

Health Insurance: Choices, Changes, and Policy Challenges

By Maria Polyakova

Medical practice has reached an unprecedented ability to prevent, diagnose, and treat diseases. But all that care comes at a high — and rising — cost. In the United States, health care costs increased over the past five decades from about 6 percent to roughly 18 percent of GDP.* Advanced treatments available today can exceed annual budgets or even lifetime savings of an average household. Hedging health care expenditure risks through an efficient insurance system is a policy concern in all developed countries.

In the U.S., most health care is covered through private insurance. Still, government programs such as Medicare and Medicaid account for more than 40 percent of overall health care expenditures.

There has been a deepening connection between the private and public provision of health insurance. As many as 80 percent of Medicaid and more than 30 percent of Medicare beneficiaries are enrolled in various forms of privately administered, mostly publicly financed, managed care plans that completely substitute for publicly run fee-for-service coverage. Many more beneficiaries purchase private add-on insurance to supplement their public plans. Finally, with the introduction of Affordable Care Act exchanges, many more people are buying insurance on privately run, partially publicly financed markets.

That creates challenging policy issues touching on consumer behavior, insurer behavior, and market facilitation by the government.

My recent research has focused on understanding how those three categories are connected, using

Medicare Part D — the prescription drug benefit of Medicare — as a case study to examine those connections. Many pieces of Part D resemble the design of the health insurance exchanges under the Affordable Care Act, and my analysis can help policymakers who are refining the mechanics and administration of publicly funded, but privately run, health insurance programs.

First, a few definitions:

Consumer behavior. The very essence of competition in the health insurance market relies on consumers responding to prices and quality of plans and purchasing those health insurance plans that give them the highest value for their dollar. Policymakers may attempt to encourage such shopping behavior and facilitate better insurance plan choices.

Insurer behavior. Insurers make multiple strategic choices in competitive health insurance markets. They decide whether to enter the market, which insurance contracts to offer, and how much to charge for them. The regulatory environment may significantly affect all these decisions, and policymakers face the challenging task of trying to anticipate insurers' response to the design of the policy instruments.

* National Health Expenditure Accounts summary tables 1960-2014

About the Author



Maria Polyakova is an Assistant Professor in Stanford's Department of Health Research and Policy. She is a Faculty Fellow at SIEPR and a Faculty Research Fellow at the National Bureau of Economic Research. Her work focuses on health economics, public finance, and the economics of regulation.

Market facilitation by the government.

In mixed public-private health insurance markets the government is often a direct participant, since a large share of financial resources transacted between insurers, patients, and providers stem from public funds. In the simplest case, for example, policymakers decide how much of insurers' premiums are paid by consumers and how much are paid from federal or state budgets. Moreover, policymakers often run various kinds of risk-equalization programs, aimed at reducing the incentives for insurers to select the healthiest consumers. The design of subsidization and risk-equalization may significantly affect how much insurance costs and which consumers choose which plans and services.

Medicare Part D: A case study

Medicare Part D — a prescription drug insurance for seniors — was introduced in 2006 and was the largest expansion of Medicare in its most recent history. It is run entirely by private insurers that are heavily regulated and subsidized from public funds.

These insurers provide a variety of drug plans to seniors. Enrollment is voluntary, although seniors face higher premiums if they enroll later than when they first become eligible. A typical Medicare enrollee can choose among 30 to 50 Part D plans. These plans vary in their premiums, coverage rules, and in which insurer

runs the plan. Roughly 70 to 75 percent of insurers' revenues for regular enrollees come from federal subsidies, while the remainder is paid by enrolled Medicare beneficiaries. For beneficiaries with sufficiently low incomes, subsidies can reach up to 100 percent of premiums and out-of-pocket expenditures.

How are consumers making their decisions?

One of the key debates has focused on how well Part D beneficiaries are choosing plans and whether having too much choice is harmful. Researchers have documented that seniors enrolling in Medicare Part D didn't always choose plans that cut their costs on prescription drugs.¹⁻⁵ And some evidence suggests that when choosing plans consumers may have paid more attention to things like premiums and deductibles, rather than exactly which drugs were covered by plans and what their out-of-pocket costs would be.¹

Other work has found that choices may have improved over time, suggesting that seniors were actually shopping for their plans and trying to choose those that offered them the best services at the lowest price.^{6,7}

Considering the dynamic perspective on consumers' annual choices, my research has also documented that consumers in Part D have been extremely sticky in their choices of insurance plans. In the first four to five years of the program, almost 90

percent of seniors chose to remain in the same plan they had in the year before.⁸

While inertia in purchases is natural and is observed in many other markets — from electricity providers to cell phone contracts — such low rates of contract switching may be detrimental to the idea of effective competition in health insurance.

