



## How Pharmacists can Promote and Benefit from Medication Adherence

Pharmacies can track adherence rates, but they need more: the right tools to keep patients engaged and help them maintain adherence. Pharmacy First is taking steps toward solutions.





**Today's pharmacist** provides a vital link between the patient and entire healthcare system. A pharmacist's role goes beyond merely dispensing medications, as they work directly with their patients to reduce adverse drug events, improve safety, and optimize medication use and health outcomes.

Pharmacists have unique expertise and opportunities to positively influence medication adherence by their patients – including understanding their directions for use, remembering to take medications, and filling their prescriptions regularly.

It's estimated that half of patients don't take medications as prescribed, resulting in poor clinical outcomes and a large economic burden to the healthcare system. Nationally, poor medication adherence costs \$100 billion to \$289 billion per year. The low rate of adherence is multifactorial and can include reasons such as financial stresses, low health literacy and absence of symptoms.

## The Role of the Pharmacist

As one of the most accessible healthcare providers and the medication experts of the healthcare system, pharmacists can have a major impact on patients' medication adherence. The role of pharmacists regarding this issue has been highlighted over the years, as evidenced by the increasing number of value-based contracts that include patient adherence rates in determining overall pharmacy reimbursement.

Pharmacies may track medication adherence through their pharmacy management software or ancillary clinical platforms. However, knowing which patients are non-adherent isn't enough. Pharmacies must utilize a variety of tools to engage patients to promote and maintain adherence.

One of the most well-known methods for improving adherence is medication synchronization, which entails the coordination of refills so that every medication in the patient's therapeutic regimen is picked up on a single day each month. While medication synchronization can be helpful, patients may still struggle with remembering to take medications on a specific day or taking every medication if they are packaged individually.



As a result, some pharmacies have begun implementing an appointment-based model to the medication synchronization program, and some have gone further to incorporate compliance packaging to the overall patient care model. While there is clear evidence that pharmacies are utilizing these tools, few studies look at the real-world impact of incorporating synchronization, appointment-based modeling and compliance packaging.

“The most effective way for pharmacists to positively impact medication adherence is to change patient behavior and make the entire process easier for the patient,” said Perry Larson, chief operating officer for Medicine-On-Time, a leader in the medication adherence market. “Synchronizing medications is a great first step. When coupled with compliance packaging and an appointment-based pharmacy adherence program, the pharmacist/patient relationship is enhanced through regularly meeting to address changes in prescriptions or overall health.”

## Solution

As a high-functioning Pharmacy Services Administration Organization (PSAO), Pharmacy First supports and partners with pharmacies in implementing programs to help them achieve optimal clinical and operational outcomes. The clinical pharmacists at Pharmacy First, in realizing the value of medication synchronization and adherence packaging on clinical pharmacy metrics, sought to develop a pilot program to observe the real-world impact of implementing the solutions within the PSAO.

The clinical team at Pharmacy First partnered with CSS Health, which offers comprehensive medication management services, to develop a pilot program examining the impact to patient adherence scores with the use of Medicine-on-Time, an appointment-based synchronization and adherence packaging program. Medicine-On-Time has pioneered medication synchronization with industry-leading multi-dose pharmaceutical packaging software, color-coded calendar cards for compliance packaging, and more.

After discussing the goals of the pilot program, Pharmacy First and CSS Health began researching pharmacies that could benefit from the Medicine-on-Time platform. The team landed on two Louisiana pharmacies, Germ's Thrift Clinic Pharmacy and Thrifty Way Pharmacy Northside, that appeared to be ideal candidates for the solution.

Both pharmacies were already actively engaging with patients. They were well aware of the importance of adherence, utilizing clinical platforms to identify outliers, and even synchronizing medications for certain patients. Despite the efforts put forth by the pharmacies, it was difficult to move the needle and see true improvements for certain patients with complex clinical regimens that required multiple medications. After discussing Medicine-on-Time with the pharmacies, both were on board to see if the solution could make actionable impacts on their patients.





## Implementation of the Solution

Like Pharmacy First, CSS Health prides itself on outstanding customer service and personalized solutions. To make sure pharmacies utilize the solution to its fullest potential, CSS Health provides individualized onboarding and support to pharmacies who use the platform.

CSS Health worked with pharmacies for six weeks before implementation of the software. During this time, the team collaborated with the pharmacies to learn about their operations, pain points, current performance, and areas for potential growth. After a preliminary workup, CSS Health provided the pharmacies with an individual plan of action, including initial patients to target as well as marketing collateral.

