Anatomy of a Slow-Motion Health Insurance Death Spiral

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Introduction

• Death spirals rare and exotic
• More interest now
• ACA -> more likely
• Documented spirals
  – Group insurance
  – Quick
• We document spiral
  – Individual insurance
  – Very slow, 1981-2009, 28 years
Current Interest and ACA

- Googled “adverse selection death spirals”
  June 17, 2014
- 311,000 hits
- 9 of first 10 hits were about the ACA
- At end, lessons of for ACA
Adverse Selection Death Spiral Defined

- Dynamic
- Low risks drop out
- Premiums rise
- More low risks drop out
- Eventually, very high risks, high premiums
- Few, if any insured, plan is dead
More on Adverse Selection

• Timing: Time of purchase or renewal
• Two sources
  – Classic = Asymmetric information
  – Policy = Insurers don’t use information
    – (E.g., mandatory community rating)
• Most adverse selection is policy-based
Previously Documented Death Spirals

• Cutler and Reber (1998)
• Sutton, Feldman and Dowd (2004)
• Two different episodes
• Both group insurance
• Both short, 3 years
• Employer dropped the “dead” plan
Our Death Spiral

• Individual plan
• Related to closing the block
• Coordinated Health Insurance Plan (CHIP)
• Prudential
• Premiums up, factor of 7, compared to yarkstick
• Very few members by 2009
• Litigation: *Beverly Clark, et al. v. Prudential Insurance Company of America*
Premiums Determined by Costs Over Long Periods

- Loss ratios = (health care cost)/premiums
- Stable over long periods
- Groups: 75% to 98%
- Individual: 48% to 67%
- Mostly costs, profits are small
Estimate Premiums With Expenditures

Average Annual Individual Insurance Premiums
(Single and Family Policies Combined)

Sources: Frech (2011), Figure 1.
Closed Block Causes Adverse Selection

- Stops flow of new low-risk policyholders
- Existing pool becomes higher risk
  - Low risk policyholders move
  - High risk policyholders stay
  - “Adverse retention”
- Recognized by actuaries and public policy
  - E.g. California 1993, Arkansas 2006
Rise and Fall of CHIP Plan

• 1973, Prudential starts
• Maximum inflow over 200,000 in 1976
• Dec., 1981, closed the block
• No other blocks for rating
• Rapid decline
Number of CHIP Policies, 1973-2008

Annual Number of CHIP Policies Inforce

Block Closure

Source: Frech (2011), Figure 3.
Premium History

• More complex
• Messy nonlinear capping of increases
• Varied over time
• Increases varied somewhat over deductibles
• Next slide, capping, specific person, location, deductible, allowed to ages
Note: Premiums based on rate tables and rate increase capping procedures. Area factor used is for three-digit ZIP Code 900. Risk class used is 0, the lowest risk class.

Source: Frech (2011), Figure 2.
Creating a Premium Index

• Last graph, specific person, location, deductible, allows aging
• Want to calculate general index next
  – No aging
  – Weighted average of increases
CHIP Premium Index: 1973-2009

California CHIP Actual Premium Index

Block Closure

Creating a Yardstick

• Personal health care expenditure (PHC)
• Index and yardstick set to 100 at block closure
• Growth of premiums, no adverse selection
• Main source of variation of premiums
• Fits market data well
• Implies roughly constant level of competition
Yardstick and Market Measures

• Single individual, 2002—2009
  – AHIP, HIAA, < 65, $2,070—$2,985
  – Compound Average Growth Rate (CAGR) = 5.4%
  – PHC, $4,761—$6,796, GAGR = 5.2%

  – Cafferata, Kaiser, 1977—2010, CAGR = 7.5%
  – PHC, 1977—2009 CAGR = 7.6%
California CHIP Actual Premium Index, Yardstick Premium Index and New Policy Inflows

Block Closure

Source: Frech (2011), Figure 3 and exhibits 5, 8 and 11.
28 Years, Not 3: Why so Slow?

• Prudential subsidized CHIP
• Much by caps on increases
• Caps 1990 on
• Much stricter in the 1990s
• Policy change after that
# Rate Increase Caps

<table>
<thead>
<tr>
<th>Cap Years</th>
<th>Increase Capped at Lesser of</th>
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</thead>
<tbody>
<tr>
<td>1990 - 1995</td>
<td>10% or $50 or Rate Table</td>
</tr>
<tr>
<td>1996 - 2000</td>
<td>12% or $50 or Rate Table</td>
</tr>
<tr>
<td>2001 - 2002</td>
<td>25% or Rate Table</td>
</tr>
<tr>
<td>2003</td>
<td>30% or Rate Table</td>
</tr>
<tr>
<td>2004 - 2006</td>
<td>35% or Rate Table</td>
</tr>
<tr>
<td>2007</td>
<td>20% or Rate Table</td>
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<tr>
<td>2008</td>
<td>15% or Rate Table</td>
</tr>
<tr>
<td>2009</td>
<td>13% or Rate Table</td>
</tr>
</tbody>
</table>

Source: Frech (2011), Appendix B.
Conclusions, Application to the ACA

- Very slow spiral
- By the end, premiums were 7 times yardstick
- ACA, insurers can’t use information
  - Modified community rating
  - Mandating high pricing to the young
  - Over 50% for males 25-36 (O’Connor 2013)
  - Guaranteed issue
ACA Closes Blocks

- Noncomplying plans, mass cancellations
- Reversed in some states
- Grandfathered plans -> closed to new people
Selection Against Complying Plans

• Continuing “noncomplying” plans, selection against complying plans
  – High risks most likely to switch out of preferred “noncomplying” plans to complying plans
Mitigations

• Individual and employer mandates
• Risk corridor program
• Other taxes and transfers considered by Administration (Pear 2013)
Pressure on Regulations and Taxes

• Price distortions, not incentive compatible
• Requires strong regulation and tax subsides
• Makes implementation more difficult
• Many economists suggest more incentive-compatible approaches
• Matter of degree—partial movement possible
Austrian Liberalization of 2000

• Supplemental insurance community rated
• Slow death spiral 50%–32%, 1985–2000
• Reversed by liberalizing age rating
  – “Lifetime community rating”
  – Premiums depend on age of entry
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