



Yale SCHOOL OF MANAGEMENT

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Mistakes in Decision-making by Consumers and Providers

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Mistakes

- 1) Mistakes in Health Plan Choice by consumers
- 2) Mistakes in Medical Testing by providers



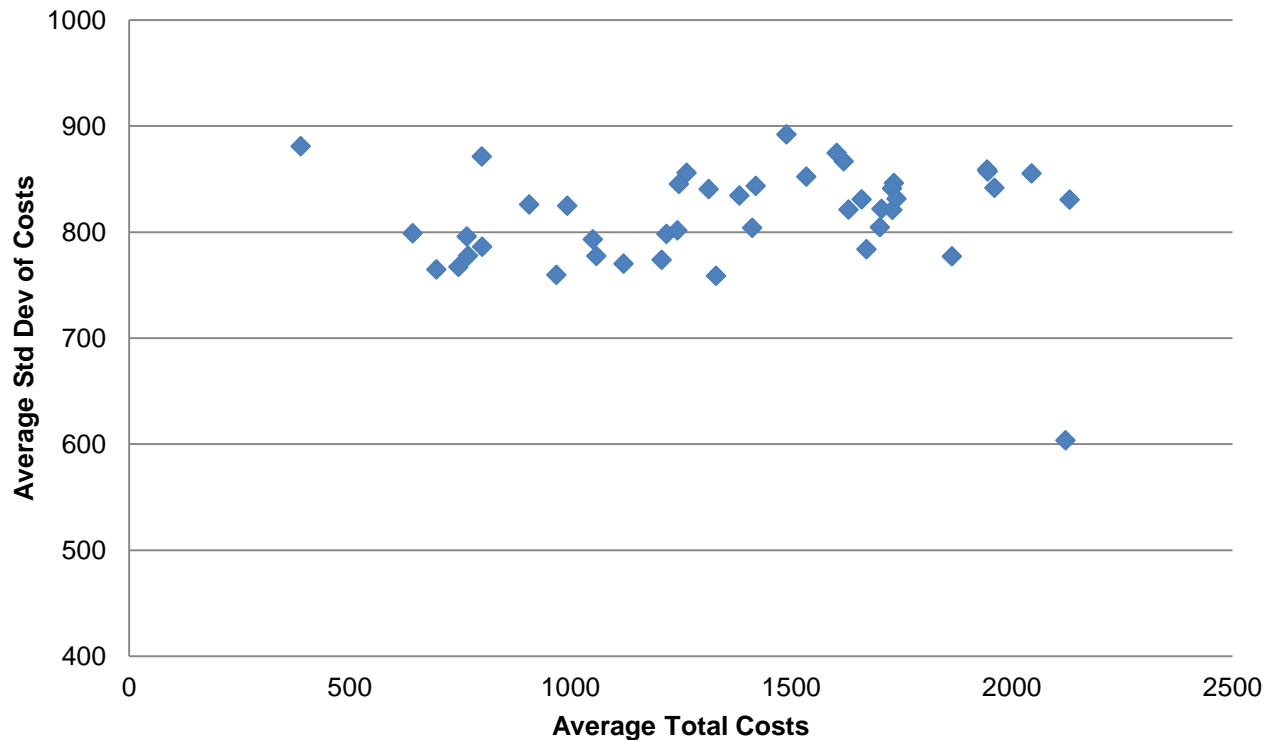
Beneficiaries Don't Minimize Costs

- Vast majority fail to choose cost minimizing plan in ex ante or ex post sense
- Leave hundreds or thousands of dollars on the table by doing so
- True across a across wide variety of settings (prescription drugs – Abaluck and Gruber 2011, 2015, employer provided plans – Handel 2013, Bhargava, Loewenstein and Sydnor 2015, Handel and Kolstad 2015, Medigap – Fang, Keane and Silverman)



