



# Evaluating the Association Between Medicare Star Ratings Part D Medication Adherence Measures and the Part C Plan All-Cause Readmission Outcome Measure

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## BACKGROUND

- Medication nonadherence to chronic medications contributes to disease progression, increased morbidity, hospitalizations, and readmissions.<sup>1-3</sup>
- The Medicare Star Ratings is a program that is run by CMS which evaluates the quality of care provided by Medicare health plans annually based on a list of selected quality measures.<sup>4</sup>
- These measures include 3 medication adherence measures (non-insulin antidiabetics, renin-angiotensin system antagonists (RASA), and statins), along with a Part C measure assessing plan all-cause readmissions (PACR).<sup>5</sup>
- Previous research has shown that performance on the Star Ratings medication adherence measures is tied to performance on the intermediate outcome measures, signaling that improving medication adherence leads to improved patient outcomes.<sup>6</sup>
- No analysis has yet to examine the relationship between the Part D medication adherence measures and the Part C all-cause readmission measure.

## OBJECTIVE

- To examine the potential interrelation between the Medicare Star Ratings Part D medication adherence measures and the Part C PACR outcome measure.

## METHODS

- An analysis of the publicly available annual health plan MSR performance data was conducted to examine the impact of high performance on the 3 Part D medication adherence measures on performance of the Part C PACR outcome measure.<sup>7</sup>
- The analysis assessed MSR years of 2015-2024, except years 2021-2023 where MSR did not include the PACR measure due to the Covid-19 pandemic.
- The primary outcomes were odds ratios (OR) and 95% confidence intervals (CI) evaluating the likelihood of a health plan achieving ≥4-stars on the PACR measure if it also earned ≥4-stars or 5-stars on the medication adherence measures compared to not achieving ≥4-stars or 5-stars on the medication adherence measures.
- OR and 95% CI were calculated using OpenEpi.<sup>8</sup>

## RESULTS

TABLE 1: Performance on the Medicare Star Rating, Medication Adherence Measures and the All-Cause Readmission Measure

|                           | 5 Stars on Measure & ≥4 Star Readmission Measure | 5 Stars on Measure & ≥4 Star Readmission Measure | 5 Stars on Measure & ≥4 Star Readmission Measure | 5 Stars on Measure & ≥4 Star Readmission Measure |
|---------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|
| Diabetes Adherence        | 521                                              | 186                                              | 1451                                             | 510                                              |
| RASA Adherence            | 665                                              | 274                                              | 1389                                             | 536                                              |
| Statin Adherence          | 358                                              | 171                                              | 1298                                             | 510                                              |
| Only 1 Adherence Measure  | 334                                              | 121                                              | 352                                              | 102                                              |
| Only 2 Adherence Measures | 224                                              | 94                                               | 326                                              | 128                                              |
| All 3 Adherence Measures  | 243                                              | 105                                              | 1030                                             | 405                                              |

TABLE 2: Odds Ratios of Achieving ≥4 Stars on Readmission Measures with Performance on Medication Adherence Measures

| Measure                  | OR of Achieving ≥4 Star Readmission if ≥4 Stars on Measure | OR of Achieving ≥4 Star Readmission if 5 Stars on Measure |
|--------------------------|------------------------------------------------------------|-----------------------------------------------------------|
| Diabetes Adherence       | 1.10 (95% CI: 0.93-1.30)                                   | 1.09 (95% CI: 0.89-1.33)                                  |
| RAS Antagonist Adherence | 1.53 (95% CI: 1.30-1.81)                                   | 1.51 (95% CI: 1.26-1.81)                                  |
| Statin Adherence         | 1.58 (95% CI: 1.34-1.86)                                   | 1.94 (95% CI: 1.55-2.43)                                  |
| 1 Adherence Measure      | 0.76 (95% CI: 0.59-0.97)                                   | 1.11 (95% CI: 0.87-1.41)                                  |
| 2 Adherence Measures     | 1.29 (95% CI: 1.01-1.63)                                   | 1.44 (95% CI: 1.09-1.90)                                  |
| 3 Adherence Measures     | 1.46 (95% CI: 1.23-1.72)                                   | 1.53 (95% CI: 1.17-2.00)                                  |

