



Who Did What to Whom? Estimating the Relative Contribution of Pharmacists and Primary Care Providers to Quality Measures

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INTRODUCTION

- Performance-based payments are increasingly tied to quality measures, putting primary care providers and pharmacists at greater financial risk
- Many medication-related quality measures may be impacted by pharmacists but pharmacists are not currently recognized within value-based payment models
- Little research has been done to evaluate the relative impact of pharmacists and primary care providers on these measures

AIM

- Demonstrate a method to estimate relative contribution of pharmacists and primary care providers by using statin adherence

METHODS

- Data source: 20% sample of 2015 Medicare Parts A, B and D
- Study design: Population-based, retrospective, cross-sectional
- Eligibility: Must be enrolled in parts A, B and D for 12 continuous months, be at least 65 years of age, and be non-dually eligible and non-institutionalized.
- Attribution: Patients attributed to pharmacy where they filled 50% or more of their prescriptions; attributed to the primary care group, defined as a single taxpayer identification number (TIN), that provided the plurality of their annual primary care services. Minimum of 20 attributed patients to be included in the analysis. Pharmacies and TINs with the greatest 0.1% of attributed patients were removed.
- Outcomes: The proportion of days covered (PDC) was calculated for adherence to statins. Pharmacy and PCP-level adherence scores were calculated as the proportion of eligible, attributed patients who were adherent at $PDC \geq 0.8$.
- Statistical analysis: A multilevel logistic regression model with random intercepts was used to calculate the residual intraclass correlation coefficient (RICC) for each pharmacy and primary care group. These values were used to calculate the relative contribution ratio.

RESULTS

Table 1. Model Input Statistics

Patients With Statin Adherence Meeting Criteria: 1,146,929		Pharmacies with an Eligible Patient: 56,429	Primary Care Groups with an Eligible Patient: 67,175
Pharmacy-Attributable Patients: 573,193	Primary Care Group-Attributable Patients: 756,854	Pharmacies with at Least 20 Eligible Patients: 16,228	Primary Care Groups with at Least 20 Eligible Patients: 9,148