Risk & Quality Ratings Can't Explain Choices

CA Choice Set, 2006



Choices are inconsistent

- Beneficiaries value premiums more than OOP costs (risk protection would suggest the opposite) (Abaluck and Gruber 2011)
- They don't appropriately value financial plan characteristics; they are willing to pay too much to avoid deductibles (Bhargava, Loewenstein and Sydnor 2015)
- They have incorrect beliefs about network size and their own past expenditures (Handel and Kolstad 2013)
- In Part D (prescription drugs), these identifiable errors explain about 50% of foregone welfare



Beneficiaries are inertial

- Across a wide range of settings, 80-90% of beneficiaries choose same plan as the previous year
- They could save money by switching
- Typically switching induced by large increases in premiums for existing plan (Ho, Hogan and Scott-Morton, 2015)



What we know

- 1) Not cost minimizing
- 2) Chosen plans don't look better in other dimensions
- 3) Explicit evidence of choice inconsistencies
- 4) Huge amount of inertia
- So... does this matter?



Reasons Mistakes Matter

- 1) Too much money gets transferred to insurance companies
- 2) Bad matching / Adverse selection
- 3) Insurer benefits would change with better choices



Reason #1: pay too much to insurers?

- Consumers choose badly and pay more (in terms of premiums minus benefits)
- In New Jersey, eliminating inertia saves \$82 year / beneficiary directly, but \$248 through more premium competition (Ho, Hogan and Scott Morton 2015)
- Insurer profits in Part D and ACA are... complicated



Reason #2: Matching / Adverse-selection

- Mistakes lead to welfare losses from bad matching
- Handel (2013) – inertia can help prevent adverse selection, can actually improve welfare (ignores competition effect)
- Importance of this effect may be lessened in ACA/Part D due to subsidies based on risk



Reason #3: Plan Characteristics

- Retail clinics are a cheaper substitute for some types of doctor visits (Parente and Town 2009)
- Price is \$500 at retail clinic (cost to clinic is \$400), \$1000 at hospital (cost to hospital is \$600), insurer pays 50% of costs
- If retail clinic covered, insurer saves \$250 from retail clinic entry, consumers save \$250 in OOP costs
- BUT, hospital loses \$400
- So they might say to the insurer – we'll give you a \$350 rebate if you don't cover retail clinics
- If consumers were paying attention, insurer could say: no way, we'll save \$250, raise premiums by \$200 and consumers will still be happy to get the service from the retail clinic
- But if consumers aren't paying attention...



What can we do about this?

- 1) Give people more information
- 2) Nudge them to make active choices
- 3) Default them into good options if they don't make an active choice
- (see Handel and Kolstad 2015 for a nice discussion of how these might work in practice)



Option 1: More Information?

- Increase switching from 17%-28%, switchers save \$100 out of \$500 possible (Kling, Mullainathan, Shafir, Vermeulen, Wrobel 2011)
- Three challenges:
 - 1) Deal with logistical challenges in getting people to pay attention
 - 2) Is there some other mechanism to prevent adverse selection?
 - 3) Giving people all the info they need



Option 2: Nudges

- What if we just force people to make an active choice?
- In our analysis of Part D choices, we find that had inertial consumers actively chosen but done only as well as switchers, they'd realize about 20% of savings
- It's true that switchers tend to save a lot, but that's because their original plan got so much worse



Option 3: Better Defaults

- If lots of people aren't paying attention, why not just default them into the lowest cost plan?
- Same problem as info intervention – lowest cost given prior year claims? No incentives for innovation at all
- Lots of room for gaming by insurers (Decarolis 2015, Brown, Duggan, Kuziemko and Woolston 2014)

