



Innovation Challenge

Project Overview



Pharmacy Drug Spend Optimization

This project aims to create a website-based application to reduce spend on pharmacy medications using a forecasting model to predict more cost-effective future purchases. Approximately \$2M in total savings across the hospital system is expected to be saved.



Cohort 1
July 2021 - January 2023



\$125,000 Award



Primary Outcome
Drug cost savings



Project Team

- Joshua Denford, CPhT, Ambulatory Pharmacy
- Kathy Vranek, PharmD, Ambulatory Pharmacy
- Michael McGrath, Enterprise Data and Analytics
- Warren D'Souza, PhD, Enterprise Data and Analytics
- Rajas Gokhale, Enterprise Data and Analytics

Midpoint Progress Updates

(June 2022)

The team partnered with a website developer to expedite the website design process. Next milestones include completing the retail validation and starting to pilot test at the retail locations. The inpatient algorithm is on pace to begin development in the beginning of February, followed by validation and then piloting. The Medical Center is targeted to begin the pilot in February. If successful, the pilot will expand to other inpatient settings across the system throughout the spring.

Final Report Summary

(January 2023)

The team successfully developed two algorithms in a website-based application for use by pharmacy purchasers to significantly reduce drug spend. One algorithm is for retail purchases and the second is for inpatient purchases. Both algorithms are available on the website for all UMMS pharmacies. Currently the retail algorithm generates \$2.5M in savings annually and the inpatient algorithm generates \$1.75M in savings.

Of the \$4.25M currently possible, more than \$2M is expected due to non-usage of the app, drug shortages, and patient/provider drug preference.

The team plans to also develop a cost savings analysis on the website that will track actual vs. predicted cost savings over time. UMMS pharmacy staff have been instrumental in the success of this initiative as they continue to use the app successfully.