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RESEARCH BRIEF

Growing Reinsurance Payments Weaken Competitive Bidding in Medicare Part D

Jeah Jung and Roger Feldman

Objectives. To examine variation in risk-adjusted reinsurance payments across Part D plans, analyze its implications for the program, and explore options to reduce reinsurance payments.

Data/Study Design. 2007–2015 Part D Plan Payment and Premium data; 2010–2013 Part D Prescription Drug Event data; and 2013 Part D Plan Formulary Files.

Principal Findings. Risk-adjusted reinsurance payments varied widely across plans at a given out-of-pocket (OOP) premium. The variance in risk-adjusted reinsurance in common OOP premium ranges increased between 2010 and 2015. High risk-adjusted reinsurance payments were negatively correlated with use of utilization management tools for high-cost drugs.

Conclusions. Growing reinsurance payments shrink plans' liability for managing drug spending for high-cost enrollees, creating plan moral hazard, and making OOP premiums a noisy signal of plans' total costs.

Key Words. Part D reinsurance, competitive bidding, plan moral hazard

Medicare Part D benefits are delivered through private plans—stand-alone Prescription Drug Plans (PDPs) or Medicare Advantage Prescription Drug Plans (MA-PDs). Medicare subsidizes about 75 percent of Part D spending through payments to Part D plans, and beneficiaries pay the remaining 25 percent through out-of-pocket (OOP) premiums. Medicare payments to plans take two forms: (1) the *direct subsidy* covers the cost of offering the standard benefit to an average enrollee; and (2) *reinsurance* covers 80 percent of drug spending above the catastrophic threshold. Total Medicare payments to Part D plans reached \$80 billion in 2015 (14.8 percent of Medicare spending), up from \$52 billion in 2010 (11.7 percent); particularly, reinsurance payments grew from \$11.2 billion in 2010 to \$34.3 billion in 2015, accounting for 2.5 percent and 6.4 percent of Medicare spending, respectively (Boards of Trustees 2016). Reinsurance payments alone are expected to hit \$92.2 billion in 2025, comprising 16.4 percent of Medicare spending (Boards of Trustees 2016).

Part D reinsurance was introduced at the inception of the program to promote insurers' participation in Part D by protecting plans from financial risk. Part D reinsurance kicks in when patients reach catastrophic coverage after spending \$4,950 out-of-pocket in 2017 (total drug spending of \$7,425 with standard benefits). Reinsurance payments cover 80 percent of catastrophic drug spending, while plans are liable for 15 percent and patients pay the remaining 5 percent.

In theory, reinsurance pays for cases with unpredictably high costs and thereby reduces insurers' financial risk. In commercial insurance markets, reinsurance comprises a small fraction of total spending (about 10 percent) because reinsurance requires a high threshold before any benefits are paid. Typically, only 1 percent of commercial enrollees incur catastrophic expenses (Milliman 2015). In contrast, about 8 percent of Part D enrollees reached the catastrophic threshold in 2013, and their spending was 47 percent of total Part D spending (MedPAC 2016). Reinsurance payments have thus become the main source of plan reimbursements in Part D. Figure 1 shows that reinsurance payments to plans recently have exceeded the direct subsidy.

This trend has attracted attention of government agencies, leading them to seek options to reduce reinsurance payments (MedPAC 2016, 2017). Growing reinsurance payments, which imply shrinking plan liability for managing drug spending, are an important concern because they weaken competitive bidding and create inefficiency in the program. Part D plans submit bids, which are estimates of their costs to cover the standard benefit for an average-risk enrollee. Medicare determines the direct subsidy based on the national average bid. Plans with lower than average bids can use the savings from the direct subsidy to reduce enrollees' OOP premiums. Plans bidding higher than the average charge additional OOP premiums to cover spending above the subsidy. Because OOP premiums are a key determinant of beneficiaries' plan choice, plans are motivated to lower their bids by offering efficient drug coverage.

However, plans' incentives to manage spending above the catastrophic threshold are weak because reinsurance payments are not included in plan bids. For example, plans may not negotiate hard with manufacturers for lower

Address correspondence to Jeah Jung, Ph.D., Department of Health Policy and Administration, College of Health and Human Development, The Pennsylvania State University, 604 Ford Building, University Park, PA 16802; e-mail: kuj11@psu.edu. Roger Feldman, Ph.D., is with the Division of Health Policy and Management, School of Public Health, University of Minnesota, Minneapolis, MN.