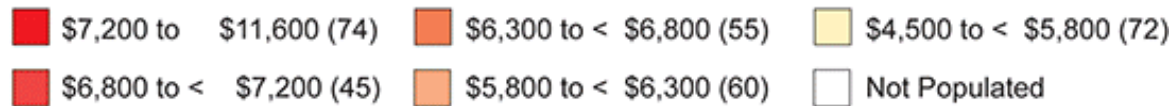
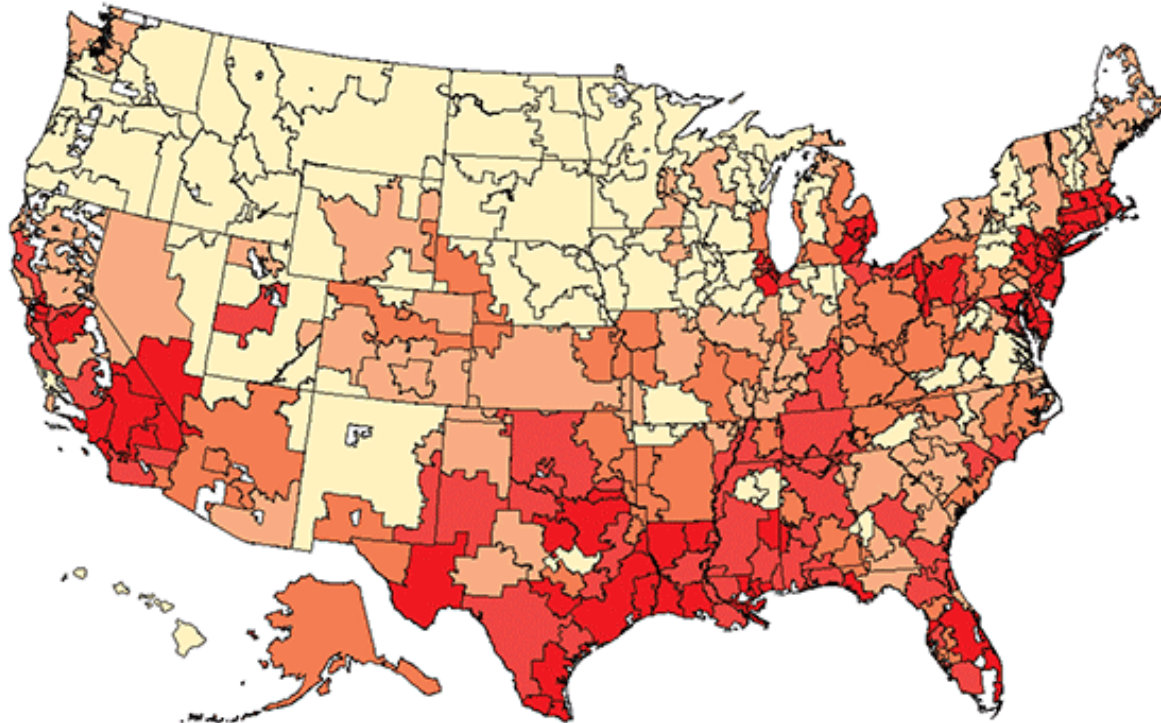


Upshots

- If you help people choose better you can probably reduce premiums
- You have to be careful about adverse selection
- You have to be careful about how you model cost savings and substitution