FIGURE 1: Odds Ratios (OR) of Achieving ≥4 Star Readmission if ≥4 Stars on Measure

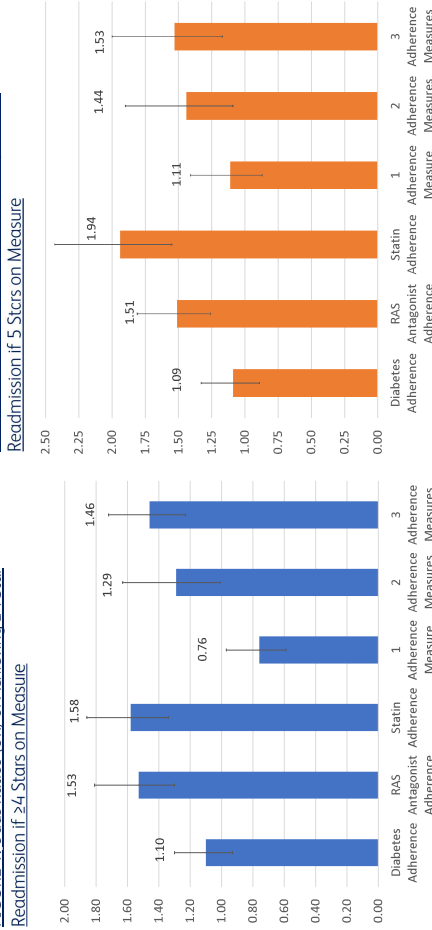
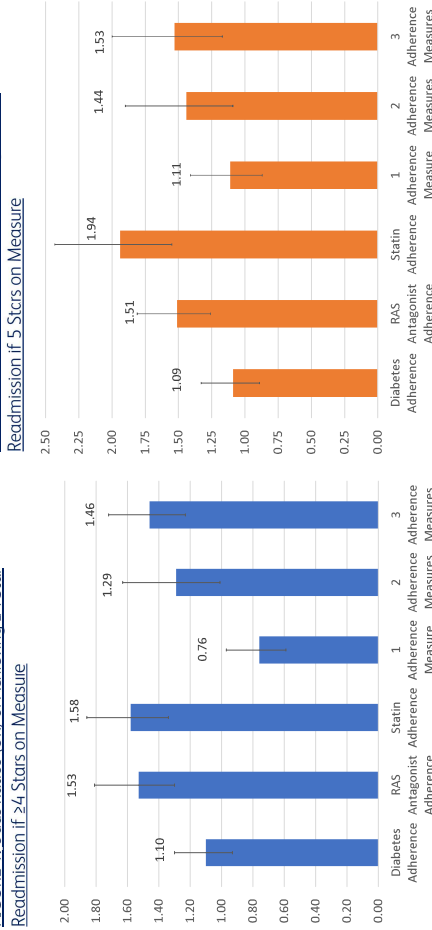


FIGURE 2: Odds Ratios (OR) of Achieving ≥4 Star Readmission if 5 Stars on Measure



## DISCUSSION

- Plans that perform well on the Part D medication adherence measures had a significantly higher likelihood of performing well on the Part C all-cause readmission measure, showing the potential relationship between high medication adherence leading to improved patient outcomes.
- The results from this analysis support previous research find has found that medication nonadherence is a contributing factor for hospital readmissions.<sup>9-10</sup>
- These results are in line with the findings of the 2024 National Impact Assessment by CMS that showed increasing medication adherence rates is associated with improved outcomes and reductions in healthcare costs.<sup>11</sup>
- Medication adherence enhancing initiatives have been shown to help improve medication adherence and Star Rating performance.<sup>12-13</sup>
  - Health plans that invest in medication adherence enhancing initiatives may also see benefits from improvements in other Star Ratings measures.

## CONCLUSION

- Health plans with higher performance on the Medicare Star Ratings medication adherence measures had significantly increased odds of high performance on the Medicare Star Ratings PACR measure
- This suggests that better medication adherence may contribute to lower readmissions and improved plan performance.

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