

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

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# Motivation for the analysis

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- 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

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- 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

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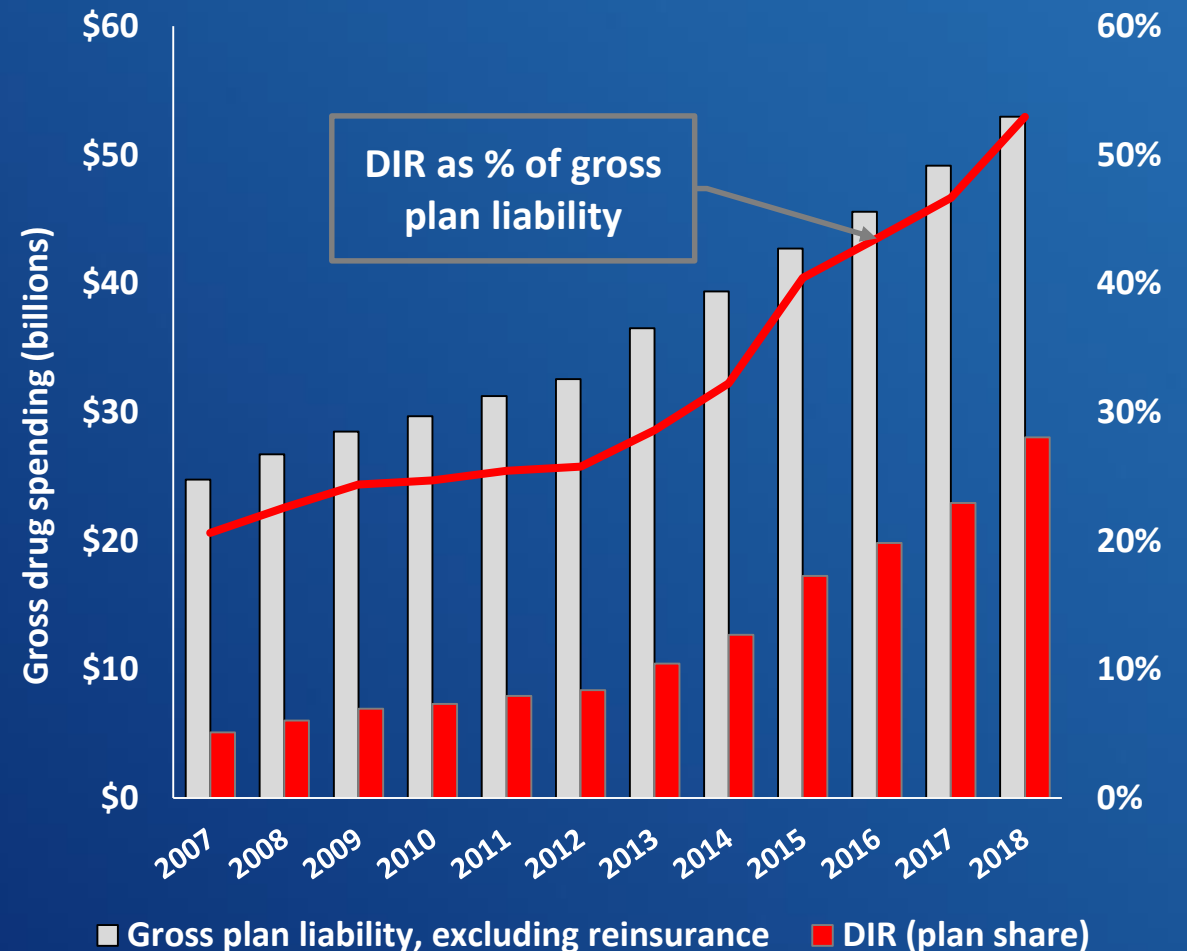
- Similar to the HCC model used to adjust payments to Medicare Advantage plans
  - Based on age, sex, disability status, and medical diagnoses (RxHCCs)
  - Uses a regression analysis to estimate coefficients that reflect expected additional drug costs for each variable
- Predicts plans' basic benefit 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

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- 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

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- 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
<b>Average per user</b>		
Spending	\$4,410	\$45,052
Plan liability <sup>1</sup>	1,527	7,630
Rebate <sup>2</sup>	1,257	5,191
<b>Net plan liability</b>	<b>270</b>	<b>2,438</b>

- 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

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- 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

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- 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

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- 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

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- 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

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- 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?