Figure 1. Pharmacy PDC Score Histogram

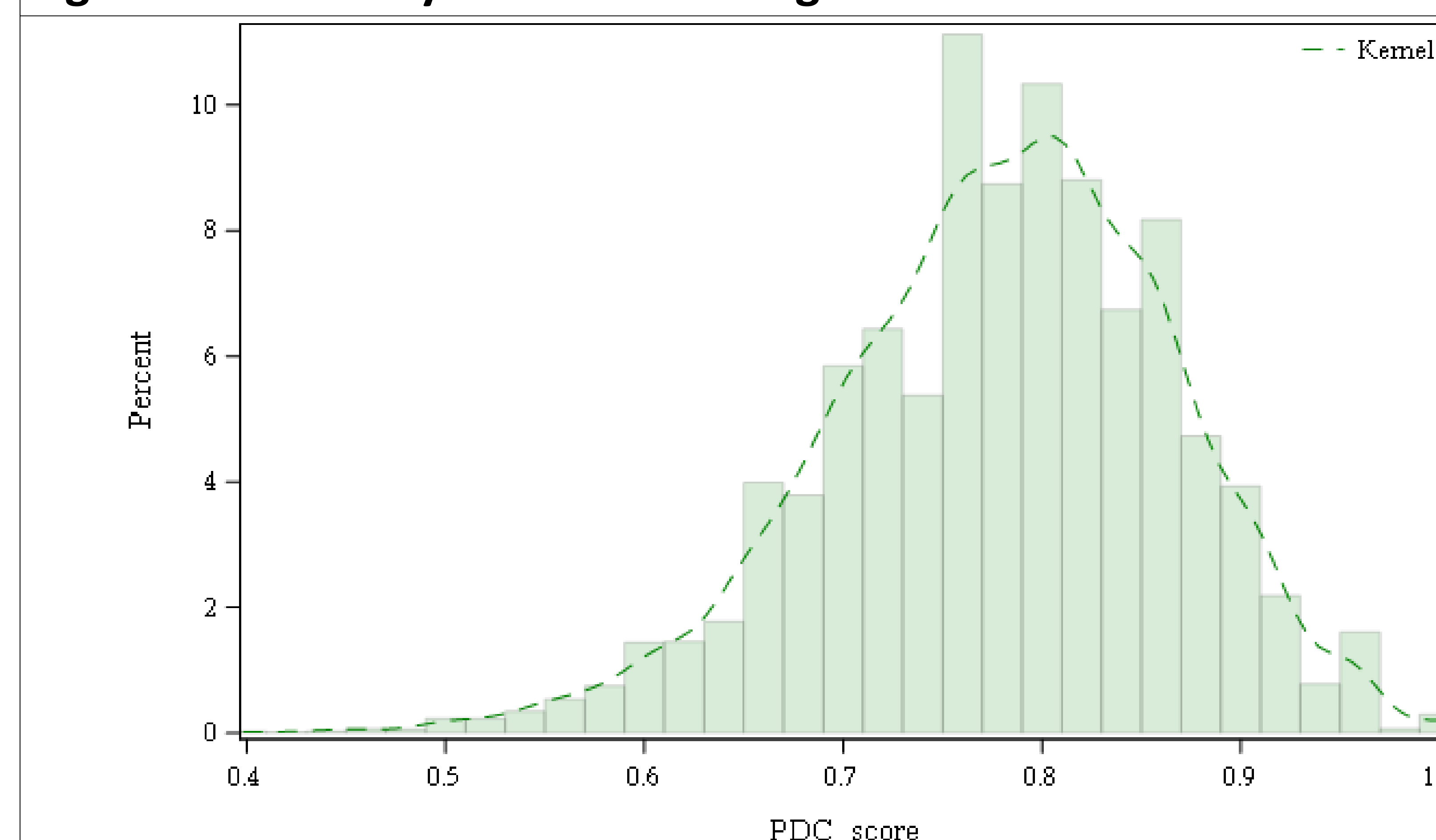


Figure 2. Primary Care Group PDC Score Histogram

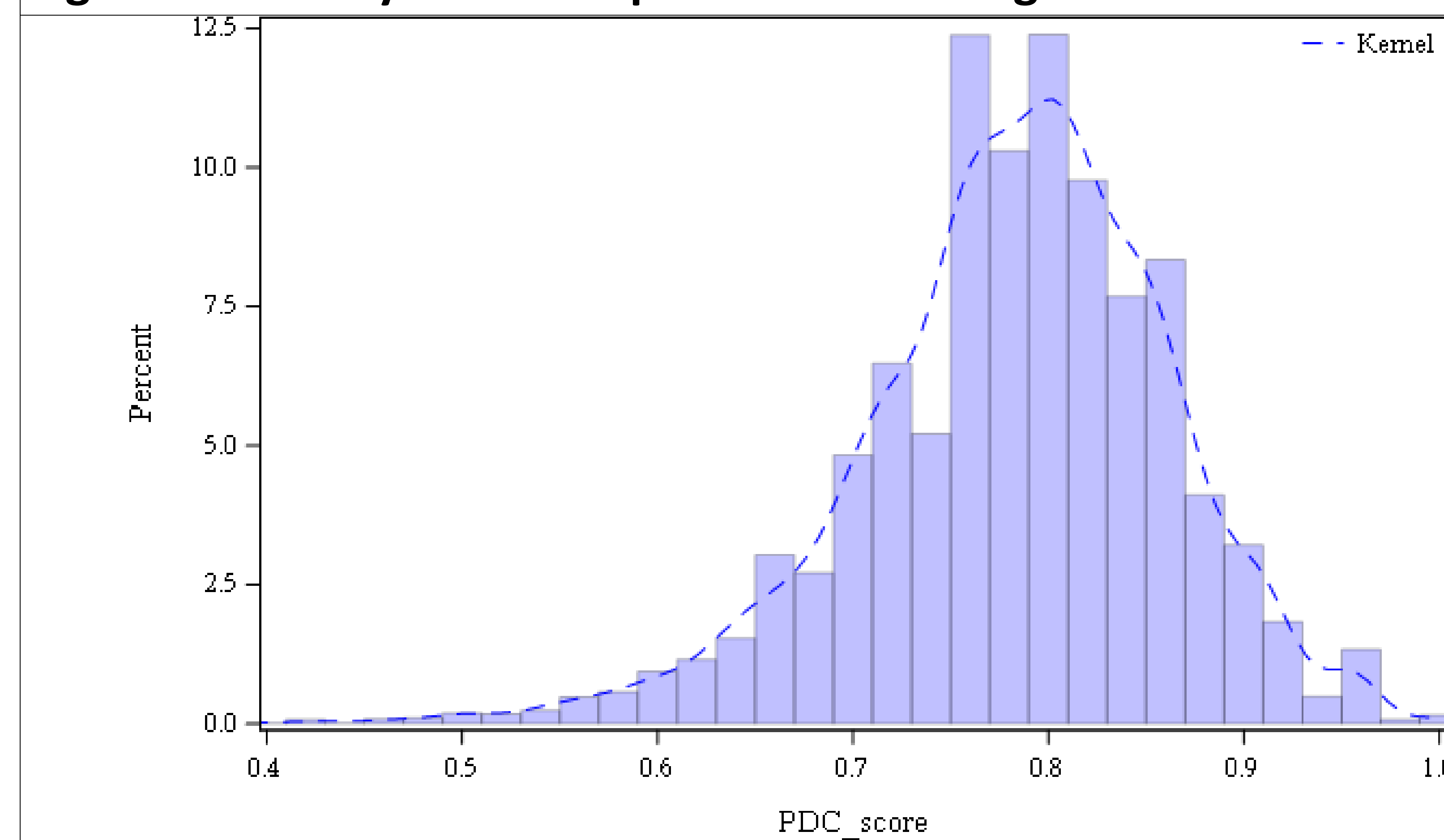


Table 2. Results

Statistical Measure	Pharmacy Values	Primary Care Values
Mean (SD) PDC Score	0.78 (0.087)	0.78 (0.080)
Median (IQR) PDC Score	0.78 (0.72-0.84)	0.79 (0.74-0.84)
Provider Variance	0.126	0.052
Patient Variance	3.29	3.29
RICC	0.037 (3.7%)	0.016 (1.6%)
RICC Contribution Percentage*	70.3%	29.7%
Relative Contribution Ratio**	2.37	

*RICC Contribution Percentage=Provider-specific RICC/(Sum RICC)

**Contribution Ratio = Pharmacy RICC/Primary Care Group RICC

CONCLUSION

- The pharmacy cluster RICC was 3.7% while the primary care cluster RICC was 1.6%; therefore, the contribution of pharmacies was roughly 2.4 times that of primary care groups
- The small RICC values for pharmacies and primary care groups suggest that the majority of the variance is due to patient and environmental factors
- Overall, these results suggest that pharmacists have a larger relative impact on medication-related quality measures than primary care providers and shared-risk agreements should consider the addition of pharmacists

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