If consumers do not reconsider their choices in response to significant changes in premiums or coverage features every year, insurers may have no incentives to improve their products.

Although seniors may not be choosing plans that perfectly minimize their spending, they are certainly not choosing plans at random. In my research I found that in Part D, sicker beneficiaries are significantly more likely to choose plans with higher coverage. For example, in the first year of the program, plans that offered minimal required coverage levels had consumers that spent an average of \$1,500 on prescription medications. Plans with the most generous coverage, however, enrolled consumers that ended up having almost three times that spending on average.⁸

While the fact that individuals with greater medical needs select more generous plans is perfectly natural, it creates a significant challenge for the policymakers. The regulatory environment allows insurers to offer plans of different generosity, but does not allow them to charge

different premiums depending on how sick individuals are. Hence, when the sickest beneficiaries all enroll into the most generous plan, this plan increases its prices for all enrollees, which causes the healthiest consumers in the plan to switch to other options, leaving the plan with an ever-worsening risk pool.

Economists call such phenomenon an adverse selection spiral. In a worst-case scenario, the spiral unravels. And insurers decide not to offer generous coverage.

Indeed, I find this likely happened in the Part D context, as the most generous plans offered in 2006 and 2007 were discontinued by insurers after those plans have attracted disproportionately sick beneficiaries.⁸ To prevent the whole system from unraveling, policymakers in Part D have several regulatory instruments in place, from minimum required coverage levels to several risk-equalization schemes.

While these extensive policies are in place to combat the implications of adverse selection, there are comparatively fewer policy instruments that try to address the implications of potential behavioral biases in consumer choices. Such rules could encourage consumers to actively reconsider their annual choices of plans and simplify the effort required to find the most suitable plan by making differences in plan features more transparent.

Caution is warranted, however, with any

policies that strive to simplify choices.

First, the simplification of choices is most valuable to consumers when it is individual-specific. Whether a certain plan is more generous than another may vary depending on a person's health.

Second, common choice simplification tools — such as software that calculates out-of-pocket spending in all plans for a given basket of drugs — usually do not communicate how much risk protection each plan provides and the chances of each individual consumer needing such risk protection.

The calculators are a great tool if consumers know with complete certainty which prescription drugs they will need next year, but they may be misleading if such knowledge is not available.

In general, too much simplification and reliance on historical health care experience undercuts the perceived value of having insurance. As a result, beneficiaries may feel that purchasing health insurance “was not worth it” if they didn't end up using health care in a given year, even though the same people would not complain about the worthlessness of their auto or home insurance if they didn't have a collision or their house didn't burn down.

Finally, researchers have argued that under certain circumstances improving choices by consumers could exacerbate the adverse

selection dynamics.⁹ This risk of selection spirals is a crucial aspect to consider in the design of any choice improvement policies.

With that in mind, more consumer education on the nature and magnitudes of health care risks could significantly help consumers assess their own risk, how much risk they are willing to tolerate, and how much risk protection they want to purchase.

Insurers: The makings of a plan

On the insurer side of the equation, setting up the right incentives requires taking into account a large number of different margins on which insurers respond strategically to market conditions.

For example, economists have considered how Medicare Part D insurers may respond to the kinds of frictions in consumer choices that were outlined above.¹⁰ Not surprisingly, insurers consider consumers' tendency to remain in their plans over time and may try adjusting their prices to attract new consumers when they enter the market and then keep them at potentially higher premiums.

This natural response by insurers is important to keep in mind when considering policies that may reduce consumer inertia in plan choices.

Another important question to ask is whether there are inefficiencies in plan design that may be associated

with the insurers' attempt to discourage enrollment by relatively sick consumers. While Medicare Part D has relatively extensive regulation around which drugs have to be covered by plans, there is still significant room for strategic formulary design by insurers. Indeed, it appears that on average insurers tend to offer better coverage of drugs that are used in treating more profitable diagnoses.^{11,12} This happens despite the extensive risk-equalization policies that are in place in the Part D market.

Resolving this issue by specifying exactly which drugs have to be on formularies and how they should be covered, however, would unlikely provide an optimal policy solution and may indeed make obsolete the idea of achieving efficiency gains through insurer competition.

With these likely challenges in mind, one wonders whether there are actual efficiency gains that the competitive environment brings to benefit and formulary design.

