Assessment of potential enhancements to the Part D risk adjustment (RxHCC) model:

Considerations for ensuring risk adjustment adequacy in an evolving Part D environment

Commissioned by PhRMA

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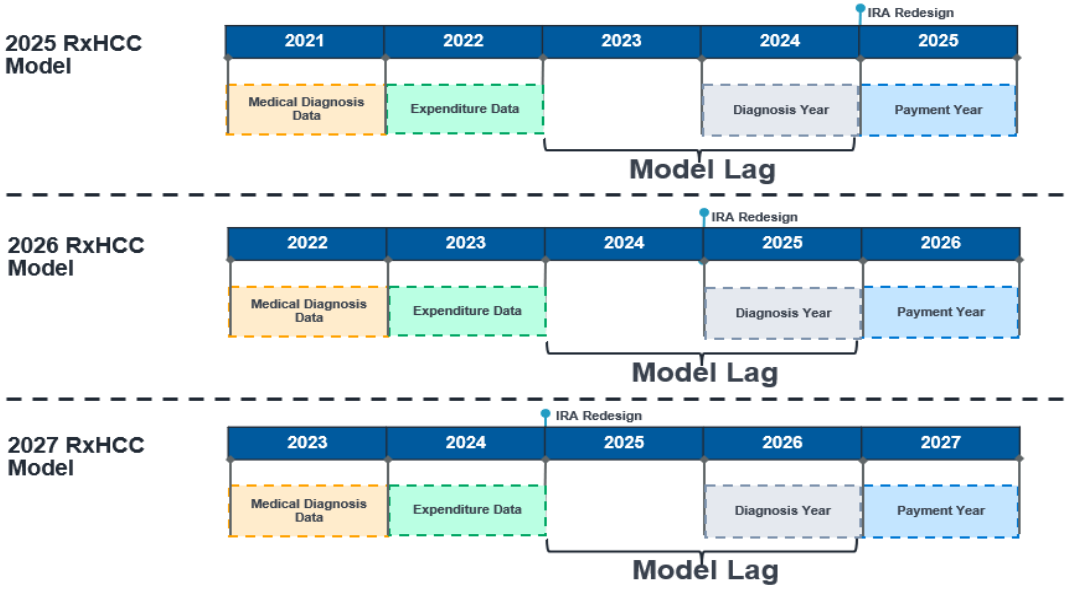
While the 2026 model has already been finalized, in this paper, commissioned by Pharmaceutical Research and Manufacturers of America (PhRMA), we explore potential model enhancements for the 2027 prescription hierarchical condition category (RxHCC) model, which the Centers for Medicare and Medicaid Services (CMS) is expected to propose and finalize in early 2026. These enhancements reflect methodology used elsewhere in the healthcare system, and we evaluate their applicability and potential impact if used to enhance the RxHCC model. Specifically, at PhRMA's request, we look at an enhancement to incorporate emerging 2025 experience, as is commonly considered in the Medicare Advantage bid process, and an enhancement to improve prediction accuracy for high-cost beneficiaries, as is done through other risk adjustment models.

CMS uses the RxHCC model to calculate Part D risk scores for each beneficiary; the scores are then aggregated at the plan level and used to adjust direct subsidy payments to plan sponsors. Risk adjusting direct subsidy payments is essential to ensure Part D plan sponsors are appropriately compensated for the varying risk levels in their enrolled populations, since underwriting is prohibited in Medicare Advantage prescription drug (MAPD) plans and standalone prescription drug plans (PDPs). As average direct subsidy payments have already increased from less than $2 prior to the implementation of the Inflation Reduction Act (IRA) in 2023[1] to more than $200 in 2026,[2] so has the significance of risk adjustment.

As shown in Figure 1, the most recent iterations of the RxHCC model are calibrated using expenditure data from three years prior to the applicable payment year. Assuming a similar lag continues, the 2028 RxHCC model would be the first time the calibration is based on prescription drug costs under the IRA's new benefit design.

FIGURE 1: RxHCC MODEL CALIBRATION TIMELINE



[1] Seshamani, M. (July 29, 2022). Annual release of Part D national average bid amount and other Part C & D bid information [Memo]. Centers for Medicare and Medicaid Services. Retrieved September 4, 2025, from https://www.cms.gov/files/document/july-29-2022-parts-c-d-announcement-pdf.pdf.
[2] Klomp, C. (July 28, 2025). Annual release of Part D national average monthly bid amount and other Part C & D bid information [Memo]. Centers for Medicare and Medicaid Services. Retrieved September 4, 2025, from https://www.cms.gov/files/document/july-28-2025-parts-c-d-announcement.pdf.

