QUALITY MEDICATION USE

# PQA Adherence Measure Risk Adjustment FAQs

Health outcomes can be influenced by many factors other than the healthcare services received, including patient-related characteristics that are not under the control of the measured entity.

This Frequently Asked Questions (FAQ) document addresses risk adjustment of three Pharmacy Quality Alliance (PQA) adherence measures. The document is divided into two sections: (1) Risk Adjustment: Background and Basics; and (2) PQA Risk Adjustment Recommendations for Three Adherence Measures in Medicare Part D.

## Risk Adjustment: Background and Basics

**What is risk adjustment?**

Risk adjustment (or case-mix adjustment) is a statistical method to account for patient-related factors (e.g., age, comorbidity, illness severity) that may impact health outcomes but may be outside the direct control of the measured entity (e.g., health plans, providers). For example, a hospital measure capturing readmissions may be risk-adjusted to account for the fact certain clinical conditions carry greater risk of readmission. A variety of patient-related characteristics may also be associated with differential health outcomes.

The goal of risk adjustment is to account for factors that are unrelated to the quality of care provided and improve the ability to make fair and correct conclusions about the quality of care provided.

**Why is risk adjustment important?**

Ensuring accurate conclusions and inferences about quality of care is important to both patients and healthcare entities. Appropriate measurement of quality allows patients to make informed decisions about where to obtain care. For measured entities, inaccurate measurement can have implications on rewards and penalties as well as their reputation and ability to improve care for the various subpopulations they serve, since measurement is critical to continuous quality improvement.[1, 2] By risk adjusting quality measures, the likelihood of penalizing accountable entities for factors outside of their control is reduced. Finally, risk adjustment is important to preserve access to care by reducing incentives to avoid patients who have characteristics that may be associated with poorer health outcomes.

**What is the difference between quality measure risk adjustment and stratification?**

Risk adjustment (or case-mix adjustment) accounts for patient-related factors when calculating overall performance scores by using statistical modeling. Generally, a single, risk-adjusted performance score is computed for a measured entity.[1]

Stratification refers to the process of calculating performance separately for different strata or groupings of patients based on defined patient-level characteristic(s). That is, rather than a single overall performance score, a score is reported for each stratum, or group. Stratification highlights differences in care by comparing scores across groups.[1]

## PQA Risk Adjustment Recommendations for Three Adherence Measures in Medicare Part D

PQA convened a Risk Adjustment Advisory Panel (RAAP) to determine which PQA measures may be appropriate for risk adjustment, and to recommend a risk adjustment methodology for the measures. The panel consisted of representatives from PQA's multistakeholder member organizations with expertise in risk adjustment methodology, medication adherence, health outcomes research, and health plans currently participating in the Medicare Part C and Part D Star Ratings programs.

The RAAP identified the three PQA medication adherence measures, assessed by Proportion of Days Covered (PDC), currently used in the Medicare Part D Star Ratings program as appropriate to consider for risk adjustment—in part because they are intermediate outcome measures, which are broadly considered more appropriate for risk adjustment than process measures. Additionally, the RAAP identified a conceptual relationship between different beneficiary-related characteristics and adherence in literature. PQA contracted with the Centers for Medicare & Medicaid Services (CMS) to assess the impact of beneficiary-related variables on these three measures.

**How were the variables identified?**

The RAAP determined a list of potential risk factors to examine based on a conceptual framework focused on medication adherence and a systematic review of published literature. Potential risk factors were identified to include in the analysis inclusive of beneficiary-, community-, and county-level factors. Risk factors were only included if they were present prior to the measurement period and not directly under the control of the health plan.

**How was risk adjustment applied to the three PQA measures?**

Once the risk factors were identified through the conceptual model and literature review, the RAAP selected a multivariable logistic regression model as the statistical method for risk adjustment. The evaluation was designed to assess to what degree beneficiaries enrolled in the same contract have dissimilar outcomes. To ensure that beneficiary comparisons were made within contracts, a random-effects logistic regression model was employed, which controlled for the Part D contract for each adherence measure of interest. This approach acknowledged the variability in an outcome that is attributable to the contract and only allowed comparisons among beneficiaries enrolled in the same contract.

For each Medicare Part D contract, a risk-adjusted score was calculated for each of the three adherence measures of interest to determine the extent of score change after risk adjustment. For each Part D contract and for each measure, the expected measure rate was calculated as the average of the patient-predicted probabilities of adherence for the contract based on the multivariable logistic regression model. Each risk-adjusted measure score for each contract was then calculated as the ratio of observed (or unadjusted) measure score to the expected (adjusted) score, multiplied by the aggregate unadjusted score for all Part D contracts.

**What variables did PQA recommend for the risk adjustment model?**

PQA conducted analyses of the model using beneficiary-level data from CMS, as well as additional community-, and county- level data from other data partners. However, given the challenges associated with obtaining certain beneficiary-level data, PQA also explored a more parsimonious and feasible model that included only beneficiary-level data readily available to CMS and health plans.

A comparison of the beneficiary-level model and the model including beneficiary-level, community-level, and county-level variables showed similar risk-adjusted rates for the Part D contracts. As a result, PQA recommended the most parsimonious model, which includes the following patient factors: age, sex, dual eligibility/Low Income Subsidy (LIS) status, and disability status.

**What are PQA's recommendations for risk adjustment of the three PQA adherence measures?**

As noted in the PQA Measure Manual, PQA recommends the following pertaining to the use of the three health plan adherence measures, PDC: Diabetes All Class, PDC: Renin Angiotensin System Antagonists, and PDC: Statins, in Medicare Part D.

- The measure rates should be adjusted for the following beneficiary-level characteristics to more adequately reflect differences in patient populations: age, sex, dual eligibility/Low-Income Subsidy (LIS) status, and disability status.
- The measures should be stratified by the beneficiary-level characteristics listed above to allow health plans to identify differential performance and better understand how their patient population mix is affecting their measure rates.

*For more information about PQA measures, visit pqaalliance.org/pqa-measures.*

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