Community Pharmacy Foundation

Evaluation of the Impact of Community Pharmacy-Based Medication Synchronization on Patient Adherence

Rebecca W. Chater, Fei Yu, Mike Roberts

Ateb, Inc. | Raleigh, NC

Objectives	
The goal of this study was to evaluate the impact of medication synchronization on adherence among an intervention group of at least 1,000 subjects of community pharmacies using disparate pharmacy management systems, and located across a multistate geography. Objectives were to measure the impact of synchronization on medication adherence of the intervention group as compared to a control group and also to evaluate the impact of medication synchronization on Medicare Star Ratings.	

Methods	
Design	• This study employed a quasi-experimental design with intervention and control participant matching • The control and test patients were selected using a set of matching criteria including age, comorbid conditions, and adherence and persistence behavior prior to the measurement period • 2,262 subjects ≥18 years of age were enrolled across 29 pharmacies located in 19 states • Patients were enrolled in the medication synchronization program prior to August 31, 2015 • The study period was 12 months • Patient medication adherence behavior was evaluated using PQA quality measure specifications for adherence to medications within 3 groups—diabetes, hypertension, and cholesterol • Medication persistence behavior was measured using Average Days on Therapy across seven therapeutic areas—cardiovascular, diabetes, hyperlipidemia, hypertension, mental health, respiratory, and GI. • Chi-square and Wilcoxon tests were used to evaluate the p-value for this study. The data analysis was conducted using SAS software.
Study endpoints	• Differences in adherence and persistence behavior between patients enrolled vs. non-enrolled in an appointment-based synchronization program • Pharmacy performance against Medicare Star Ratings quality measures • The differential impact of the appointment-based medication synchronization program on medication persistence among therapeutic categories

Results	
• The difference in Average Number of Days on Therapy (ADT) among the seven therapeutic categories analyzed ranged from 14.4 to 50.67 days. Each of these values was statistically significant (p-value < .0001) • PDC scores of enrolled subjects for Star Ratings adherence exceeded the 2016 5-star thresholds in all three categories—diabetes (93.59%), hyperlipidemia (92.68%), and hypertension (91.50%). • The relative differences in Proportion of Days Covered (PDC) among the three Star Ratings adherence measures were also statistically significant (p-value < .01), ranging from 8.26% to 13.34%.	

Conclusion	
Community pharmacies successfully deployed an appointment-based medication synchronization program, significantly improving chronic medication use by study subjects. Sophisticated parametric patient matching techniques were utilized to minimize program subject self-selection bias, further supporting the impact of the appointment-based medication synchronization program on the improvement of medication adherence and persistence.	