

Effects of pharmaceutical manufacturer rebates on Part D's risk adjustment

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November 9, 2020

Motivation for the analysis

- Goal of risk adjustment is to pay accurately across groups of beneficiaries based on expected average costs of each of these groups
- Rapid growth in rebates and discounts may have reduced the accuracy of Part D's risk adjustment across disease conditions
 - Annual growth of about 20% since 2007
 - Estimated to sum to 28% of total Part D spending, up from less than 10% in 2007

Payments to plans are risk adjusted to counter incentives for risk selection

- Capitated payments (direct subsidy) are based on plans' estimates of expected benefit costs for an average enrollee
- CMS uses RxHCC model to adjust payments to reflect the expected costliness of each enrollee
- In 2018, risk adjustment applied to 40% of plans' revenue covering basic benefit costs (remainder covered by Medicare's cost-based reinsurance)

Part D's risk-adjustment model

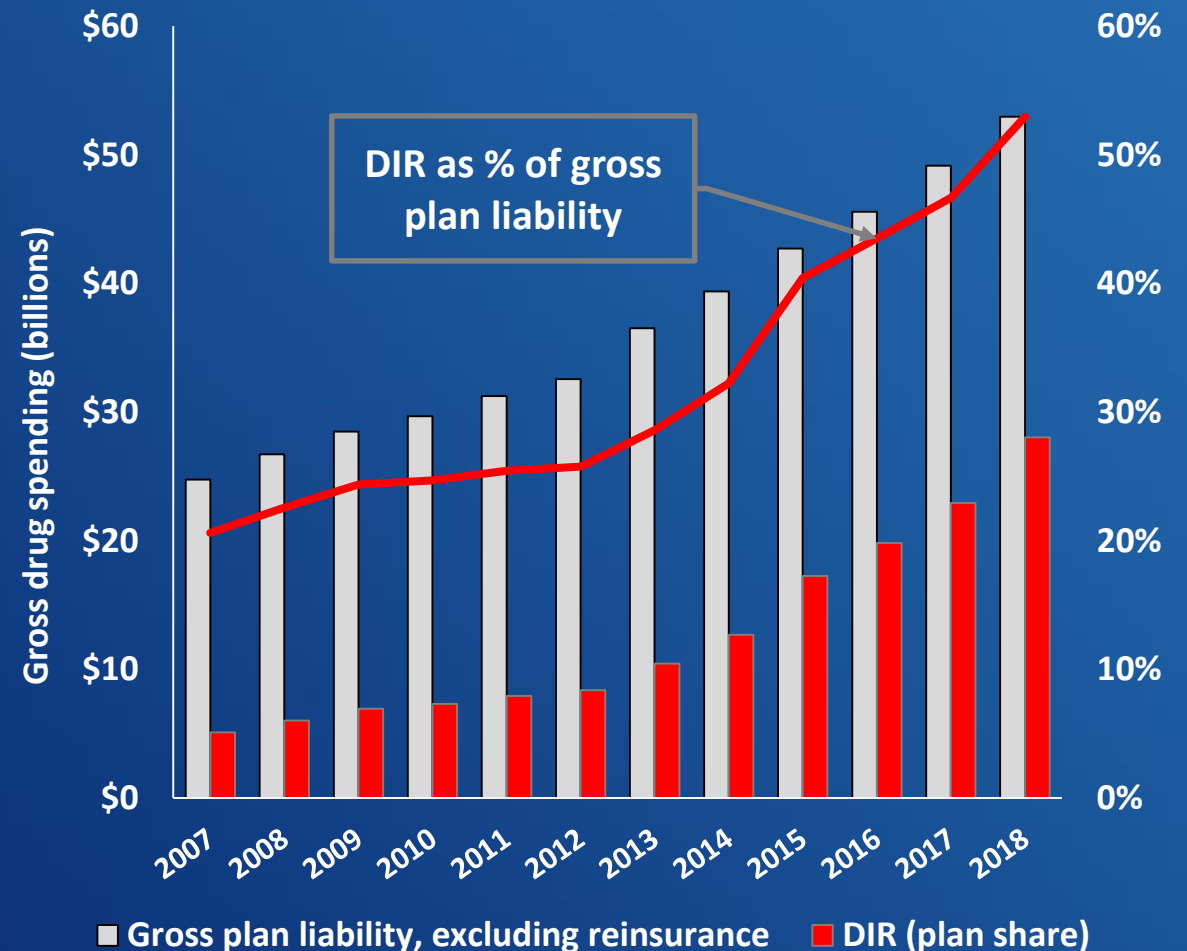
- Similar to the HCC model used to adjust payments to Medicare Advantage plans
 - Based on age, sex, disability status, and medical diagnoses (RxHCCs)
 - Uses a regression analysis to estimate coefficients that reflect expected additional drug costs for each variable
- Predicts plans' basic benefit costs (prices paid at the pharmacy)
 - Excludes reinsurance because that risk is borne by Medicare
 - Pharmacy claims do not reflect postsale rebates and discounts

