The Effect of Medicaid Expansion on Demand for VA Care

Steve Pizer
Amresh Hanchate
Austin Frakt
Acknowledgement

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Objective

• To estimate the historical relationship between Medicaid expansion and demand for VA care
• To use our estimate to simulate the effect of the Affordable Care Act’s (ACA’s) Medicaid expansion on VA enrollment and utilization
Background

• The ACA aims to increase access to affordable health insurance, expanding coverage

• One in ten nonelderly veterans were uninsured in 2010 (Haley & Kenney 2012)

• 2.8 million of 12.5 million of nonelderly veterans have VA coverage (Haley & Kenney 2013)
Background

- Medicaid available to persons with income <138% FPL, but only where states expand
  - 4 in 10 unins veterans would qualify (Haley & Kenney 2013)
  - >50% don’t live in expansion states (Haley & Kenney 2013)
- Individual-market plans with subsidies for persons income 100%-400% FPL and cost sharing assistance for <250% FPL
  - 90% nonelderly VA users qualify (Haley & Kenney 2012)
Background

• What is the effect on VA demand of these other options for coverage?
• Extensive margin: Substituting non-VA coverage for VA coverage
• Intensive margin: Substituting some non-VA care for VA care
  – Dual enrollment among nonelderly VA enrollees: 34% private, 4% Medicaid, 17% Medicare (ADUSH 2011)
Data/Methods

• We combined historical:
  – Medicaid eligibility rules (Urban/TRIM + MEPS)
  – Annual, sector-level VA enrollment, inpatient (days), outpatient (clinic stops) utilization (Milliman)
  – VetPop
  – Housing purchase price index (FHA, normalized to 1 in 1991)
  – Employment-to-population ratio (BLS)
Data/Methods

• Data from all sources overlapped 2002-2008
• Estimated year-sector level models, though independent variables are state level
  – 566 sectors, 7 years: 3,962 year-sector observations
• Used year and sector fixed effects
• Focus on <65, post-4/1/1999 enrollees
  – This is where ACA impact will be concentrated
Medicaid Eligibility Variable Details

• Similar to work of Currie and Gruber (1996) and Cutler and Gruber (1996)
• Proportion of standardized pop (1998 MEPS) eligible for each state’s program in each year
• Working age (25-62)
• Not affected by demographic/economic variation
• Eligibility rules from Urban/TRIM model
Medicaid Eligibility Trends
(Ratio of 2008 to 2002 value: ↑ 23%)
VA Enrollment Trends (<65, post)
(Ratio of 2008 to 2002 value: ↑56%)
VA Inpatient Util Trends (<65, post)
(Ratio of 2008 to 2002 value: ↑87%)
VA Outpatient Util Trends (<65, post)
(Ratio of 2008 to 2002 value: ↑146%)
### Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion Medicaid eligible: baseline</td>
<td>0.090</td>
<td>0.055</td>
<td>0.018</td>
<td>0.36</td>
</tr>
<tr>
<td>Proportion Medicaid eligible: ACA-simulated</td>
<td>0.18</td>
<td>0.030</td>
<td>0.17</td>
<td>0.36</td>
</tr>
<tr>
<td>Housing sales price index (1=1991)</td>
<td>1.97</td>
<td>0.40</td>
<td>1.069</td>
<td>3.48</td>
</tr>
<tr>
<td>Employment-pop ratio</td>
<td>62.72%</td>
<td>3.51%</td>
<td>52.28%</td>
<td>71.58%</td>
</tr>
<tr>
<td>VetPop</td>
<td>26,705</td>
<td>22,631</td>
<td>132</td>
<td>287,567</td>
</tr>
<tr>
<td>Enrollment</td>
<td>4,457</td>
<td>3,849</td>
<td>36</td>
<td>49,337</td>
</tr>
<tr>
<td>Inpatient util (days)</td>
<td>1,564</td>
<td>1,632</td>
<td>9</td>
<td>19,332</td>
</tr>
<tr>
<td>Outpatient util (clinic stops)</td>
<td>17,620</td>
<td>16,702</td>
<td>85</td>
<td>235,711</td>
</tr>
</tbody>
</table>

