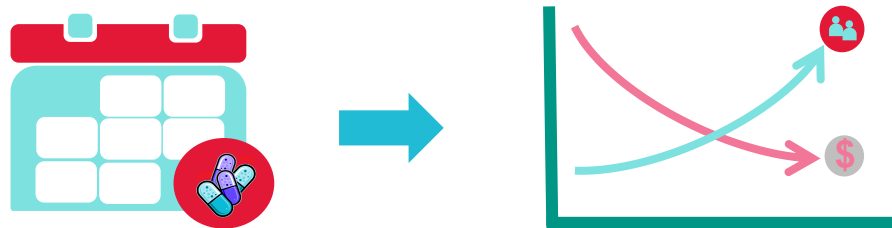


## Medication Synchronization is Associated with Greater Adherence and Lower Healthcare Expenditures

Presented at the International Society for Pharmacoeconomics and Outcomes Research Annual Meeting - Virtual ISPOR 2020



Medication self synchronization lifted adherence by 1.2% 3.1%  
and lowered healthcare costs by 34% 71%

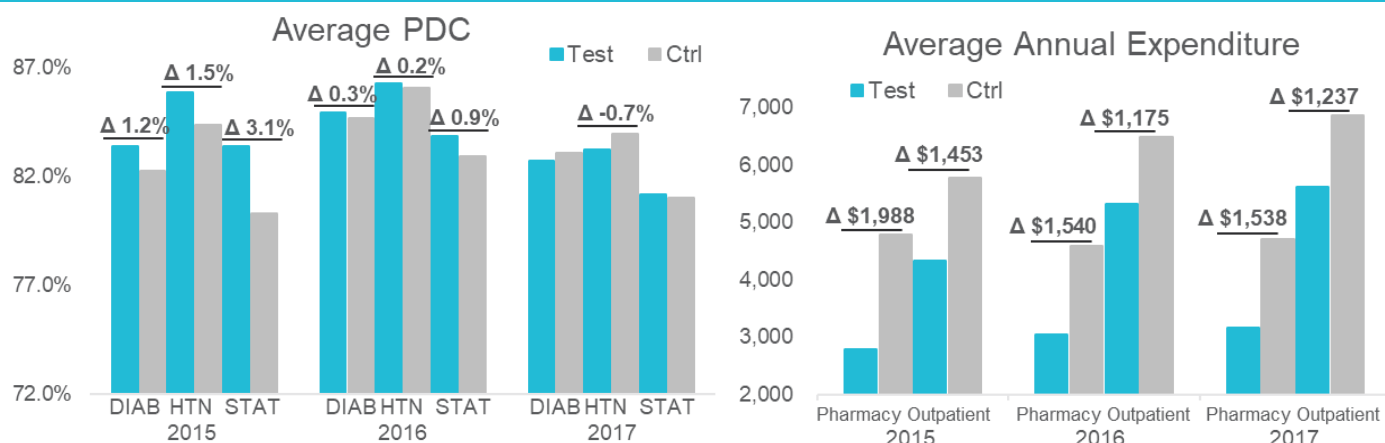
### OBJECTIVES

- Previous studies have shown that medication synchronization is a promising intervention to improve medication adherence and health outcomes, especially for patients with multiple chronic conditions and complex medication regimens.<sup>1-4</sup>
- To evaluate the association of medication synchronization with adherence for three therapeutic classes (Oral diabetes, Hypertension, and Hyperlipidemia) as well as the annual expenses for subjects covered by commercial health plans.

### METHODS

- **Study Design:** A retrospective, propensity matched, cohort study.
- **Study Population:** Data from patients with four chronic medications filled between January - June 2015 and with at least one fill in the three therapeutic classes were identified from 2015 - 2017 IBM MarketScan® Databases. A total of 74,526 cohort patients under commercial plan included the self-synchronized group (Test) with medications filled on the same date between January-June 2015 and the non-synchronized group (Ctrl) with medications filled on more than 1 single day within the same period.
- **Study Period:** January 2015 to December 2017
- **Outcome Measures:** Medication adherence rate (proportion of days covered, PDC  $\geq$  0.80) as defined by CMS and Medical/Pharmacy cost in outpatient service for all reasons annually.
- **Statistical Analyses:** The Student t-test was applied to compare the difference between paired groups. The statistical significance was determined as p-value < 0.01.

## RESULTS



- Self-synchronized patients (Test) revealed higher adherence in 3 therapeutic classes than that of non-synchronized patients (Ctrl) in 2015. The trend was kept in 2016 while the differences are narrowed, and then disappeared in 2017. (DIAB: Oral diabetes, HTN: Hypertension, STAT: Hyperlipidemia).
- Non-synchronized patients (Ctrl) spent more on healthcare services than self-synchronized patients (Test) did in all 3 years. Around 1.5 fold higher in drug spending and 1.2 fold increase in outpatient cost were shown in payment data of non-synchronized patients vs. self-synchronized patients.

## CONCLUSIONS

- Chronic medication self-synchronization in commercial populations are associated with the greater medication adherence for three major therapeutic classes, and the lower trends in healthcare expenditures.
- This study leveraged real-world evidence to reveal a possible intervention strategy towards the economic outcome of patients with multiple medications for their chronic conditions.

### References:

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