Specifically, the 2025 RxHCC model is calibrated to 2021 medical diagnoses and 2022 prescription drug costs[3] but is used to predict 2025 plan liability relativities based on 2024 medical diagnoses of the plan's beneficiaries. Similarly, the 2026 RxHCC model is calibrated to 2022 medical diagnoses and 2023 prescription drug costs[4] but is used to predict 2026 plan liability relativities based on 2025 medical diagnoses. Said differently, a plan is paid in 2026 based on its enrollees' diagnoses in 2025, calibrated to 2023 prescription drug costs and 2022 medical diagnoses. Notably, the 2025 and 2026 risk scores are calculated using prescription drug data from a period prior to the implementation of the IRA's 2025 benefit redesign changes. While CMS accounts for cost trends in the RxHCC model, the use of data from prior to redesign does not capture changes in utilization rates between population cohorts, which recent studies have observed and often occur for specialty drugs.[5,6] In particular, increases in utilization for non-low-income beneficiaries have significantly outpaced utilization increases for low-income beneficiaries. This is likely primarily due to the reduction in out-of-pocket costs for these beneficiaries as a result of the IRA's maximum out-of-pocket limit, though related factors, including the introduction of the Medicare Prescription Payment Plan (M3P) and changes in physician prescribing patterns, may also have impacts. Low-income members' cost-sharing was already largely subsidized so they have not experienced the same reduction in out-of-pocket costs that non-low-income members have.

Since it is not practical for CMS to use a shorter lag and still allow for sufficient time for medical claims completion and model development, other model enhancements could be used to help ensure that risk scores are still appropriate to reflect utilization patterns under the new benefit design, particularly during this period of transition from pre-redesign calibration data.

Goals of risk adjustment model enhancements

In the remainder of this paper, we discuss potential model enhancements for the 2027 RxHCC model. These enhancements represent the following intentions:

- Reduce the disconnect between pre-2025 data used to calibrate the model and the 2027 payment period in order to avoid creating incentives for plans to modify formularies, utilization management programs, or benefits as a result of the new model.
- Specifically account for the changes in utilization following the implementation of the IRA's 2025 benefit design changes.
- Avoid unintended disproportionate impacts on any given market segment (e.g., MAPD vs. PDP) by applying adjustments across all segments.

Enhancement 1: Adjust 2024 expenditure data used for model calibration by considering 2025 emerging experience

Typically, the proposed risk adjustment model is released roughly one full year prior to implementation (i.e., the 2027 RxHCC model would likely be proposed around January 2026). We expect that model development begins several months prior to that release. Thus, CMS would not have access to a full year of 2025 data—the first period following benefit redesign—at the time of 2027 model development. However, CMS may still consider incorporating emerging experience from the first half of 2025.

Practically speaking, CMS may use the full-year 2024 prescription drug costs as the starting point for calibration but then apply an adjustment to account for observed utilization changes in early 2025. Accounting for emerging experience is a common actuarial practice but requires thoughtful consideration to ensure the adjustments made are appropriate.[7] Adjustments would need to appropriately normalize for the fact that the emerging data represents a partial year.

For emerging experience adjustments to most appropriately account for differences in costs measured by the RxHCC model, adjustments would need to be developed and applied at the demographic category and condition (RxHCC) level. However, if sufficient data is not available for some rare conditions, a higher-level adjustment (e.g., specialty vs. nonspecialty specific adjustments) could be used.