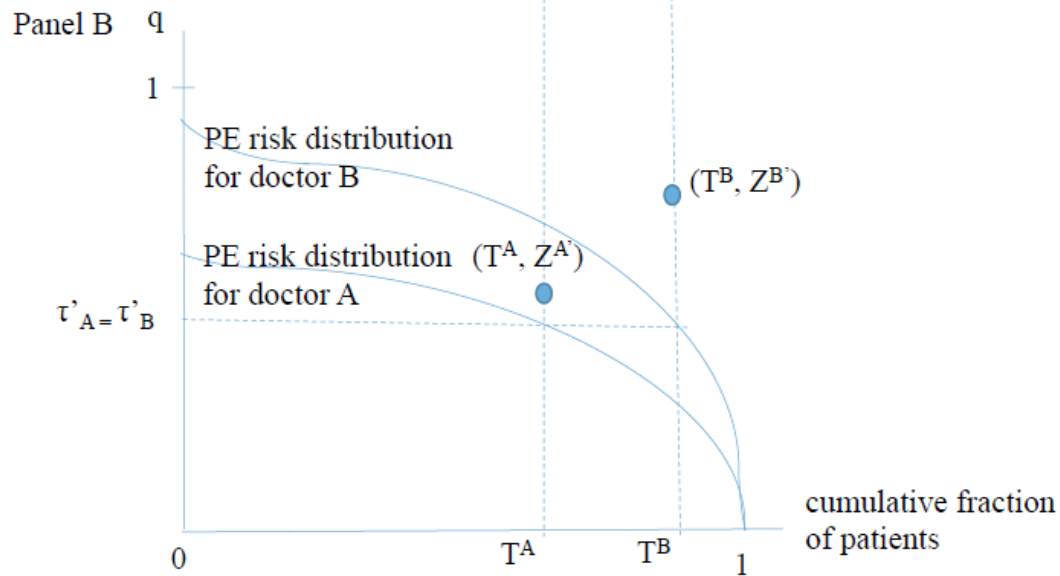
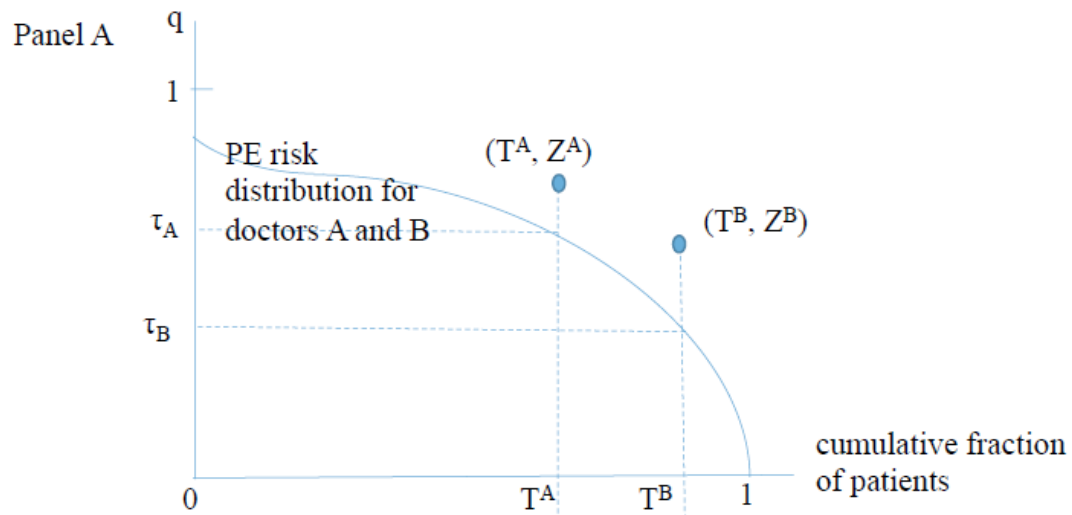
Moving on to providers...



