PROVIDING HEALTH INSURANCE TO ALL: THE COLOMBIAN EXPERIENCE

Ursula Giedion
Washington D.C., April 2008
Studies and authors

- Summary of three recent impact evaluation studies on the Colombian health insurance scheme:
  - Giedion, Díaz y Alonso, 2006,
  - Giedion, Díaz y Alonso, 2007,
    - *The impact of health insurance in the mandatory contributory regime on access and utilization: The case of Colombia*. The Brookings Institution.
  - Flórez, Giedion y Pardo, 2008,
    - *The impact of health insurance on financial protection in Colombia*. IADB..
Goal of the studies

- Evaluate the impact of public health insurance on key health sector performance indicators including access, utilization, and financial protection.
- These studies look neither at impact of health insurance on equity (treated elsewhere, Flórez et al.) nor on quality or efficiency.
Why is this of interest?

- At the country level:
  - Value-added of the health insurance scheme introduced in 1993 fiercely debated and available evidence mostly related to descriptive statistics.
    - Scarce evidence on the impact of HI on access, utilization and financial protection.
    - Question of impact of HI on health sector performance is being skipped. Questions now being addressed: poverty trap (subsidies), fiscal sustainability (aprox. 50% in the subsidized regime) and incentives for informal employment (through payroll taxes).
Why is this of interest?

- Elsewhere:
  - Many advocates of health insurance for the poor and several countries trying to extend social insurance to the poor/informal sector.
Overall findings:

- Estimates show that:
  1. HI improves access and utilization in both the subsidized regime for the poor and in the contributory regime.
  2. Access improves even for services that are free for all irrespective of an individual's insurance status (and for which we might not anticipate any additional benefits for those insured). Spillover effect?
  3. HI reduces the incidence of catastrophic health expenditure.
Contents

1. Stylized facts of health insurance in Colombia.
2. Impact of HI in Colombia.
3. Final reflexions
STYLIZED FACTS ON THE HEALTH INSURANCE SCHEME FOR THE POOR

Kandinski, Circles in Circles
Colombia’s evolution from segmented health insurance system to universal health insurance

Where Colombia comes from
- Vertically integrated *social security system* for formal workers based on payroll taxes.
- Vertically integrated *public system* for the rest based on general taxes.
- Private sector based on COP for those able to pay.

Colombia’s system
- Social insurance coverage for all.
- Based mainly on general taxes for the poor and on payroll taxes for those able to pay.
Health insurance in Colombia
Premiums and benefits plans

Subsidized regime, 2007
- Care for catastrophic illnesses
- Hospital care
- Primary care

Cost: US$ 117

Contributory regime, 2007
- Care for catastrophic illnesses
- Hospital care
- Primary care

Cost: US$ 208
Increase in insurance coverage by quintile, 1993-2003

Source: Escobar, 2003

Important because increases coverage & reduces equity gap in terms of insurance coverage.
Growth of HI in Colombia

Colombia is among the few developing countries rapidly approaching universal coverage.

Figure 2.1. Progress Toward Universality, Selected Countries, 1990–2014

Source: MPS, 2008 (Presentation by the General Director for Insurance of the MPS, March 10th, 2008).


Source: Hsiao, 2007. Recent data on Colombia based on projections by the Ministry of Social Protection.
Composition of health expenditure, Colombia, 1993-2003

Colombia has radically changed its health financing sources

Source: Colombian National Health Accounts, Barón, 2006
Colombia’s financing structure in the international perspective

Colombia is outlier in terms of its financing structure

Source: Hsiao, 2005
EVALUATING THE IMPACT OF HI ON
ON ACCESS, UTILIZATION AND
FINANCIAL PROTECTION
### What methods?

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Subsidized regime</th>
<th>Contributory Regime</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Access &amp; Use</td>
<td>Financial Protection</td>
</tr>
<tr>
<td>PSM</td>
<td>x</td>
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<td>DD</td>
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<td>IV</td>
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What data?

<table>
<thead>
<tr>
<th>Data</th>
<th>Subsidized Regime</th>
<th>Contributory Regime</th>
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<tbody>
<tr>
<td></td>
<td>Access &amp; Use</td>
<td>Financial protection</td>
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<tr>
<td>DHS 1995 &amp; 2005</td>
<td>X</td>
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<tr>
<td>LSMS 2003</td>
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<td>X</td>
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<td>Administrative data</td>
<td>X</td>
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<td>Census data</td>
<td>X</td>
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Impact on barriers of access
Subsidized Regime

Access barriers, Propensity Score Matching Estimates

<table>
<thead>
<tr>
<th></th>
<th>Not insured</th>
<th>Subsidized Regime</th>
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</thead>
<tbody>
<tr>
<td>Demand barriers</td>
<td>36%</td>
<td>6%</td>
</tr>
<tr>
<td>Supply barriers</td>
<td>6%</td>
<td>18%</td>
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HI reduces barriers of access
HI changes the types of access problems
Impact of insurance on access to healthcare

Contributory Regime

- Financial barrier of access
  -47% Self-employed
  -14% Employed

- Decreases probability of experiencing barriers of access
  -2% Self-employed
  -2% Employed

- Access to prescribed medicines
  +75% Self-employed
  +76% Employed

- Self-medication when having a health problem
  -15% Self-employed
  -18% Employed

Important because before the reform, insurance coverage was limited to formal workers and there was no family coverage.