How CMS calculates RxHCC risk scores

- RxHCC model coefficients are divided by average drug costs to arrive at relative factors
- Examples of relative factors for community beneficiaries, not receiving Part D's LIS*:
 - Female 65 – 69 years **0.239**
 - RxHCC30 (diabetes with complications) **0.425**
 - RxHCC241 (diabetic retinopathy) **0.307**
- Risk score for non-LIS, 65-year old female with diabetes with complications and diabetic retinopathy is:
 $0.239 + 0.425 + 0.307 = \underline{0.971}$

Rapid growth in rebates raises concerns about the accuracy of Part D's risk adjustment

- In 2018, plans' share of direct and indirect remuneration (DIR) offset over 50% of plan liability
- Rebates vary by drug, potentially undermining the accuracy of risk adjustment across RxHCCs



Key questions for the analysis of the effects of rebates on Part D's risk adjusters

- How do rebates affect the RxHCC model's risk-adjustment factors?
- Are there systematic over- or under-estimation of costs across the condition categories?
- What are the potential implications for plan incentives and payments?

Method used to compare risk adjusters with and without rebates

- Base case: single model* calibrated using 2017 diagnoses to predict 2018 (gross) plan liability
- Used estimated rebates to calculate plan liability net of rebates for 2 categories of drugs:
 - Insulins
 - TNF inhibitors
- Re-estimated the model using net plan liability for 1) insulins, 2) TNF inhibitors, and 3) both insulins and TNF inhibitors
- All models used the same explanatory variables as the current version of the RxHCC model

Estimated net plan liability for insulins and TNF inhibitors, 2018

	Insulins	TNF inhibitors
# of users, millions	3.2	0.1
Total spending, billions	\$14.3	\$5.4
Average per user		
Spending	\$4,410	\$45,052
Plan liability ¹	1,527	7,630
Rebate ²	1,257	5,191
Net plan liability	270	2,438

- Chose insulins and TNF inhibitors because:
 - Rebate information available in published studies/reports
 - Represent drugs with very different use and costs
- Used conservative estimates of rebates
 - Started with the lower bound of estimates
 - Accounted for coverage gap discounts

Interpreting the regression findings

- Results are specific to the two categories of drugs we examined—insulins and TNF inhibitors—and are based on estimated rebates
- Impacts would vary if rebates for other categories of drugs were reflected in the model

Using plan liability net of rebates reduced relative factors by as much as 75 percent

Relative factors	Base case	Net plan liability for insulins	Change
RxHCC30: Diabetes with complications	0.612	0.395	-35%
RxHCC31: Diabetes without complications	0.284	0.251	-12%
RxHCC241: Diabetic retinopathy	0.412	0.102	-75%
RxHCC311: Chronic ulcer of skin, except pressure	0.150	0.061	-59%

- Using net plan liability for TNF inhibitors reduced relative factors for inflammatory conditions* by between 20% and 39%
- Similar effects on relative factors for diabetes and inflammatory conditions in the combined model

Changes in the relative costs for specific conditions affect risk scores for all beneficiaries

- A decrease in the relative costliness of a specific condition means higher relative costs for other conditions

Average risk score for beneficiaries	Base case	Net plan liability (combined)	Change
With diabetes	1.53	1.39	-9%
Without diabetes	0.77	0.83	8%
With inflammatory conditions	1.75	1.63	-7%
Without inflammatory conditions	0.95	0.96	1%

- Effects on risk scores for individual beneficiaries will vary depending on the RxHCCs indicated for each individual (e.g., risk scores increased for 10% of beneficiaries with diabetes)

Using net prices would affect plan-level averages less than individual risk scores

- Effects on individual plans would depend on the mix of RxHCCs indicated for their enrollees
- Plan-level average risk scores increased by 0.7% for PDPs and decreased by 1.5% for MA-PDs, on average, when net plan liability used for both insulins and TNF inhibitors
 - Mostly driven by effects of rebates for insulins
 - Reflects differences in RxHCCs (e.g., higher share of MA-PD enrollees had diabetes with complications)

Key takeaways

- Rebates affect the accuracy of the entire risk-adjustment system
 - CMS uses gross, not net prices
 - Rapid and uneven growth in rebates has reduced the accuracy of the model
- To improve payment accuracy, policymakers may want to initially focus on drugs with the largest impact—i.e., those with large rebates and used to treat highly prevalent conditions

Policy implications

- Risk adjustment based on pharmacy prices creates or worsens misaligned incentives
 - Incentives for risk selection
 - Use of formularies that prefer high-price, high-rebate drugs
- Using net prices in the risk-adjustment model would improve the accuracy of payments
- Accurate risk adjustment would be particularly important under the Commission's recommendations to restructure the Part D benefit

Discussion

- Questions or comments?
- Commissioner feedback on future direction
 - We plan to include the material in the Part D chapter of the March 2021 Report to the Congress
 - Research/explore administrative changes required (e.g., data submission requirements, agency resources) and potential unintended consequences
 - Are there other angles you would like us to pursue?