implications for Employees and Working Households
by Paul Ginsburg

Amanda Kowalski
Assistant Professor of Economics, Yale University
Faculty Research Fellow, NBER
Nonresident Fellow in Economic Studies, Brookings

April 2014
Who pays for increased spending? Employers say they do

Deloitte: One in 10 U.S. Employers to Drop Health Coverage
By LOUISE RADNOFSKY
July 24, 2012 12:03 a.m. ET

Dropping Health Plans, to Pick Better Coverage
By STACY COWLEY

For nearly 20 years, Keith Perkins offered health insurance to employees of his small electrical contracting company in Greencastle, Pa., and footed most of the bill. This year, with the arrival of the Affordable Care Act’s insurance marketplace, he decided to stop.

Columbus, Ohio • Apr 10, 2014 • 73° Partly Cloudy

The Columbus Dispatch

Company drops health coverage, cites Obamacare
Theoretical and empirical literature in economics says that workers, and not their employers, bear the burden of increased health care costs.

Ginsburg summarizes and agrees with the literature, allowing for some nuanced exceptions, especially due to the structure of the ACA.
Who pays for increased spending? Ongoing trends vs. policy changes

- Health care costs have been increasing over time, with implications for employers
- The ACA adds additional implications for health care costs and employers

Ginsburg discusses both. I’ll focus on the ACA and what we can learn about the ACA from Massachusetts
Key Provisions of Massachusetts and National Health Reform

Massachusetts Reform, April 2006

• Individual mandate
  – Penalty is up to 50% of basic plan by months without coverage

• Employers mandated to offer coverage
  – >10 FTEs
  – Penalty is $295/worker

• Medicaid expansions
  – Up to 100% of FPL for adults

• Subsidized private plans through exchanges
  – Subsidies up to 300% of FPL

National Reform, March 2010

• Individual mandate
  – Penalty is higher of 2.5% of income or $2,085

• Employers mandated to offer coverage (delayed until 2018)
  – >50 FTs
  – Penalty is $2,000 per FT for not offering any insurance
  – Penalty is $3,000 per FT for not offering affordable coverage, for all employees receiving tax credit (not assessed on first 30 employees)

• Medicaid expansions
  – Up to 133% of FPL

• Subsidized private plans through exchanges
  – Subsidies up to 400% of FPL

Reference: Kaiser Family Foundation
Massachusetts saw an *increase* in employer-sponsored coverage after the reform relative to before the reform, relative to other states.

*Half* of all new coverage was obtained through employers.
Workers who gain employer coverage see wages fall

Regression coefficients with $w$ as dependent variable. See text for details.
Wages and ESHI are two-month indicators. May-June 2006 are normalized to zero.
I. Subtle policy differences could encourage even more employer-sponsored insurance
   - In ACA, only way to get tax advantage for employee portion of premiums is to get insurance through insurer
   - In MA, employers had to establish section 125 plans so that employees could pay premiums pre-tax, even on exchange

II. Theoretical and empirical result that workers pay for increased health care costs is alive and well – should apply post-ACA
What could the ACA have done differently based on MA?

- ACA could have allowed employers to purchase health insurance through exchanges
  - Seems to be enthusiasm, given popularity of new employer exchanges
  - As in MA, employees could potentially combine contributions from employers of both spouses, rewarding families with two workers
  - People with employer-sponsored coverage are generally healthier – participants in individual market and the government would save money by including them in the pool

Potential outcry from people who want to keep their existing employer plans, but perhaps this change could still be made!
Sustainable Reductions in Health Care Spending: What is Possible While Improving Health?

Authors: Mark McClellan, Alice Rivlin

Panel Three
Percent change in cumulative Medicare spending by scenario

- 2020
- 2030
- 2040

Growth

- 2.5% Growth
- 0% Growth

$50K
- $5.6% Growth
- $12.2% Growth
- $18.0% Growth
- $0.4% Growth
- $0.1% Growth
- $0.9% Growth

$100K
- $1.5% Growth
- $1.0% Growth
- $0.9% Growth
- $1.5% Growth
- $0.5% Growth
- $1.1% Growth
- $3.7% Growth
- $3.1% Growth

$50K
- $0.5% Growth
- $1.1% Growth
- $3.7% Growth
- $3.1% Growth

$100K
- $0.5% Growth
- $1.1% Growth
- $3.7% Growth
- $3.1% Growth

0.5% cost reduction
- $1.6% cost reduction
- $4.3% cost reduction
- $7.6% cost reduction

1.0% cost reduction
- $3.1% cost reduction
- $8.8% cost reduction
- $14.5% cost reduction