Note: Only statistically significant results are reported on this slide. IV with probit or with bivariate probit or simple probit with controls.
Impact of insurance on utilization

Subsidized Regime

Use of ambulatory health services in last 12 months: +41%

Child taken to a health care facility when coughing: +17%

Child taken to a health care facility when suffering from diarrhea: +23%

Child being immunized complete schedule: +8%

Important because diarrhea and acute respiratory infection are still among the first 5 mortality causes in children.

Interesting because immunization is free for all irrespective of HIV status.

Note: Only statistically significant results are reported on this slide. PSM, Kernel Epanechnikov, bandwidth 0.001
Impact of insurance on utilization
Subsidized Regime

Subsidized insurance for the poor increases access for maternal services

- Birth attended by a doctor +7%
- Birth in health facility +6%
- Number of prenatal visits +6%

Interesting because these services are free for all irrespective of HIV status

Note: Only statistically significant results are reported on this slide. PSM, Kernel Epanechnikov, bandwidth 0.001
Impact of insurance on utilization

Contributory Regime

- Contributory insurance increases access for curative and preventive services
- Used health services in the last month: +25% Self-employed, +56% Employed
- Used preventive health services in last year (physician or dentist): +46% Self-employed, +34% Employed
- Used preventive health services in last year (physician & dentist): +15% Self-employed, +27% Employed

Important as self-employed and family members were not covered prior to the reform

Note: Only statistically significant results are reported on this slide. IV with probit or with bivariate probit or simple probit with controls.
Subsidized insurance for the poor increases access and use more in the rural areas.

<table>
<thead>
<tr>
<th>Service</th>
<th>Urban</th>
<th>Rural</th>
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<tbody>
<tr>
<td>Use of ambulatory health services in last 12 months</td>
<td>+33%</td>
<td>+49%</td>
</tr>
<tr>
<td>Child taken to a health care facility when coughing</td>
<td>+15%</td>
<td>+33%</td>
</tr>
<tr>
<td>Child taken to a health care facility when suffering from diarrhea</td>
<td>+11%</td>
<td>+38%</td>
</tr>
<tr>
<td>Delivery in health care facility</td>
<td>+2%</td>
<td>+9%</td>
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PSM estimates

1. This table only reports results from PSM and from one model specification (HE with bandwidth 0.25). Similar results were found for other model specifications.
Impact of insurance on financial protection

Subsidized Regime

- OOP represent 10% or more of non-subsistence income: -36%
- OOP represents 20% or more of non-subsistence income: -39%
- OOP represents 30% or more of non-subsistence income: -44%
- OOP represents 40% or more of non-subsistence income: -27%

This is important as 5% / 30% of all Colombians/health service users have monthly OOP above 30% of their monthly subsistence income.

Note: Only statistically significant results are reported on this slide. PSM, Kernel Epanechnikov, bandwidth 0.001.
Impact of insurance on financial protection. Contributory Regime

IV estimates

- OOP represent 10% or more of non-subsistence income
- OOP represents 20% or more of non-subsistence income
- OOP represents 30% or more of non-subsistence income
- OOP represents 40% or more of non-subsistence income

Contributory HI mitigates the impact of catastrophic expenditure

-72% Self-employed
-61% Self-employed
-27% Self-employed
-13% Self-employed
-14% Self-employed

- The impact decreases as the size of the “catastrophe” increases.
  - The impact is more important among the Self-employed
3 Final Reflexions

- 1 related to results:
  - Results indicate that HI in Colombia improves access, utilization and financial protection.
  - Indicators have improved for those insured but are still worrisome in some instances. For example:
    - 30% still experience barriers of access in the SR.
    - 20% of affiliates of the SR using health services spend more than 20% of their monthly non-subsistence income on health related OOP.
    - Supply side problems become a key issue in the SR now that financial barriers have been reduced.
    - 50% of those affiliated in the CR do not receive all prescribed medicines.
Health insurance is not just a dichotomous variable—it’s a "complex machine"

- It varies in extent, duration, organization, financing etc. and its impact will depend on all of these.
- Its impact on health and health related outcomes is indirect—so if we want to further improve impacts we need to look at the details of organization.
3 Final Reflexions

2 methodological:

1. If we really want to evaluate the impact of HI on health status, general household survey data will possible not do the job.
   - We need variables capable of detecting underlying changes in quality of life related to access to services covered by the benefits package.
   - Start using the concept of effective coverage rather than blunt health measures may be an alternative.

2. The current way of measuring financial protection relies on many methodological assumptions and measures the hypothetical impact of HI on household income. We need to think more about this.
GRACIAS
Evaluating the impact of HI on health status: methodological considerations

1. Health status is itself a determinant of affiliation to insurance. The controls we can introduce for this are incomplete at best.
   - We won't know whether the observed health status is consequence of insurance or insurance is itself consequence of the observed health status.

Which came first, the chicken or the egg?
2. We only have very gross measures of health (child mortality, weight at birth):
   - They are not sensitive enough to capture the potential impact of changes in access to health services on health status.
   - Often few observations.

3. DHS surveys typically concentrate on child-mother health status variables and include virtually no information on adult’s health status. Any extrapolation would be highly questionable.

4. Many of the services that are related to child/mother health status variables are free for all and irrespective of HI status—we would not expect any differences.
5. The impact of HI on health status is indirect (via improved access).

6. Ultimately the question is: what type of indicators do we need to detect the impact of improved access obtained through HI?

- I would argue that different types of data are needed for the description of health status versus analytic models of health status which try to explain why some people are healthy and some are not.

- HEALTH STATUS MEASUREMENT DESIGNS SHOULD REFLECT THEIR PURPOSE