Health Plan Choice Under Managed Competition: Evidence from the U.S.

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Background: Managed Competition in the US

Variants of the Enthoven model have been proposed, but never enacted as national policy. ⇒ No “policy lessons” from the US

• But, managed competition has been implemented by large employers and state and county governments. ⇒ Evidence on how consumers and insurers behave in a managed competition environment.
Research on Health Plan Choice

- Literature consists mainly of case studies, including:
  - The University of California
  - Harvard, Stanford Universities
  - The Health Insurance plan of California
  - The Federal Employees Health Benefits Program
  - General Motors

⇒ What are the common results from these studies?
⇒ What lessons can be drawn?
Overview

• The effect of price on plan choice
  – Average effects
  – Variation among consumers and products
  – Implications for risk selection, insurer competition

• The effect of information about quality
  – How do "report cards" affect choices?

• Open questions and future research
The Effect of Price: The UC Case Study

• Before 1994, the UC employee health benefits program resembled the Enthoven model with one big exception: the premium contribution policy

• In 1994, the UC adopted a “fixed dollar” contribution policy

⇒ Stronger incentives and a nice natural experiment
The UC Health Benefits Program

• Choice of plans
  – 2 to 5 HMOs
  – 2 FFS plans (including Prudential “High Option” plan)

• Benefits
  – Standardized across HMOs
  – FFS plans were similar; High Option offered greatest choice

• No risk adjustment (at the time of the studies)
The UC Health Benefits Program

• Pre-94 Premium Contribution Policy
  - Based on weighted average of top 4 plans
  - All HMOs were “free”
    ⇒ Choice among HMOs was not based on price
    ⇒ HMOs could “shadow price”

• Post-94 Premium Contribution Policy
  - UC contribution capped at premium of low cost plan
    ⇒ several HMOs now required a monthly employee contribution of $5 to $30
    ⇒ High Option price increased by $50 to $90
The Effect of Price on Health Plan Switching

• Buchmueller and Feldstein (JHE, 1997)

• Compares employees facing price increases of $5-$30 with those whose chosen plan remained free

• Probit model of the decision to switch plans

• Since price change comes from the change in the employer contribution and all other factors were constant: unbiased estimates of the effect of price.
Hypotheses

• Non-health economists:
  – Demand curves obviously slope down.
  – (Why is this even an interesting question?)

• Non-economist health policy types:
  – Health care is different.
  – Price will not matter.

• Health economists:
  – Health care is different...but not that different.
  – The demand curve probably slopes down.
The Probability of Switching Plans in Response to an Increase in Health Plan Premium: Active UC Employees

When price is constant about 5% switch plans

1/3 of employees facing a price increase of $30 switched plans
Patterns of Plan Switching

• Cross-price effects stronger within type than across
  - HMO enrollees switched to “free” HMOs
  - Enrollees of “high option” FFS switched to free PPO

• Speculation: standardized benefits plus high degree
  of provider panel overlap increased price sensitivity.
  - Example: UC-Santa Cruz
    • main medical group contracted with 2 HMOs (1 pay, 1 free)
    ⇒ Plans were essentially perfect substitutes
    ⇒ The pay plan lost over 80% of its membership (from a price increase of less than $10).
Other Case Studies

- Harvard (Cutler & Reber, QJE 1998)
  - Similar reform as UC
  - Modeled choice of PPO vs. HMO
  - “Plan perspective” elasticity: -2

- Stanford (Royalty & Solomon, JHR 1999)
  - Elasticities ranged from -2 to -6

These are average price effects. How does price sensitivity vary within the population?
Price Elasticity Depends on Switching Costs

- Sources of switching costs
  - Complicated decision means high transaction costs
  - Uncertainty about untested alternatives
  - Switching HMOs can require switching providers
  - Status quo bias

- Hypothesis: switching costs will be greater for
  - older consumers
  - those in poor health
  - those who have been in the market for a long time.

- Test: consumers hypothesized to face higher switching costs will be less price sensitive.
Do switching costs reduce sensitivity to health plan premiums?

• Strombom, Buchmueller & Feldstein (J HE, 2002)

• UC files + hosp. discharge and cancer registry data
  ⇒ “high risk” indicator for cancer, recent hospitalization

• Contrast price-sensitivity of groups likely to differ in terms of cost of switching health plans
  • Older vs. younger (3 groups)
  • Recent hospitalization/cancer, yes vs. no (2 groups)
  • Long-term employees vs. new hires (3 groups)
    ⇒ 18 employee groups

• Conditional logit models of plan choice
Results

- Price sensitivity...
  - decreases with age
  - decreases with years of service
  - is lower for “high risk” employee

Selected Elasticity Estimates

<table>
<thead>
<tr>
<th>Employee group</th>
<th>Price Elasticity</th>
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</thead>
<tbody>
<tr>
<td>Low risk, New employee, &lt; 30 yrs old</td>
<td>-8.4</td>
</tr>
<tr>
<td>Low risk, &gt; 5 yrs at UC, 31-45 yrs old</td>
<td>-3.1</td>
</tr>
<tr>
<td>High risk, &gt; 5 yrs at UC, &gt; 45 yrs old</td>
<td>-2.0</td>
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</tbody>
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Decrease in Plan Market Share Caused by a $5 Increase in Premiums

Low Health Risk - Tenure by Age

High Health Risk - Tenure by Age
Other Studies Find Similar Results

• Royalty & Solomon
  – Elasticities lower for older employees, those in poor health

• Wedig and Tai-Seale (JHE, 2002); Bealieu (JHE, 2002)
  – New employees more price-sensitive than incumbents

• Buchmueller (HSR, 2000; JHE 2006)
  – Retirees less price-sensitive than active employees

• Atherly et al. (HSR 2004)
  – Small elasticities for Medicare HMO enrollees
Implications for Risk Selection

• When switching costs are important, price-induced switching may contribute to “adverse retention.”