1.5% cost reduction
- $4.6% cost reduction
- $12.8% cost reduction
- $20.9% cost reduction

Reduce Obesity Rate by 20%
- $0.0% rate
- $0.0% rate
- $0.0% rate

Reduce Smoking Rate by 7%
- $0.0% rate
- $0.0% rate
- $0.1% rate

3-4 month life expectancy gain

13-14 month life expectancy gain

Excess Cost Growth Scenarios

Biomedical Innovation Scenarios

Payment, Consumer Choice, and Market Reform Scenarios

Behavioral Change Scenarios
Sustainable Reductions in Health Care Spending: What is Possible While Improving Health?  
Discussant: David Cutler
What’s Possible in Health Spending?

David M. Cutler
Department of Economics
Harvard University
david_cutler@harvard.edu
The traditional approach to health spending: the Trend and Wiggle Model

Medical spending as a share of GDP

Trend = GDP + 1%
The traditional approach to health spending: the Trend and Wiggle Model

Medical spending as a share of GDP

Wiggle = everything else

Trend = GDP + 1%
The traditional approach to health spending: the Trend and Wiggle Model

Trend = GDP + 1%

Wiggle = everything else
Why is the model wrong?

Technology doesn’t always add to costs

• Technology costs more when there are no other ways to treat people.
• We often discover that old technologies are harmful or unnecessary (decline of stent insertion after the COURAGE trial)

Income isn’t a determining factor for the bulk of people with insurance
A different model

The efficiency of the supply side determines how much it costs to treat a particular condition.

Demand and other constraints determine how frequently those treatments are applied.
A more efficient delivery system would save 25-50%

<table>
<thead>
<tr>
<th>Organization</th>
<th>Year</th>
<th>Estimate (as percent of U.S. spending)</th>
<th>Approach</th>
<th>Types of waste examined</th>
</tr>
</thead>
<tbody>
<tr>
<td>PricewaterhouseCoopers</td>
<td>2005</td>
<td>54%</td>
<td>Literature review, Interviews with health industry executives and government officials, Survey of 1,000 US consumers</td>
<td>Behavioral inefficiencies, Clinical inefficiencies, Operational inefficiencies</td>
</tr>
<tr>
<td>RAND Corporation</td>
<td>2008</td>
<td>50%</td>
<td>Meta-analysis of research on waste in the health care system</td>
<td>Administrative inefficiencies, Operational inefficiencies, Clinical inefficiencies</td>
</tr>
<tr>
<td>McKinsey Global Institute</td>
<td>2008</td>
<td>31%</td>
<td>Comparison of health care spending and income by country</td>
<td>Spending in excess of expected level of spending based on national wealth</td>
</tr>
<tr>
<td>Institute of Medicine</td>
<td>2012</td>
<td>30%</td>
<td>Meta-analysis of literature; expert interviews</td>
<td>Unnecessary services, Delivery inefficiencies, High prices, Unnecessary administrative costs, Missed prevention opportunities, Fraud and abuse</td>
</tr>
<tr>
<td>NEHI</td>
<td>2008</td>
<td>27%</td>
<td>Meta-analysis of expert interviews, case studies, and a review of relevant literature</td>
<td>Emergency department overuse, Antibiotic overuse, Patient medication non-adherence, Vaccine underuse, Hospital readmissions, Hospital admissions for ambulatory care-sensitive conditions, Medical errors</td>
</tr>
</tbody>
</table>

Source: PricewaterhouseCoopers; RAND Corporation; McKinsey & Company; Institute of Medicine; Journal of the American Medical Association; NEHI.
Getting better is not rocket science

Source: Richard Bohmer, Designing Care
This process applies throughout health care ‘production’

Mass production of routine treatments
- Chest pain, cancer, routine mental illness

Customized production of treatment for the uniquely ill
- Seriously and persistently mentally ill

Administrative cost of managing payments
Conjecture: Medical care would have more normal price increase with greater efficiency

2012 CPI, 1982-84=100

College tuition and fees
Medical care
Services
Energy
Food
Transportation
Housing
Apparel
Durables
Toys
Televisions

All items

BLS data; compiled by Larry Summers
Demand probably would not respond greatly to cheaper treatments

Aging is not a big deal
- Age doesn’t matter for spending; sickness does

With a few exceptions, most disease is already diagnosed
- Exceptions: Alzheimer’s/mild dementia
What will influence the trend in medical spending?

The efficiency of the health system
- The managerial capacity of health care

The compression of morbidity
- Death from cancer or Alzheimer’s?
Disability is increasingly being compressed into the period at the end of life