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Title

Exploring the Varied Effects of Patient-PCP Continuity on ER Utilization and Costs

Priority 1 (Research Category)

Healthcare Services, Delivery, and Financing

Presenters

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Abstract

Context: Continuity of care between a patient and their primary care practitioner (PCP) is a cornerstone of primary care (PC) and is associated with many positive health outcomes including decreased utilization of ER services and lower costs for some populations.

Objective: To explore how the associations of continuity with ER utilization and costs differ by patient age.

Study Design and Analysis: Cross-sectional study of patients in 2021 Virginia All Payer Claims Database (APCD). Patients were attributed to the PCPs with whom they had the most visits. Patient-level continuity was our main effect, measured using the Bice-Boxerman Continuity of Care (BB-COC) index for patients with 2+ visits, and categorized as high (BB-COC >= 0.7) or low (< 0.7). Other independent variables included patient age, gender, Charlson Comorbidity Index, number of visits, payer, geographic social deprivation, rurality, and PCP specialty. We performed an inverse probability weighted generalized linear mixed model (GLMM) with a random PCP intercept for each outcome. Any ER care was modeled as a binary outcome with a logit link and total allowed costs were modeled using a lognormal log-linked GLMM. An interaction term was included to allow for heterogenous effect estimates for continuity by patient age.

Dataset: Virginia APCD

Population Studied: Virginia patients

Outcomes: Any ER care, total costs

Results: Our sample included 1,305,561 patients, with 58% having high continuity, 32% having any ER utilization, and median total costs of $4,368. Having high continuity (vs low) was significantly associated

with lower odds of having any ER utilization for patients of all ages. This association was strongest for patients 85+ years old (OR 0.67) and weakest for ages 10-17 (0.93). High continuity was significantly associated with lower total costs, but only for adult patients. For 18-29 year old patients, high continuity (vs low) was associated with 9% lower costs. This effect grows to 23% lower costs for patients 85 or older.

Conclusions: Higher continuity of care with a PCP is significantly associated with reduced ER utilization and lower healthcare costs, but with significant heterogeneity across various age groups, which suggests that the benefits of continuity may manifest differently for different populations. Such findings endorse policy and payment changes that incentivize continuity, especially for the care of older adults, in the interest of lowering undesirable utilization.