In addition to adverse selection, economists often highlight a second market inefficiency in health insurance settings — the so-called “moral hazard.” The idea is that in the presence of insurance, individuals face a much lower (perhaps even zero) price for each next health care service they get, and hence may have little incentive to carefully weigh the benefit of the service against its true cost. The problem of moral hazard

has likely led to the sharp recent increase in co-pays, co-insurance, and high deductibles in health plans.

Recent studies have found evidence indicating that private insurers in Medicare Part D may be quite effective at the management of moral hazard. First, existing formularies in Medicare Part D tend to provide more insurance for drugs that are less prone to moral hazard.¹³

Second, insurers that provide both prescription drug and medical coverage (Medicare Advantage plans with a Part D component) have better coverage of prescription drugs that may lead to higher expenditures in inpatient and outpatient settings if not taken regularly.^{12,14} The fact that insurers that only provide prescription drug coverage do not have the incentives to improve coverage for such drugs implies that they exert an externality on traditional Medicare that has to absorb potentially higher medical costs from suboptimal drug adherence.

Overall, conditional on the policymakers' decision to introduce competition in health insurance, it appears valuable to leave private insurers some room for the design of their plans, as long as the policy environment makes a significant attempt at muting risk-selection incentives and at discouraging prescription drug insurers from having poor coverage of cost-effective medications.

Government: Balancing regulation and subsidization

In addition to its extensive regulatory role in Medicare Part D, the government is also a direct player in this market, as more than 75 percent of insurers' revenues ultimately stem from public funds. Relative to the aspects of consumer choices and insurer behavior, there is less research examining the incentives around the payment of public subsidies in Medicare Part D. This part of the market, however, plays a crucial role, as the design of the subsidization mechanisms and the level of subsidies may significantly alter prices and allocations on this market.

In Medicare Part D alone, public spending — most of it in terms of subsidies for premiums and cost-sharing — amounts to about \$80 billion annually.

Subsidies come in several different flavors. For people with incomes significantly above the federal poverty line, there are no subsidies for co-pays and co-insurance, but there are significant subsidies for premiums. On average, these beneficiaries pay about 30 percent of the premiums. For enrollees whose incomes are lower or slightly above the federal poverty line, there are special so-called “low-income subsidies” in place. These subsidies typically cover 100 percent of insurance premiums and almost all of co-pay and co-insurance payments.

How does the government — in this case the Centers for Medicare and Medicaid Services, or CMS — decide how much subsidy to offer?

A critical piece of this puzzle is the rule for how a firm's pricing decision — called a "bid" — is turned into premiums that enrollees face. Medicare beneficiaries do not face full prices or bids set by insurers; instead, there is an intermediate process by which CMS decides on how much of the insurer's bid will be paid by the government in subsidies and how much will be paid by enrollees in premiums.

In this process, CMS takes the sum of all bids for all participating insurers in the U.S., averages them using enrollment weights from the previous year, and takes a fraction of the resulting number to obtain the base subsidy. The premium of a given plan is then determined by taking the maximum of zero and the firm's bid minus this base subsidy.

This pricing mechanism has three effects on market outcomes.

First, consumers face premiums that are strictly lower than firm bids, which increases demand.

Second, the relative premiums of plans are distorted by this mechanism; this is important since it may distort the choices of consumers across plans.

Third, the same bids determine the plans' eligibility to enroll low-income subsidy enrollees, who are commonly

assigned to plans by CMS, rather than choose their plans themselves.

While this complex mechanism of collecting bids from insurers, and passing them through an intricate formula, may seem like a convoluted way of determining subsidy levels, there are few alternatives that the government could consider.

Another, simple, option that implicitly comes up in frequent policy proposals that consider moving the whole Medicare program to a defined benefit system would be to provide fixed vouchers that could be used to buy a plan in the Part D market.

While it is not immediately obvious, the current subsidization system in fact operates like a voucher, in that the average bid is computed from the bids of all plans and any individual firm has little influence on that average. Unsurprisingly, setting a fixed pre-specified voucher close in levels to what effectively ends up being the subsidy level under the current system would lead to similar market efficiency. Moreover, the current subsidy level appears to encourage insurers to submit competitive bids and generates efficiency gains that are very close to an optimal uniform voucher.¹⁵

The existing system has an important additional advantage — it gives CMS an implementable, albeit potentially administratively very costly, mechanism to determine the level of the voucher. While efficiency could be substantially improved by making

subsidies plan-specific and attempting to steer consumers to more efficient plans, such policies are likely not practical, since CMS would have to know the efficiency differences across hundreds of insurance plans.

Medicare Part D subsidization policies provide key learnings for the subsidization of privately provided, publicly subsidized social insurance programs in general.