[3] Centers for Medicare and Medicaid Services. (April 1, 2024). Announcement of calendar year (CY) 2025 Medicare Advantage (MA) capitation rates and Part C and Part D payment policies, p. 6. Retrieved September 4, 2025, from https://www.cms.gov/files/document/2025-announcement.pdf.
[4] Ibid., p. 5.
[5] Duke, D., Cline, M., & Liner, D. (April 15, 2025). Early 2025 Medicare Part D claims show continued increase in non-low income specialty drug spend [White paper]. Milliman. Retrieved September 4, 2025, from https://www.milliman.com/en/insight/2025-medicare-part-d-increase-specialty-drug-spend.
[6] Cline, M., Madden, R., & Holcomb, K. (April 25, 2025). Part D trend insights: 2024 trend analysis reveals sharp increase in specialty drug utilization among non-low income beneficiaries [White paper]. Milliman. Retrieved September 4, 2025, from https://www.milliman.com/en/insight/part-d-trend-insights-analysis-specialty-drug-utilization.
[7] Angeloni, M., & Weber, S. (February 2019). Medicare Advantage experience data: Pitfalls and concerns beyond ASOP #23. *Health Watch*, (88), 20–23. Retrieved September 4, 2025, from https://www.soa.org/globalassets/assets/library/newsletters/health-watch-newsletter/2019/february/hsn-2019-iss88-angeloni.pdf.

In effect, this adjustment would redistribute projected coefficients in line with emerging 2025 experience. That is to say, beneficiaries with a condition with significant utilization growth in 2025 would receive a higher coefficient while beneficiaries with a condition with lower or negative utilization growth in 2025 would receive a lower coefficient.

Figure 2 provides an illustrative example of this dynamic, focusing on two RxHCCs for a given demographic category.

FIGURE 2: ILLUSTRATIVE EMERGING EXPERIENCE ADJUSTMENT IMPACT

ILLUSTRATIVE EMERGING EXPERIENCE ADJUSTMENT IMPACT

	2024 PLAN LIABILITY PMPM	2025 PLAN LIABILITY PMPM	2024 TO 2025 CHANGE	2027 COEFFICIENT BASED ON 2024 DATA	BASED ON 2025 DATA
RxHCC H	$500	$625	25%	1.250	1.488
RxHCC L	$500	$510	2%	1.250	1.214
Market Average	$400	$420	5%	1.000	1.000

In this illustration, the plan liability for beneficiaries who have a high-growth RxHCC (RxHCC H) and a low-growth RxHCC (RxHCC L) are the same, $500 per member per month (PMPM), in 2024. In 2025, plan liability for beneficiaries who have RxHCC H increases 25% from 2024 while RxHCC L increases only 2% and the rest of the market increases 5%. If the 2027 RxHCC model were to consider only 2024 experience, plans would be compensated the same amount for beneficiaries with RxHCC H and RxHCC L. If the model were to consider the emerging 2025 changes, plans would receive higher payments for beneficiaries with RxHCC H. Payments adjusted for emerging experience would be more likely to be aligned with expected 2027 costs. Since the average risk score must remain at 1.0, the plan receives a lower payment associated with beneficiaries with RxHCC L given its lower change in plan liability relative to the market.

Enhancement 2: Improve risk score prediction for high-cost beneficiaries

One fundamental limitation of the RxHCC model, or any risk adjustment model, is its lower accuracy of predicting costs for outliers. CMS notes that the RxHCC model is not intended to predict individual costs.[8] However, these outlier claims often present the greatest financial risk for plans. Given the increasing popularity of specialty therapies and dramatic growth in specialty utilization in 2025,[9] it is important for plans to be appropriately compensated for such claims.

While CMS ensures that predictive ratios[10] of each model segment are appropriate in aggregate and at each decile, it is challenging to ensure accurate predictions at all levels of risk. For the 2026 RxHCC model, predictive ratios for continuing enrollees suggest that plan liability for beneficiaries at the second, third, and fourth deciles of risk tend to be overpredicted, while plan liability for beneficiaries at higher deciles of risk (seventh, eighth, and ninth) tend to be underpredicted.[11] One consideration to improve prediction accuracy across all groups while maintaining adequate plan compensation for the highest-cost beneficiaries is to model risk scores separately for high-cost beneficiaries. CMS could define “high-cost beneficiaries” using a percentile or dollar threshold.

CMS could accomplish this modeling through different mechanisms. For example, CMS could introduce additional severity coefficients for a cohort of “catastrophic” or very high-cost claimants, such as the highest 0.1% of claimants. Such coefficients could be conceptually similar to condition count variables that exist in the CMS hierarchical condition category (CMS-HCC; used for Medicare Part C plans)[12] and Health and Human Services hierarchical condition category (HHS-HCC; used for exchange plans)[13] models. A different method could introduce an incremental additional factor for high-cost claimants similar to the frailty factor[14] used for some special needs plans (SNPs) in the CMS-HCC model.

