Association of a pharmacy center of excellence with medical outcomes in patients with pulmonary diseases

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Background

- Specialty pharmacy clinical programs provide disease management through side effect management strategies and adherence coaching to improve patient outcomes through personalized care.
- CenterWell Specialty Pharmacy (CWSP) has an established Pulmonary Center of Excellence (PCOE) which provides dedicated clinicians, disease-specific disease assessments, evaluation of social determinants of health, and operational processes to provide holistic patient care.
- Clinical outcomes and quantification of value are increasingly important to showcase impact of specialty pharmacy clinical programs.

Objectives

- Compare acute hospitalization rates and emergency department visits for pulmonary patients engaging with a center of excellence in pulmonology versus those using other pharmacies or not engaging with the center of excellence.
- Measure the impact of engagement with CWSP clinical staff.

Methods

- This study was a retrospective analysis of Medicare Part D-insured patients using Medicare administered by a large national insurer.
- The primary test group included beneficiaries who used the insurer's affiliated specialty pharmacy and engaged with the pharmacy's PCOE compared with a control group of those not engaged or using a different pharmacy.
- Those using pulmonary medications in 2022 or 2023 (hospice and delegation excluded) were included.
- Predictors and covariates of interest were measured in a four-month window starting with their first qualifying pulmonary medication fill.
- Outcomes, including acute hospitalization rates and emergency department visits, were measured in the 12 months after the pre-period.

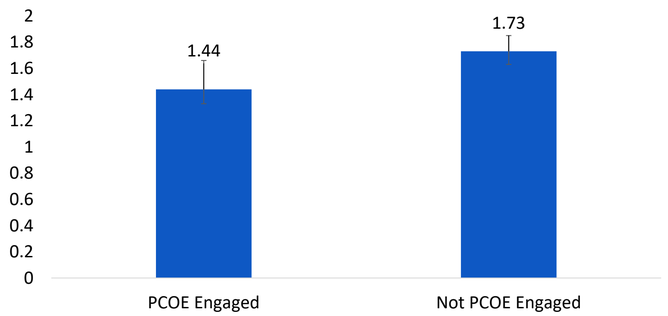
Results

A negative binomial regression was used, controlling for contract type, region of residence, age, sex, low-income subsidy status, number of drug classes, number of distinct drugs prescribed, and whether prescribed ambrisentan, benralizumab, dornase alfa, dupilumab, macitentan, mepolizumab, nintedanib, omalizumab, pirfenidone, sildenafil citrate, tadalafil, and/or tobramycin.

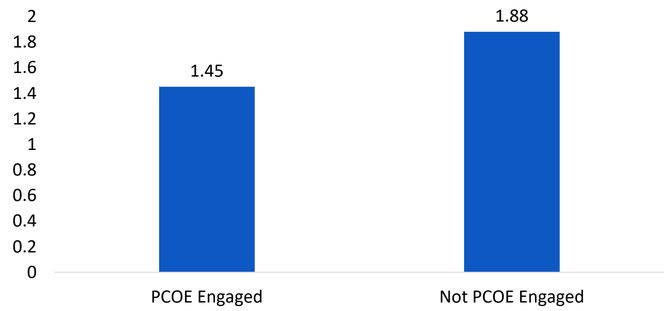
N_t = 691 test subjects

N_c = 6,938 in the control group

Estimated Marginal Means of Emergency Department Visits



Unadjusted Incidence Rates of Emergency Department Visits



No significant differences were found for acute hospitalizations

PCOE, Pulmonary center of excellence

Conclusions

- High-touch clinical programs supported by dedicated pharmacy resources were associated with a reduction in emergency department utilization among patients with pulmonary conditions enrolled in Medicare.
- Those engaged with the affiliated pharmacy's PCOE program had fewer emergency department visits compared with non-engaged patients and those using other pharmacies adjusting for contract type, region of residence, age, sex, low-income subsidy status, number of drug classes, number of distinct drugs prescribed, and specific drug prescribed.

Limitations

- Clinical engagement at non-affiliated pharmacies could not be assessed; however, a sensitivity analysis limited to affiliated pharmacy users yielded similar findings.
- Potential selection bias may have influenced observed differences; therefore, results should be interpreted as associative rather than causal, however, we have attempted to reduce this bias by adjusting for contract type, region of residence, age, sex, low-income subsidy status, number of drug classes, number of distinct drugs prescribed, and specific drug prescribed.
- Generalizability may be limited to Medicare beneficiaries covered by this insurer and may not extend to other patient populations or healthcare settings.

Future Research

- Identify factors associated with patient engagement in the pulmonary clinical program to inform targeted outreach and program optimization.
- Investigate the impact of centers of excellence and clinical programs across other specialty disease states.
- Develop better methods of reducing bias in small samples.

References

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2. Patel K, Chim YL, Grant J, et al. Development and Implementation of Clinical Outcome Measures for Automated Collection Within Specialty Pharmacy Practice. J Manag Care Spec Pharm. 2020;26(7):901-909.

Disclosures

- The authors of this presentation are employed by the affiliate pharmacy and parent company