It suggests that the optimal subsidy design depends crucially on the policymakers' objective. One motivation of subsidizing these programs is typically redistribution — the government attempts to ensure the affordability of insurance.

Inevitably, such subsidy policies will have efficiency costs for the market. One source of such inefficiencies is market power. Subsidies create incentives for imperfectly competitive insurers to raise markups and pass them through to the price inelastic government.

Conditional on the decision to privately run and publicly subsidize social insurance programs, there are large welfare differences across specific mechanisms that are feasibly at the policymakers' disposal. Depending on whether the policy is guided by the considerations of consumer surplus, total welfare, or government spending, different policies deliver drastically different results.

Endnotes

1. Abaluck, Jason, and Jonathan Gruber (2011) "Choice Inconsistencies among the Elderly: Evidence from Plan Choice in the Medicare Part D program," *American Economic Review* 101(4): 1180-1210.
2. Heiss, Florian, Daniel McFadden, and Joachim Winter (2006) "Who Failed to Enroll in Medicare Part D, And Why? Early Results," *Health Affairs* 25(5): 344-354.
3. Winter, Joachim, Rowilma Balza, Frank Caro, Florian Heiss, Byung-hill Jun, Rosa Matzkin, and Daniel McFadden (2006) "Medicare Prescription Drug Coverage: Consumer Information and Preferences," *Proceedings of the National Academy of Sciences* 103(20): 7929-7934.
4. Heiss, Florian, Daniel McFadden, and Joachim Winter (2010) "Mind the Gap! Consumer Perceptions and Choices of Medicare Part D Prescription Drug Plans," in *Research Findings in the Economics of Aging*, ed. D. Wise, The University of Chicago Press: 413-481.
5. Heiss, Florian, Adam Leive, Daniel McFadden, and Joachim Winter (2006) "Plan selection in Medicare Part D: Evidence from administrative data," *Journal of Health Economics* 32(6): 1325-1344.
6. Ketcham, Jonathan, Claudio Lucarelli, Eugenio Miravete, and Christopher Roebuck (2012) "Sinking, Swimming, or Learning to Swim in Medicare Part D," *American Economic Review* 102(6): 2639-2673.
7. Ketcham, Jonathan, Claudio Lucarelli, and Christopher Powers (2015) "Paying Attention or Paying Too Much in Medicare Part D," *American Economic Review* 105(1): 204-233.
8. Polyakova, Maria (2016) "Regulation of insurance with adverse selection and switching costs: Evidence from Medicare Part D," *American Economic Journal: Applied Economics* 8(3): 165-195.
9. Handel, Benjamin (2013) "Adverse Selection and Inertia in Health Insurance Markets: When Nudging Hurts," *American Economic Review* 103(7): 2643-2682.
10. Ho, Kate, Joseph Hogan, and Fiona Scott Morton (2015) "The Impact of Consumer Inattention on Insurer Pricing in the Medicare Part D Program," NBER Working Paper no. 21028.
11. Carey, Colleen (forthcoming) "Technological Change and Risk Adjustment: Benefit Design Incentives in Medicare Part D," *American Economic Journal: Economic Policy*.
12. Lavetti, Kurt, and Kosali Simon (2016) "Strategic Formulary Design in Medicare Part D Plans," NBER Working Paper no. 22338.
13. Einav, Liran, Amy Finkelstein, and Maria Polyakova (2016) "Private Provision of Social Insurance: Drug-Specific Price Elasticities and Cost Sharing in Medicare Part D," NBER Working Paper no. 22277.
14. Starc, Amanda, and Robert Town (2016) "Internalizing Behavioral Externalities: Benefit Integration in Health Insurance," NBER Working Paper no. 21783.
15. Decarolis, Francesco, Maria Polyakova, and Stephen Ryan (2015) "The Welfare Effects of Supply-Side Regulations in Medicare Part D," NBER Working Paper no. 21298.

About SIEPR

We are Stanford University's hub for interdisciplinary research on economic policy. Our mission is to support research, train undergraduate and graduate students, and share knowledge that will lead to better economic policies in the United States and abroad.

Policy Briefs

SIEPR Policy Briefs summarize research by our affiliated faculty and researchers. They reflect the views and ideas of the author only. SIEPR is a nonpartisan research institute.

For Additional Copies

Please visit SIEPR.stanford.edu

Location

John A. and Cynthia Fry Gunn Building
366 Galvez Street
Stanford, CA 94305-6015

Online

siepr.stanford.edu

🐦 @siepr

📘 facebook.com/SIEPR/