Figure 1: Trends in Direct Subsidy, Reinsurance Payments, and Out-of-Pocket Premium [Color figure can be viewed at wileyonlinelibrary.com]

Notes. Direct subsidy is the payment to cover the plan's drug costs below the reinsurance threshold for an average-risk enrollee with standard benefits. Out-of-pocket (OOP) premiums are for the standard benefit.

prices of high-cost drugs, whose users would certainly hit the threshold; manufacturers may raise drug prices to have more enrollees make quicker progress toward the threshold, and plans may not actively manage drug utilization of

enrollees who are expected to reach the threshold. As reinsurance grows, plan moral hazard for high-cost enrollees can increase. Further, variation in risk-adjusted reinsurance payments across plans is not reflected in plan bids and thus OOP premiums. As reinsurance grows, OOP premiums become a noisy signal of plans' total costs (plan bid + risk-adjusted reinsurance payments). Plans charging low OOP premiums can have high risk-adjusted reinsurance payments. This would steer beneficiaries to low-premium yet high-cost plans, which could in turn increase plan moral hazard for catastrophic spending. Thus, growing reinsurance can break down the premise of competitive bidding, with costs of inefficient services being borne by taxpayers and Part D enrollees. This will become an increasingly important issue as Part D spending grows.

Despite its importance, this issue has received little attention. No work has analyzed whether variation exists in reinsurance payments (i.e., in managing catastrophic spending) across plans or what it implies for the performance of Part D. One might consider that variation in reinsurance payments is not informative because reinsurance covers unexpected costs. However, spending incurred by about 8 percent of enrollees is unlikely to be completely random. In fact, high spending in Part D is persistent: 65–70 percent of enrollees reaching the catastrophic threshold in a given year reached it in the following year, and about 30 percent of high-cost enrollees incurred high costs in all five years of follow-up (MedPAC 2016). This suggests high spending in Part D is fairly predictable.

We examined whether reinsurance payments differ across plans after adjusting for enrollee risk to understand how well plans manage drug spending for high-cost enrollees. We calculated risk-adjusted reinsurance payments for each plan using publicly available plan risk scores. This adjustment is imperfect because risk scores were developed to risk-adjust plans' liabilities, not catastrophic spending (CMS 2014). However, it allows us to estimate "excess" reinsurance to each plan (i.e., reinsurance payments after removing the payment due to enrollee risk). Using this measure, we analyzed the extent to which risk-adjusted reinsurance payments varied across plans, were reflected in OOP premiums that represent plan bids, and were related to plan moral hazard. This is crucial information for exploring options to reduce reinsurance payments—an important policy agenda in Part D (MedPAC 2016, 2017). We also discuss policy proposals to increase plans' liability for managing drug spending to incentivize plans to deliver more efficient drug coverage.

DATA

The primary data were 2007–2015 Part D Plan Payment files from the Centers for Medicare and Medicaid Services (CMS). The data contain the direct subsidy, reinsurance payments, and enrollee risk scores for each plan. The premium files supplied plans' OOP premiums. We focused on OOP premiums for the standard benefit (hereafter OOP premiums). The Supplementary Data include (1) 2010–2013 Prescription Drug Event Files for a random sample of PDP enrollees, which supplied information on drug spending by each enrollee; and (2) the 2013 Part D Formulary File, from which we identified drugs subject to utilization management (UM) tools in each plan. Appendix SA3 describes the supplementary data in detail.

METHODS

Descriptive Trends

We examined national trends in the direct subsidy, reinsurance payments, and OOP premiums between 2007 and 2015, separately for PDPs and MA-PDs.

Excess Reinsurance Payments

Following Mukamel et al. (2002), we constructed excess reinsurance payments, separately for PDPs and MA-PDs in each year, as follows:

1. Calculate each plan's monthly risk-adjusted reinsurance payments (RAR) per member as the plan's reinsurance payments divided by its risk score. This is the monthly reinsurance payment to the plan for an average-risk enrollee (risk = 1.0) in the given year.
2. Obtain the mean RAR across all plans in the given year. This is the expected reinsurance payment for an average-risk enrollee. Using the mean RAR in each year allows for general upward trends in drug prices and introduction of new drugs that raise RAR for all plans (OIG 2017).
3. Construct monthly excess reinsurance payments per member for plan i in year t as: (1)

$$\text{Excess reinsurance payment}_{it} = \text{RAR}_{it} - (\text{average RAR})_t.$$

Analysis

To examine variation in excess reinsurance, we estimated:

$$\text{Excess reinsurance payment}_{it} = \alpha + \beta(\text{OOP premium})_{it} + \text{PLAN}_i + \varepsilon_{it}, \quad (2)$$

where PLAN_i is a vector of plan fixed effects, which control for all time-invariant plan factors.

We obtained residuals from this regression for 2010 and 2015, which represent the periods before and after the growth of reinsurance payments, respectively. Using scatter plots, we assessed whether those residuals varied at a given OOP premium. To examine how the variance of excess reinsurance changed between 2010 and 2015, we created bins of common OOP premiums using a \$10 range and calculated the variance of excess reinsurance within each bin in each year.

