Valuing Protection against Health-Related Risks

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Motivation

- A growing call by the WHO and others for universal health coverage around the world

- But... how should we value the benefits of the expanded coverage or the substantial costs of sustaining such coverage?
A simple two-period model....

<table>
<thead>
<tr>
<th>Young, working</th>
<th>Older, more likely sick</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy, earn income $Y_1$</td>
<td>Prob. good health: $\pi_g(h_{2g})$</td>
</tr>
<tr>
<td>Pay insurance $P(Y_1)$</td>
<td>Prob. bad health: $\pi_b(h_{2b})$</td>
</tr>
<tr>
<td>Saving $S = Y_1 - P(Y_1) - C_1$</td>
<td>Prob. early death: $1-\pi_g-\pi_b$</td>
</tr>
</tbody>
</table>

Note: $h_{2g}$ is health spending in good health, $h_{2b}$ in bad health
1. Health insurance leads to more health spending, and, one hopes, better health:
   - Greater chance of good health: \[ \Delta \pi_g = \pi'_g \Delta h_{2g} \geq 0 \]
   - Lower chance of poor health: \[ \Delta \pi_b = \pi'_b \Delta h_{2b} \leq 0 \]
Although the evidence is sometimes mixed

The Oregon Experiment — Effects of Medicaid on Clinical Outcomes

Katherine Baicker, Ph.D., Sarah L. Taubman, Sc.D., Heidi L. Allen, Ph.D., Mira Bernstein, Ph.D., Jonathan H. Gruber, Ph.D., Joseph P. Newhouse, Ph.D., Eric C. Schneider, M.D., Bill J. Wright, Ph.D., Alan M. Zaslavsky, Ph.D., and Amy N. Finkelstein, Ph.D., for the Oregon Health Study Group*
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Oregon Study: Medicaid 'Had No Significant Effect' On Health Outcomes vs. Being Uninsured
Although the evidence is sometimes mixed
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To be fair....

- Long-term beneficial health effects of 1980s/1990s Medicaid expansions for kids

*Oregon health experiment:*
- Large increase in self-reported health (to good/excellent)
- Substantial increase in credit scores

Credit scores, cardiovascular disease risk, and human capital

- Some evidence from observational studies
So what’s insurance good for?

1. Health insurance leads to more health spending, and, one hopes, better health

2. Health insurance reduces consumption risk and uncertainty
We worry most about consumption for lower-income people in bad health:

\[ C_{2b} = S(1 + r) + Y_{2b} - P(Y_{2b}) - (1 - \varphi)(h_{2b}) \]

- Risk-pooling; \( \varphi \) (insurance coverage) near 1 reduces catastrophic out-of-pocket spending risk
- Intertemporal consumption smoothing – paying for health insurance early \([P(Y_1)]\) reduces the risk of sudden consumption drops later (Laibson, 1997)
So what’s insurance good for?

1. Health insurance leads to more health spending, and, one hopes, better health
2. Health insurance reduces consumption risk and uncertainty
3. Health insurance can provide a mechanism for income redistribution
How health insurance can redistribute income

We worry most about consumption for lower-income people in bad health:

\[ C_{2b} = S(1 + r) + Y_{2b} - P(Y_{2b}) - (1 - \varphi)(h_{2b}) \]

Politically feasible income redistribution when 
\[ P(Y_{2k}) < h_k \] in all states of health
Yet, revealed preference suggests: not much value

Subsidizing Health Insurance for Low-Income Adults: Evidence from Massachusetts

Amy Finkelstein, Nathaniel Hendren, Mark Shepard*

September 2017
Could be explained by:

- Lack of intertemporal consumption smoothing (hyperbolic discounting)
- Lack of proper social welfare “weights” of health benefits for lower income people
  - Although see Shepard, Baicker, Skinner (2017)
Low insurance value even with a utility assessment

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The Value of Medicaid: Interpreting Results from the Oregon Health Insurance Experiment

Amy Finkelstein, Nathaniel Hendren, and Erzo F.P. Luttmer*
November 2016
Once again, Forbes weighs in

ObamaCare Medicaid Expansion: A Poor Use Of Taxpayer Dollars

The Apothecary
Insights into health care and entitlement reform. FULL BIO
Opinions expressed by Forbes Contributors are their own.

Brian Blase, Contributor
Some unpleasant arithmetic

<table>
<thead>
<tr>
<th>Variable</th>
<th>Treatment</th>
<th>Control</th>
<th>Difference (Δ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Out of pocket spending</td>
<td>0</td>
<td>$570</td>
<td>-$570</td>
</tr>
<tr>
<td>Uncompensated care</td>
<td>0</td>
<td>$2,130</td>
<td>-$2,130</td>
</tr>
<tr>
<td>Medicaid payments</td>
<td>$3,600</td>
<td>$0</td>
<td>$3,600</td>
</tr>
<tr>
<td>Total health care spending (h)</td>
<td>$3,600</td>
<td>$2,700</td>
<td>$900</td>
</tr>
</tbody>
</table>

Source: Finkelstein, Oregon Medicaid Expansion study
Key question: Who benefits from health insurance?
“I could remember the difficulties we had then, trying to keep our doors open... People brought chickens in and meat to pay their bills. They would paint or do work around the hospital of some kind.... Nurses would come in and beg us to give them a job without pay, for room and board, because they were starving.”

Study by Cooper et al. (2017) showed higher Medicare reimbursement rates led to:

- Increasing payroll
- 80% boost to CEO salary (relative to controls)
- More utilization
- No reduction in commercial insurance fees
What is “uncompensated care” in LMICs?

Anglican-Church-supported solar panels for clinic in Tanzania

MCC-supported clinic in Lesotho
Universal Health Benefits – an important and challenging goal for global health

Benefit-cost analysis (or CEA) of insurance expansion: It’s complicated

No matter what: Should include value of reduction in risk of financial distress

No matter what: Should include social weights to reflect benefits to poorer households

But valuing the social impact of insurance on providers is more challenging