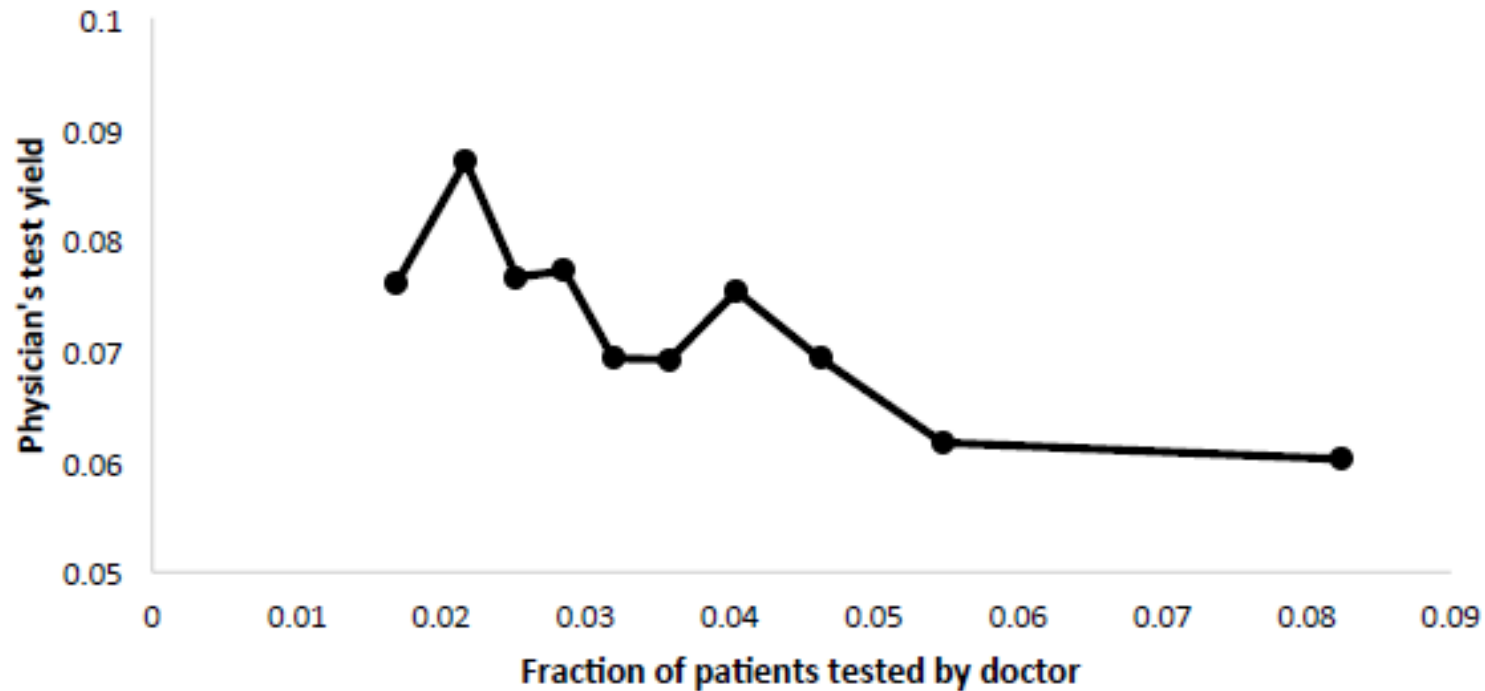
Abaluck and Agha (2015)

- Looks at CT scans for Pulmonary Embolism (a blood clot in the lungs)
- Asks whether observed variation is due to patient variation or physician behavior
- Also assess whether physicians are weighting patient characteristics appropriately (see Currie and Macleod 2013 for an alternative view of diagnostic error)





Evidence for Productive Inefficiency



Evidence for Misweighting

	<i>A. Fraction tested</i>	<i>B. Test yield</i>
<i>Selected candidates for under-weighting</i>		
Prostate cancer (CCW)	0.0370	0.1019
No prostate cancer (CCW)	0.0380	0.0677
Black	0.0313	0.0851
Non-black	0.0385	0.0682
History of PE	0.0726	0.1881
No history of PE	0.0378	0.0686
History of deep vein thrombosis	0.0507	0.1656
No history of deep vein thrombosis	0.0378	0.0685
Prior hospital visit within 30 days	0.0465	0.1976
No prior hospital visit within 30 days	0.0377	0.0656
<i>Selected candidates for over-weighting</i>		
Chronic obstructive pulmonary disease (CCW)	0.0466	0.0524
No chronic obstructive pulmonary disease (CCW)	0.0360	0.0742
Atrial fibrillation	0.0742	0.0520
No atrial fibrillation	0.0388	0.0713
Ischemic heart disease	0.0376	0.0566
No ischemic heart disease	0.0382	0.0786



Results

- Given calibration assumptions, with no overtesting, welfare increases by 60% (this is the “expensive docs spend less and get same results”)
- With no misweighting, welfare increases by 300%
- In other words, yes, lots of productive inefficiency, but whether we’re spending given \$\$\$ correctly is more important!



What to do about it?

- Better adherence to guidelines?
- Better guidelines?
- Warn docs if their behavior departs from model recommendation?
- Incentives?
- Information sharing?