We also explored indications that excess reinsurance payments might be due to plan moral hazard. One of these indications is the distribution of enrollees' annual OOP spending, on which the catastrophic threshold is based. The dearth of observations in a spending range approaching the catastrophic threshold and the abundance of observations above the threshold indicate plan moral hazard: plans let enrollees approaching the threshold continue to spend more and hit the threshold. Plans would not let enrollees do so if they bore more risk for catastrophic spending. Second, we checked whether excess reinsurance payments were negatively correlated with use of UM tools. We calculated the percent of high-cost drugs for each plan (defined as monthly cost $\geq$ \$600) subject to any UM tools (prior authorization, quantity limits, and step therapy) among all high-cost drugs covered by the plan.

RESULTS

Figure 1 shows that reinsurance payments have grown rapidly since 2012, while the direct subsidy has decreased. PDPs and MA-PDs had similar trends, but the growth of reinsurance payments was more salient among PDPs. Reinsurance payments to PDPs were twice as high as the direct subsidy in 2015. This is a striking development considering that they were only a half of the direct subsidy in the early years of the program. The decrease in the direct subsidy is due to increases in drug discounts/rebates because a large share of the rebates must be used to reduce plan liability (CMS, 2017): the rebates accounted for 11.7 percent of total drug spending in 2012, but 17.2 percent in 2015, leading the subsidy to decrease by 5 percent annually.

Figure 2 depicts variation in residuals from regressing excess reinsurance payments on plan fixed effects and OOP premiums. PDPs and MA-PDs had similar patterns. But many MA-PDs had zero OOP premiums because they can use revenues from Part C to subsidize Part D (cross-subsidization) and their bids could be affected by Part C risk and spending. In the figure, if all residuals were close to zero, it would mean that OOP premiums represent both plan costs below the threshold and excess reinsurance payments. However, the figure indicates wide variation in excess reinsurance payments at a given OOP premium that represents plan bids (costs below the threshold). This suggests that beneficiaries who choose plans with low OOP premiums can enroll unknowingly in plans with large excess reinsurance payments.

The variance of excess reinsurance payments in common OOP ranges tended to increase as OOP premiums increased, and it doubled between 2010 and 2015 (Table S1 in Appendix SA2). This means that OOP premiums become noisier for plans doing a poorer job in managing spending below the

Figure 2: Residuals from Regression of Excess Reinsurance Payments on Plan Fixed Effects and Out-Of-Pocket (OOP) Premiums [Color figure can be viewed at wileyonlinelibrary.com]

Notes. Excess reinsurance payments are reinsurance amounts after removing the portion of the payment explained by enrollee health risk. Out-of-pocket (OOP) premiums are for the standard benefit.

threshold and OOP premiums were noisier predictors of total spending (plan bids plus excess reinsurance) in 2015 than in 2010.

Finally, we found a negative correlation between plans' excess reinsurance amounts and the percent of high-cost drugs subject to UM tools in 2013 (correlation coefficient = -0.07 ; $p < .001$). This indicates that excess reinsurance payments were partially due to plan moral hazard. The distribution of PDP enrollees' annual OOP spending also suggested the presence of plan moral hazard (Figure S1 in Appendix SA2). Very few enrollees stopped spending when close to the catastrophic threshold, while there was a sudden increase in the number of enrollees who spent above the threshold. This suggests that plans do not manage spending as enrollees approach the threshold because reinsurance covers 80 percent of spending above the threshold. Plans are responsible for 15 percent of catastrophic spending, and enrollees pay 5 percent coinsurance, or \$3.30 for generics and \$8.25 for brand-name drugs (whichever is greater). The current reinsurance scheme gives plans incentives to engage in moral hazard for high-cost enrollees.

DISCUSSION

Reinsurance has played an important role in stabilizing the Part D market. But the recent spike in reinsurance payments implies shrinking plan liability for managing drug spending. Good reinsurance mechanisms would protect plans from financial risk while minimizing moral hazard by plans. We discuss policy options to improve Part D reinsurance.

First, Part D could adopt the approach to reinsurance used in the commercial market, as proposed by Milliman (2015). For example, reinsurance could pay 80 percent of expenses above a threshold set at the 99th percentile of Part D enrollees ranked by total spending. Much of the unpredictable spending is represented by very costly but rare events in the upper tail. Thus, this approach would protect plans against risk. OOP premiums would signal most of the plans' costs. Covering 80 percent of high-cost bills can leave some incentive for moral hazard, although very costly bills are probably exogenous to the plan. If moral hazard occurred, the plan's coinsurance rate could be increased (e.g., from 20 to 50 percent).

