**Impact of a Pharmacist-led, Primary Medication Non-Adherence Intervention Program on Prescription Fills in Underserved Patient Populations Among Four Chronic Disease States in One Regional Division of a Large Community Pharmacy Chain**

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**Background**: Poor medication adherence is a critical barrier to improving patient health. Medication non-adherence leads to 89,000 preventable deaths and more than $100 billion in hospitalizations yearly.

**Objective**: To determine the impact of a Primary Medication Non-adherence (PMN) intervention on prescription fills in underserved patient populations encompassing multiple classes of medications as defined by the adherence quality measures under the Pharmacy Quality Alliance (PQA).

**Methods**: This randomized control trial included eight pharmacies that were chosen based on current city poverty demographic data reported by the US Census Bureau based on average income. Randomization of patients enrolled was completed by a random number generator into two arms: (1) initiation of a PMN intervention; (2) no intervention offered on PMN. This intervention was developed using a modified Delphi method utilizing anonymous feedback from pharmacy personnel, university researchers, and pharmacy leadership. Patients were enrolled in a PMN intervention at day 7 of a newly prescribed (allowing up to 180 days) medication not being obtained for therapy. Data was collected to determine the number of eligible medications or therapeutic alternatives that were obtained after a PMN intervention was initiated and if that medication was refilled.

**Results**: Rate of PMN was significantly higher (p=0.037) in the control group (71.15%) when compared to the intervention group (47.96%). Preliminary results depict a 10% increase in refills of medications that were initially dispensed in the intervention group (50%) and the control group (40%). Cost and forgetfulness encompassed 53% of the barriers experienced by patients in the interventional group. The most common medication classes associated with PMN included statins (32.98%), RASA antagonists (26.18%), oral diabetes medications (25.65%), and COPD and corticosteroid inhalers (10.47%).

**Conclusion**: The rate of PMN was significantly decreased when a pharmacist-led, evidence-based intervention was conducted with the patient. Although this study depicted a significant decrease in PMN rates, larger studies are needed to strengthen the correlation between the decrease in PMN and a pharmacist-led, PMN intervention program.