After the initial workup was completed and the pilot began, CSS Health and Pharmacy First maintained routine communication with the pharmacies, including scheduled calls to review performance and address any questions or concerns, as well as on-site visits by the CSS Health team.

## Overview of Pilot

### MEASURES

The outcome of interest for the pilot was change in medication adherence, as measured using proportion of days covered (PDC). To identify the impact of implementing an appointment-based synchronization and compliance packaging program, a six-month baseline adherence PDC score was collected. The team then examined the change in PDC from baseline to six months while utilizing Medicine-on-Time.

A baseline PDC score was collected for each prescription utilizing six-month fill data before the implementation of Medicine-on-Time software. Additionally, each patient was assigned a baseline PDC score based upon the average PDC for all prescriptions assigned to the patient.

A second PDC score was collected six months after enrollment into the Medicine-on-Time software. Similar to baseline data collected, a PDC was assigned to each prescription filled in the six-month period, and an average patient PDC was assigned for all medications prescribed to the patient that were filled.

## DATA ANALYSIS

Pharmacy First collaborated with CSS Health and the pharmacies' software vendor to create a customized report to clearly identify patients utilizing the Medicine-on-Time software, including start date and all prescription fills before and after the implementation of Medicine-on-Time. Fill data from the data vendor was used to determine PDC scores for all prescriptions and average patient PDC scores.

Internal switch data was used to validate the accuracy of fill data provided by pharmacy vendor reporting. Internal data analysis was performed by the Pharmacy First team to develop final overall results.



## BASELINE CHARACTERISTICS

A total of 21 patients were enrolled in the Medicine-on-Time pilot program. Average six-month trending patient adherence was observed to be 78.1 percent. Collectively, 104 prescriptions were included in the study, with an average PDC score of 80.9 percent per prescription.

At baseline, 42.9 percent of patients (n=9) were observed to be poor performers, defined as having an overall PDC score of less than 80 percent. Overall, these poor performers had an average PDC of 61.9 percent. Additionally, 36.7 percent (n=37) of all prescriptions filled were noted to have a PDC of less than 80 percent. Of those, the average PDC per prescription was found to be 63.6 percent.



## RESULTS FROM COMPLETION OF PILOT

All 21 patients completed the pilot program. After six months of utilizing Medicine-on-Time, the overall PDCs per prescription rose to 96.8 percent – a 15.9 percent increase. Furthermore, individual patient adherence increased 18.3 percent to an overall average PDC of 96.4 percent.

*The average PDC for individual poorly performing prescription fills increased 30.2 percent to an overall average PDC of 93.8 percent.*

Implementation of Medicine-on-Time proved to be even more impactful for poor performers. The average PDC for poorly performing patients rose over 30 percent, from 61.9 to 93.1 percent. Finally, the average PDC for individual poorly performing prescription fills increased 30.2 percent to an overall average PDC of 93.8 percent.

Positive changes in adherence were observed across various chronic disease states, including diabetes, hypercholesterolemia, cardiovascular disease and mental health.

## Conclusion

Medication adherence rates can have a critical impact on the bottom line for independent pharmacies and the healthcare industry as a whole.

“Today’s pharmacists and pharmacy owners are faced with difficult operational, technical and regulatory demands every day,” Larson said. “Critical to their success is strong customer support from their PSAO and systems providers.”

Armed with the right tools and a patient-centered approach, pharmacies have a unique opportunity to engage at a higher level, drive adherence and provide excellent customer service. The payoff is lower costs for the health industry; reduced DIR fees and more profitability for the pharmacy; and a healthier, happier patient.

## About the author



Todd Wormington, R.Ph, MBA is Vice President of Pharmacy Programs for Pharmacy First. He manages all operational and clinical support solutions delivered throughout a diverse network of over 2,300 retail pharmacies. Todd’s 25 years of experience in the industry bridges the gap from early roles in a small independent retail pharmacy chain to building a class-leading, oncology-focused reimbursement hub service company. He has worked in a variety of business development roles with key technology providers in the retail pharmacy space, including pharmacy systems vendors and class leading robotics companies.



With a network of more than 2,300 independent pharmacies across the country, Pharmacy First is committed to providing the right tools, resources and support to keep our customers competitive and sustainable.

11880 College Blvd, Ste 420  
Overland Park, KS 66210  
Phone: 800.460.1575

 [pharmacyfirst.com](http://pharmacyfirst.com)  
[info@pharmacyfirst.com](mailto:info@pharmacyfirst.com)