Second, reinsurance could pay 20 percent of expenses above a threshold set at the 90th percentile of ranked enrollees. This is similar to MedPAC's (2017) recommendation that Part D reduce reinsurance from 80 to 20 percent of catastrophic spending. This approach affects more people compared with

the first option above. Because some drug spending at this low threshold is predictable, reinsurance would not serve the risk-protection function well. Enrollees could be steered to high-cost plans because OOP premiums do not fully capture predictable plan costs—but to a smaller extent than in the current system. However, by covering only 20 percent of the excess costs, this approach would be less susceptible to plan moral hazard.

While both proposals would improve Part D reinsurance, they would require dramatic changes in the program, which can be politically challenging. An incremental step could be to gradually increase plan liability. For example, Part D could consider treating the 50 percent discount for brand-name drugs in the coverage gap as a plan liability. Currently, the gap discounts are not included in plan bids while counting toward patients' OOP spending in reaching catastrophic coverage. Thus, more patients transition more quickly to catastrophic coverage. This reduces plans' incentives to manage drug spending before the gap (to deter patients from hitting the gap), spending in the gap, and in catastrophic coverage. Increasing plan liability for drug spending in the gap could motivate plans to better manage drug spending.

We note several limitations of the study. The excess reinsurance payments we calculated could include costs incurred for truly exogenous reasons. We could not remove the exogenous portion with the available data. To focus on costs excluded from plan bids, we did not consider risk corridors, which reconcile differences between plan bids and actual costs. We could not simulate potential impacts of the policy proposals we discussed because estimates of plan responsiveness to reinsurance designs are not available. This is an important area for future research.

Reinsurance was necessary when Part D was created to promote plans' participation in the program. Part D plans now have 10 years of experience and are in a better position to predict/manage drug costs. Reinsuring 80 percent of expenses above a low threshold invites plan moral hazard. The justification for continuing to do so is weak. Modification of Part D reinsurance is needed to increase plans' incentives to provide efficient drug coverage.

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REFERENCES

- Boards of Trustees. 2016. "2016 Annual Report on the Federal Hospital Insurance and Supplementary Medical Insurance Trust Funds" [accessed on April 11, 2018]. Available at <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/ReportsTrustFunds/index.html?redirect=/reportstrustfunds/>
- Center for Medicare and Medicaid Services (CMS). 2014. "Medicare Managed Care Manual, Chapter 7 – Risk Adjustment (Rev. 118, 09-19-14)." Publication No. 100-16 [accessed on April 11, 2018]. Available at <https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Internet-Only-Manuals-IOMs.html>
- Center for Medicare and Medicaid Services (CMS). 2017. "Medicare Part D – Direct and Indirect Remuneration" [accessed on April 11, 2018]. Available at <https://www.cms.gov/newsroom/mediareleasedatabase/fact-sheets/2017-fact-sheet-items/2017-01-19-2.html>
- Medicare Payment Advisory Committee (MedPAC). 2016. *Report to the Congress: Medicare and the Health Care Delivery System; Chapter 6. Improving Medicare Part D*. Washington, DC: MedPAC.
- Medicare Payment Advisory Commission (MedPAC). 2017. "Status Report on Part D." [accessed on April 11, 2018]. Available at <http://www.medpac.gov/docs/default-source/default-document-library/status-report-on-part-d-for-jan-2017.pdf?sfvrsn=0>
- Milliman. 2015. "Milliman Medicare Issue Brief: Possible Changes to Medicare Part D Reinsurance Programs" [accessed on April 11, 2018]. Available at <http://us.milliman.com/insight/2015/Possible-changes-to-Medicare-Part-D-reinsurance-programs/>
- Mukamel, D. B., D. L. Weimer, J. Zwanziger, and A. I. Mushlin. 2002. "Quality of Cardiac Surgeons and Managed Care Contracting Practices." *Health Services Research* 37 (5): 1129–44.
- Office of Inspector General. 2017. "High-Price Drugs are Increasing Federal Payments for Medicare Part D Catastrophic Coverage." Report in Brief. Department of Health and Human Services. [accessed on April 11, 2018]. Available at <http://oig.hhs.gov/oei/reports/oei-02-16-00270.asp>

SUPPORTING INFORMATION

Additional supporting information may be found online in the supporting information tab for this article:

Appendix SA1: Author Matrix.

Appendix SA2:

Table S1: Distribution of Monthly Excess Reinsurance Payments by Out-of-Pocket (OOP) Premium

Figure S1: Distribution of Stand-Alone Prescription Drug Plan Enrollees' Annual (Total) Out-of-Pocket Spending

Appendix SA3: Supplementary Data