• Without adequate risk adjustment, a plan that increases its price will not only lose market share, but will see its costs rise.

• This can lead to a “death spiral.”
Examples of Death Spirals

• UC’s “high option” PPO
  – 1993: 3rd in market share (with 10%)
  – By 1997 plan had lost 93% of enrollment; off menu by 1998.

• Harvard’s PPO experienced similar results.

• The Health Insurance Plan of California
  – Established in 1993, offering a menu of HMOs and PPOs
  – Risk adjustment mechanism
  – PPOs received transfers, but it was not enough

• In these cases, no adverse selection among HMOs.
Implications for Plan Competition

• Fixed dollar contribution policy creates a strong incentive to compete on price.

• Switching costs give established plans an advantage in terms of market share...

• ...but new plans can set lower prices because they will attract younger consumers.

• Threat of adverse retention can amplify the incentive to compete on price.
Insurer Response to Price Incentives

• The UC reform spurred vigorous price competition.
  – New entrant set a very low price to be the low cost plan and gain substantial market share.

  ⇒ Total plan spending fell by 24% in 3 years.

• Similar results in Harvard program.

• Caveat: premiums were falling generally around this time (but not this much).

• One-time savings or a change in the trend?
The Role of Quality Information in Competitive Insurance Markets

• Ideally, both price and quality should matter.

⇒ Plans should provide “value for money”.

• Lack of good information on quality can lead to too much or too little price competition.
  - Too much: race to the bottom.
  
  - Too little: price, benefit design seen as proxies for quality.
Consumer Responses to Quality Information

• In the late 90s, large employers and policymakers began focusing less on price and more on quality.

• Several recent studies examine how consumers respond to information on health plan quality.

• A more difficult problem than estimating price effects
  - What do we mean by quality? How do we measure it?
  - Are we interested in the effect of quality itself or the effect of information about quality?
  - Clean experiments are hard to find.
How might quality information affect choices?

• In order for health plan report cards to affect decisions, it must be true that...
  – Report cards measure something consumers care about.
  – Consumers trust the accuracy of the report cards.
  – Report cards provide new information that contradicts consumer priors.

• A null result can mean a number of different things.
  – The information is not salient.
  – Consumers don’t believe the information.
  – The report cards tell consumers what they already knew.
  – Consumers don’t care about quality.
Recent Studies on the Effect of Quality Information

- Several studies examine enrollment before and after introduction of “report cards”.
  - Chernew et al. (JHE 2002) study GM
  - Wedig and Tai-Seale (JHE 2002) study FEHBP
  - Jin and Sorensen (JHE 2006) study FEHBP
  - Dafny and Dranove (NBER 2006) study Medicare HMOs
Recent Studies on the Effect of Quality Information: Common Findings

• Quality measures matter before dissemination
  ⇒ Consumers have informal sources of quality information

• Report cards have significant, but small effect.
  ⇒ Report cards confirm existing information

• Main effect: enrollment shifts away from poor plans.

• Consumers value quality, but the average value of quality information is small.

• Consumers appear to value opinion of other consumers more than those of “experts.”
Summary: What We Know

• Caveat: Natural experiment design is limited by the specifics of the cases studied.
  ⇒ External validity is not clear.
  ⇒ Benefit of multiple studies

• Several key results are consistent across studies and support the Enthoven model.
Summary: What We Know

• When choices are structured appropriately, consumers are quite sensitive to price.

• Price-sensitivity varies with (presumed) switching costs.

• Price-elastic demand creates strong incentives for price competition among plans.

• Price-elastic demand increases chance of adverse selection and the need for risk adjustment.

• Consumers care about quality and information on quality can influence choices.
Summary: What We Don’t Know

- How do other aspects of benefit design affect choices?
- How important is benefit standardization?
- How large does the price elasticity have to be to induce sufficient competition?
- Can effective risk adjustment “save” more generous plans? Is this a worthy objective?
- Does the value that consumers place on quality information justify the cost of collection and dissemination?
Emerging Questions and Future Research: US

- In the cases studied, HMOs were the lower cost plans; FFS plans were favored by higher risks.

- Growth of high deductible plans is changing this.

⇒ Will HMOs now be vulnerable to adverse selection?
⇒ How important is benefit standardization?
⇒ What does this mean for quality measurement?
Emerging Questions and Future Research: US

• The Medicare Prescription Drug Program is an important subject for future research.

• Emphasizes competition, but ignores many aspects of Enthoven model.
  - Stand-alone drug plans vulnerable to adverse selection.
  - Huge choice set (over 1400 plans from ~70 companies).
  - Benefits not standardized

Early evidence: Lots of enrollee confusion and frustration.
Emerging Questions and Future Research: The Netherlands

- Consumer behavior
- Price elasticity, switching
- Insurer strategies
- Risk selection
- Effects on total health spending

⇒ Better understanding of the economics of health insurance market
⇒ Policy lessons for other countries