[8] Centers for Medicare and Medicaid Services. (April 7, 2025). Announcement of calendar year (CY) 2026 Medicare Advantage (MA) capitation rates and Part C and Part D payment policies, p. 81. Retrieved September 4, 2025, from https://www.cms.gov/files/document/2026-announcement.pdf.
[9] Duke, D., Cline, M., & Liner, D. (April 15, 2025). Early 2025 Medicare Part D claims show continued increase in non-low income specialty drug spend [White paper]. Milliman. Retrieved September 4, 2025, from https://www.milliman.com/en/insight/2025-medicare-part-d-increase-specialty-drug-spend.
[10] CMS metric used to measure the accuracy of the model in predicting current costs.
[11] Centers for Medicare and Medicaid Services. (April 7, 2025). Announcement of calendar year (CY) 2026 Medicare Advantage (MA) capitation rates and Part C and Part D payment policies, p. 123. Retrieved September 4, 2025, from https://www.cms.gov/files/document/2026-announcement.pdf.
[12] Centers for Medicare and Medicaid Services. (October 24, 2018). Risk adjustment research and findings [Slides]. Retrieved September 4, 2025, from https://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Downloads/102618_CMS_RAModelResearchFindings_5CR_102518.pdf.
[13] Centers for Medicare and Medicaid Services. (January 7, 2025). HHS-developed risk adjustment model algorithm “do it yourself (DIY)” software instructions for the 2024 benefit year. Retrieved September 4, 2025, from https://www.cms.gov/files/document/cy2024-diy-instructions-01072025.pdf.
[14] Shapiro, J. R. (May 11, 2023). 2023 frailty scores and 2022 Health Outcomes Survey (HOS) or Health Outcomes Survey Modified (HOS-M) activities of daily living (ADLs) results [Memo]. Centers for Medicare and Medicaid Services. Retrieved September 4, 2025, from https://www.cms.gov/files/document/2023frailtyscoreshpmsmemo582023508g.pdf.

To improve predictive ratios across the board, this approach would likely have differing impacts varying by condition.

- Risk scores for beneficiaries with relatively low-cost conditions are likely to decrease as costs for that group currently tend to be overpredicted.
- Risk scores for beneficiaries with relatively (but not catastrophically) high-cost conditions are likely to increase as costs for that group currently tend to be underpredicted.
- Impacts to risk scores for catastrophic claimants may be variable, depending on how accurately they were predicted before. Non-low-income catastrophic claimants are the most likely to see risk score increases since their risk scores currently tend to be more frequently underpredicted.

Conclusion

As direct subsidy payments continue to grow—especially in 2025 and beyond—the accuracy of the risk adjustment model becomes ever more critical to ensuring appropriate plan compensation. The most recent RxHCC model iteration, which is calibrated using expenditure data from three years prior to the payment year, does not fully capture recent changes in utilization patterns following the implementation of the IRA's benefit redesign. This disconnect may leave plan sponsors either under- or overcompensated, undermining the goal of market stability.

This paper outlined two complementary enhancements—a 2025 emerging experience adjustment and improved prediction for high-cost beneficiaries—for the 2027 RxHCC model. Taken separately or together, these enhancements may better align Part D risk scores with actual plan costs and preserve the incentives that underpin sound formulary design and utilization management. The accuracy of the RxHCC model contributes to stability for all Medicare Advantage and Part D plans, though this is particularly true for PDPs. The financial outcomes of PDPs are highly dependent on the RxHCC model because it impacts a larger portion of plan revenue and these plans lack levers to stabilize premiums, such as rebates from the Medicare Advantage benefit.

Caveats and Limitations

This information was developed to help PhRMA understand how utilization changes since the implementation of the IRA may interact with the Part D risk adjustment model. This information may not be appropriate, and should not be used, for other purposes.

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We relied upon publicly available information regarding Part D risk adjustment modeling methodology. We accepted these items without audit. To the extent the data and information is not accurate or is not complete, the values provided in this report may, likewise, be inaccurate or incomplete.

Michelle Robb and Douglas Rodrigues are actuaries for Milliman and members of the American Academy of Actuaries. They meet the qualification standards of the Academy to render the actuarial opinion contained herein. To the best of their knowledge and belief, this information is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices.

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