BACKGROUND

- In 2006, the Pharmacy Quality Alliance (PQA) was formed with the mission of "important quality of medication use across health care settings... measuring and reporting performance information related to medications".
- Detailed specifications were developed for 22 measures in the areas of medication adherence and persistence, efficiency, safety, diabetes, cardiovascular and respiratory conditions.
- Measures related to medication adherence have been previously pilot-tested and concluded to be feasible and sound.

However, an important limitation is the assumption that the measures used were completely at the control of the pharmacist.
- Patient characteristics such as comorbidity burden, socioeconomic status and medication regimen complexity have been shown to affect medication adherence.
- These variables are generally outside the pharmacist's control and should be adjusted for when monitoring and comparing pharmacy performance.

OBJECTIVES

To evaluate three different methods to compute risk-adjusted pharmacy quality scores based on adherence-based pharmacy quality indicators.

METHODS

- This retrospective cohort study used the 2007 Mississippi Medicare administrative claims dataset.
- Patient medication adherence was assessed using the proportion of days covered (PDC) measure proposed by the Pharmacy Quality Alliance for those 271,934 Medicare Part D claims for medications and 11,308,554 Medicare Part D claims for medications, respectively.
- Patients were eligible if they received at least two prescription fills for at least one medication in the chronic medication class and had at least 75% of their prescription fills from the same pharmacy.
- Pharmacy quality scores were calculated for each therapeutic class as the percentage of adherence improvement in each pharmacy relative to the average for all pharmacies serving Medicare beneficiaries in the state.

RESULTS

- We used the chronic disease categories of the Re-Risk instrument, developed by Fishman et al. (2003) to measure co-morbidity burden.
- The agreement in classification of pharmacies based on unadjusted and adjusted scores was measured using Cohen's kappa coefficient.
- We evaluated agreement in identifying outlier pharmacies based on the 95% confidence intervals of the scores and identifying the top 20%

The logistic regression model and the random-intercept model displayed good predictive ability (AUC >0.70) for all therapeutic classes.
- The odds ratio estimates of all patient characteristics were similar in both models. We found that adherence was influenced by low-income subsidy status and medication regimen complexity have been shown to affect medication adherence.

CONCLUSIONS

- Risk-adjusted scores produced more robust indicators of pharmacy quality than unadjusted scores.
- Not adequately addressing the effects of patient case-mix while measuring quality can have severe implications if these measures are used to generate quality payments for performance.

REFERENCES