The Comparative Effectiveness of Reduced Patient Copayments and Bundled Provider Reimbursement as Agents of Behavior Change During Low Back Pain Rehabilitation in the Outpatient Physical Therapy Setting

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Purpose

Low back pain is a highly prevalent and pernicious problem. As a result, insurers are experimenting with new financial strategies designed to align patient and provider incentives to encourage the wise use of precious health care resources. The purpose of this study is to investigate the comparative effectiveness of reduced copayments and bundled reimbursement compared to traditional fee-for-service to change patient and provider behavior during low back pain (LBP) rehabilitation in a commercially insured population. We are partnering with UPMC, a large integrated finance and delivery system. Their outpatient rehabilitation arm, the Centers for Rehab Services (CRS), is one of the largest providers of community based physical therapy services in the United States. Their insurance arm, the UPMC Health Plan, covers 2.2 million enrollees. In January of 2012 the UPMC Health Plan instituted a novel bundled payment reimbursement program that covers eight weeks of physical therapy for patients with select LBP diagnoses in their commercial benefit plans. Under this reimbursement methodology patients presenting to CRS with one of the 14 qualifying diagnoses are only responsible for a single $30 copayment and CRS is reimbursed a single payment bundle for an 8 week rehabilitation episode. Importantly, all other commercial insurers (e.g., Highmark, United, Cigna) in their service area continue to use fee-for-service reimbursement with individual patient copayments for each therapy visit thereby creating a natural control group.

Hypotheses

Hypothesis #1: A single out-of-pocket copayment for an entire episode of physical therapy rehabilitation will improve LBP patients' compliance with their prescribed treatment plan when compared to traditional per visit copayments.

Hypothesis #2: A single bundled provider payment for an episode of LBP rehabilitation will increase physical therapists' adherence to evidence based clinical guidelines when compared to traditional fee-for-service reimbursement.

Methods

The first hypothesis will be tested using a retrospective cohort design. The unit of analysis will be the patient and the primary outcome will be compliance as measured by the proportion of scheduled therapy appointments kept. We chose this outcome because it is a commonly used measure of compliance in rehabilitation settings and it can be easily obtained from administrative data. The independent variable of interest will be a measure of each patient's total copayment costs to test the effect of patients' reduced per episode out-of-pocket burden. Data will be analyzed using multilevel regression modeling to account for patients nested within therapists who are nested in clinics. We will control for potential confounding variables at all three levels. The second hypothesis will be tested using a controlled before-after design. The unit of analysis in this study will be the physical therapists. The primary outcome will be the ratio of active care to passive care for each visit within a rehabilitation episode. Consistent will previously published literature if the ratio is >1 for 75% of the visits the treatment is considered guideline adherent. The independent variable of interest will be a dichotomous indicator representing bundled versus fee-for-service reimbursement. Again, we will employ multilevel regression modeling while controlling for potential confounding variables at all three levels.