N=3,962 sector-year observations (2002-2008, 567 sectors/year)
Estimation Method

• VA enrollment, IP utilization and OP utilization are *counts* (positive whole numbers)
• Statisticians use Poisson models to explain variations in count data
• Poisson models take the form $Y = \exp(xb + \varepsilon)$
  – $Y$ constrained to be positive
Specification

- Poisson models with year-sector non-elderly veteran pop (VetPop) as exposure variable
  - Accounts for fact that some sectors have more veterans, so we expect more enrollment and utilization there
- Enrollment or utilization = f(Medicaid eligibility, housing price index, employment-to-pop ratio, year and sector fixed effects)
Measuring Results: **Elasticity Reflects Sensitivity to Change**

- Elasticity = (% change in y)/(% change in x)
- If y doubles when x doubles,
  – elasticity = 1
- If x doubles and y grows by half,
  – elasticity = 0.5
- If x doubles and y drops by half,
  – elasticity = -0.5
Estimation Results: Elasticities

<table>
<thead>
<tr>
<th>Elasticities with respect to Medicaid eligibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrollment</td>
</tr>
<tr>
<td>-0.11 (0.0090)***</td>
</tr>
<tr>
<td>Inpatient util</td>
</tr>
<tr>
<td>-0.065 (0.028)*</td>
</tr>
<tr>
<td>Outpatient util</td>
</tr>
<tr>
<td>-0.14 (0.020)***</td>
</tr>
</tbody>
</table>

*     p< 0.05  
**    p< 0.01  
***   p < 0.001

Interpretation:
Under ACA, Medicaid eligibility could double (100% increase). Elasticities imply VA enrollment decreases by 11%, VA inpatient utilization decreases by 6.5%, and VA outpatient utilization decreases by 14%.
State-Level Simulation

• Assume ACA’s Medicaid expansion in 2008
• Account for current expansion/non-expansion state status
• Predict enrollment/utilization under status quo
• Predict it under ACA’s Medicaid expansion
• Ratio is the percent change
Where the **States** Stand on Medicaid Expansion

25 states, DC, Expanding Medicaid—February 7, 2014

Notes: Based on a literature review as of 2/7/14. All policies subject to change without notice.

HHS has announced that states can obtain a waiver to use federal funds to shift Medicaid-eligible residents into private health plans. The District of Columbia plans to participate in Medicaid expansion and will operate its own exchange.

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Simulation Results: Summary

• Enrollment would fall to between 85%-98% of baseline, depending on state
• Inpatient days would fall to between 91%-99% of baseline
• Outpatient clinic stops would fall to between 81%-97% if baseline
• (All excluding Vermont: no change)
Change Under ACA: M’caid Eligibility
Key Limitations

• Historical Medicaid expansion data only available through 2008

• Simulate ACA Medicaid expansion as if it occurred in 2008

• Compared to ACA Medicaid expansions, historical Medicaid expansions were modest in magnitude and scale: unclear if increased demand will be met

• Unable to simulate effect of ACA’s coverage mandate and other features of the law
Discussion

- Accounting for Medicaid expansion alone, had it occurred in 2008, VA enrollment, IP, and OP utilization would have fallen in expansion states.
- No effect in non-expansion states.
- Analysis does not consider possibly countervailing effects:
  - VA enrollment is creditable coverage, satisfying the mandate.
  - Coverage expansion outreach could increase knowledge of VA and demand for it.
- Analysis also does not consider availability of coverage through exchanges.
Discussion

• Study years (2002-2008) coincide with period of rapid VA enrollment growth
• Results could be driven by a reduction of that growth where and when Medicaid eligibility was relatively more expansive (extensive margin)
• Perhaps there was little effect on existing VA enrollees (intensive margin)
• VA enrollment growth has abated somewhat
• Might expect a more modest effect