



## CHC Health Uses Medication History Data to Identify Non-Adherent Patient Populations and Intervene Early to Avoid Readmissions

### Pharmacists Help High-Risk Patients Manage Adjustments to Their Medications Post-Discharge



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CHC Health, a Pack4U company, provides customized, virtual pharmacist services to enhance quality of patient care, improve health outcomes, and reduce overall healthcare costs. The company uses pharmacist-driven interventions to manage patient medication therapies in collaboration with caregivers. As one of the largest independent providers of pharmacist services in the United States, CHC Health combines clinical pharmacist skills with technology to deliver customized solutions to health plans and employer groups, hospitals and health systems, and primary care groups.

CHC Health chose DrFirst's MedHx<sup>SM</sup> PRM, a population risk management solution, to deliver the most comprehensive medication history data available so its pharmacists can identify specific patient populations in time to deliver the extra care they require.

### The Challenge

Healthcare organizations have some tough pills to swallow: Medication non-adherence costs the U.S. healthcare system \$290 billion.<sup>1</sup> The Centers for Medicare & Medicaid Services (CMS) imposed readmission penalties on 83% of hospitals<sup>2</sup> in 2020. Specific patient populations, such as non-adherent hypertension patients who have at least one additional chronic condition, cost health systems an extra \$10,000 to \$30,000 per patient per year.<sup>3</sup> Preventing just one adverse drug event (ADE)—which contributes to excess length of stay, readmissions, and lost productivity—can save a health system between \$8,000 to \$11,000.<sup>4</sup>

Many complex patients have over a dozen concurrent medications, multiple chronic conditions, and a higher prevalence of medication errors. The risk of an ADE ranges from 13% for someone taking two medicines to 58% for a patient taking five, and 82% when taking seven or more.<sup>5</sup> Medication management is further complicated when medication lists need to be updated during transitions of care, such as when a patient moves from acute to home care.

Unfortunately, hospitals and health systems often don't have the resources to optimize medication management in-house to avoid these negative patient outcomes and their associated costs. That's why many are outsourcing transitional care management (TCM) services, which are billable to CMS.

When one 400-bed hospital in the southeastern United States contracted with CHC Health to perform TCM services for patients post-discharge, the company turned to DrFirst to deliver the medication history data its clinical staff would need to monitor adherence of select patient populations. To analyze how these TCM interventions would impact clinical outcomes, CHC Health and DrFirst also collaborated on a 30-day pilot study.

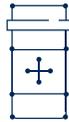


## The Solution

By using DrFirst's MedHx PRM, CHC Health was able to focus more on patient care and spend less time gathering and analyzing patient medication history data. MedHx PRM pulls data from the same national pharmacies and pharmacy benefit manager information provided by other medication history vendors, but also adds data on prescriptions purchased with cash or coupons as well as data for each health system's unique patient population, made available through DrFirst's relationships with local and community pharmacies and EHRs.

Patented artificial intelligence (AI) gives pharmacists actionable medication history by combining multiple data sources for unique prescriptions, ensuring clinicians have the most complete and accurate data necessary to perform TCM services. Data from MedHx PRM is consumable in three ways: integrated in an EHR, via the cloud-based MedHx Companion, or through flat files. CHC Health decided to use the flat file format.

The pilot required that to be included, patients must have:



**Greater than four medications**



**Two or more chronic conditions**



**Multiple providers and pharmacies**



**Identified medication adherence challenges**

### CHC Health Services:

- Medication Management
- Medication Synchronization
- Chronic Care Management
- Remote Patient Monitoring
- Transitional Care Management
- Population Health

First, nurses at the hospital identified patients who needed medication review based on the criteria above. A comprehensive medication review process required important clinical documentation to be exchanged, including the patient's admission note, discharge note, medication history dataset, and records of conversations with the patient. Next, a nurse referred the patient to a CHC Health pharmacist for medication review services, gathered clinical documentation, and sent patient information and documentation to the pharmacist. Finally, a pharmacist performed an initial review of the medication list and reached out to the patient by text or phone call, up to three times.

## The Results

By starting with more comprehensive and accurate patient medication data from MedHx PRM, CHC Health pharmacists identified patients who required additional monitoring early in the process without the traditional, time-consuming process of gathering data from multiple sources.

"By collaborating with DrFirst, we are able to leverage our skillsets as quality and outcome-driven chronic care managers in the most accurate and efficient way possible," said Mike Case-Haub, CEO of CHC Health. "This allowed us to avoid spending unnecessary time calling and waiting on retail pharmacies and hospitals to find accurate data, so we can spend the majority of our time focusing on the patient and getting them on the right track in a timely manner."

The pilot period was limited to 30 days to prove the concept, validate the workflow, and assess important clinical outcomes quickly.

- Patients included: 19
  - Patients successfully contacted by phone call or secure text: 11
  - Patients failed to be contacted: 8
- Interventions: 26 (2.36 per patient)
  - Medication change recommendations: 12
  - Medication addition recommendations: 14
- Call attempts: 30
- Calls that reached patient: 9
- Patients reached by secure text: 2



**“Nobody wants to get readmitted.** With some focus and a little hand-holding, we can save the patient money, financial risk, and time away from their family. Getting admitted/readmitted is disruptive to lives and families, so **saving even a handful of these events from happening is immensely valuable.**”

—Shannon Hubler, MAOL, RN  
VP of Clinical Operations  
CHC Health

During CHC Health’s phone consultations, medication affordability and social determinants of health were addressed to help patients find more cost-effective medications.

The final step of the TCM intervention was escalation to the primary care physician and/or specialists to avoid readmissions. During the pilot, one method of escalation was tested. If the patient was contacted and an escalation needed to take place, the pharmacist would typically contact the provider to initiate the appropriate escalation. For one patient with a high risk of being readmitted, the CHC Health pharmacist ensured that the patient was able to appropriately adjust dosages and add and subtract medications. The pharmacist consulted with the patient on the most cost-effective medications and could see that his or her prescriptions were picked up. Access to MedHx PRM technology made it possible to provide this extra hand-holding, make medication management adjustments, and avoid a 30-day readmission.

#### Outcomes and Patient Examples:

Avoided readmissions: **1**



**Patient 1** – Swelling was back to preadmission levels, didn’t have COPD meds that needed filling



**Patient 2** – Patient had many hypertension and congestive heart failure medications

2 patients were recommended for escalation. **1 was readmitted, 1 was not.**

Of 19 patients who fit the criteria, two patients were predicted to be highly likely candidates for readmission and one patient was spared from readmission following TCM intervention, which involved CHC Health advocating for immediate remote patient monitoring or home health. CHC Health deemed the pilot a huge success because avoiding even one readmission delivers a significant return on investment from the TCM service by avoiding hospital readmission penalties and bringing positive patient outcomes. The company plans to use MedHx PRM for subsequent TCM projects.

## Sources

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