

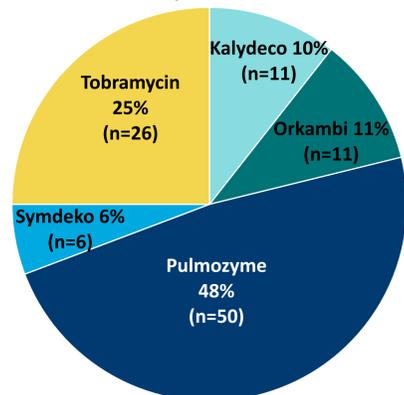
## Background

- Specialty medications represent a growing part of the pharmacological management of chronic disease states such as cystic fibrosis (CF).
- The management of CF in the pediatric population is complex, as it involves multiple medications and treatment success is largely determined by adherence to the care plan.
- Due to various factors, there can be delays between prescribing of specialty medications and initiation of therapy in the pediatric CF population as well as barriers to continued adherence.

## Advantages of Health-System Specialty Pharmacy

	Outside Specialty Pharmacy Services	Health-System Specialty Pharmacy Services
Clinical assessment & monitoring	May not have access to electronic medical record (EMR)	Direct access to electronic medical record (EMR)
Patient education	Limited	Continuous
Turn-around time	Average 7-14 days	< 72 hours
Financial services	Limited assistance	Prior authorization & financial assistance
Coordination of care	Limited / no direct access to prescribers & nurses	Close access to prescribers & nurses
Access to medications	Limited prescription pick-up	Local prescription pick-up, same-day or next-day delivery

## Prescribed Specialty Medications for Cystic Fibrosis Clinic Patients: September 2018 – February 2019

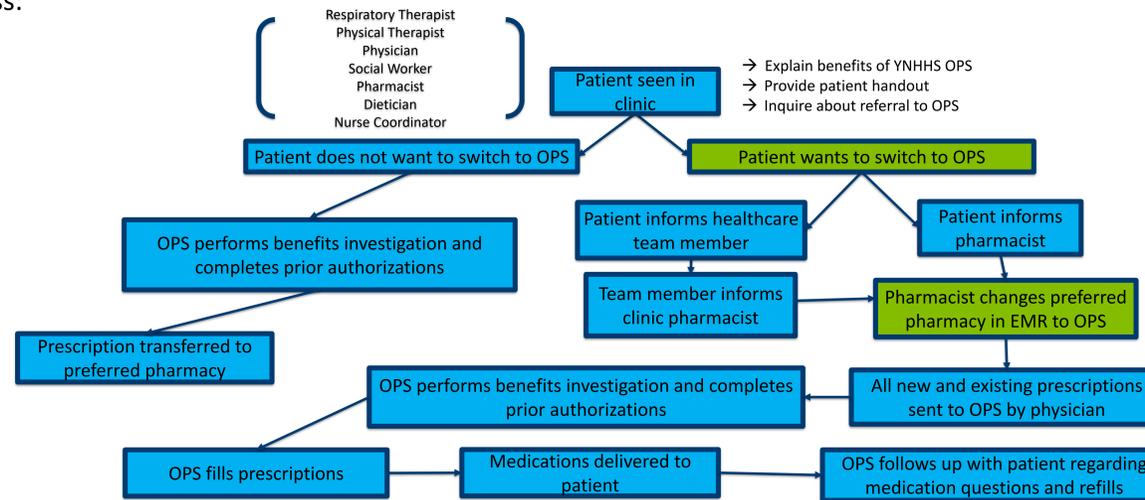


## Objective

- Assess the impact of Outpatient Pharmacy Services (OPS) at Yale New Haven Health on medication adherence in pediatric patients with cystic fibrosis.

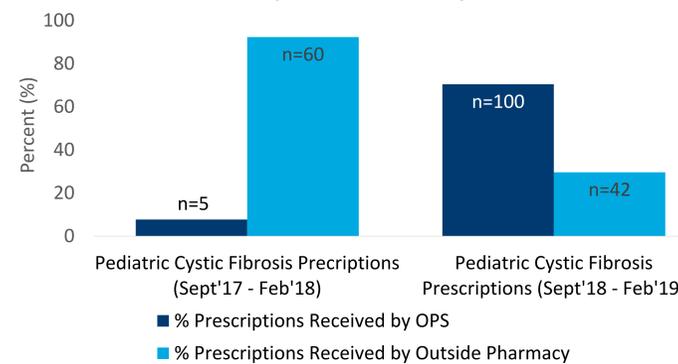
## Project Description

- A prospective review of medication adherence in 65 pediatric patients with CF was conducted over a 6 month period and compared to a retrospective cohort.
- Education about health system specialty pharmacy services was delivered to patients through: invitation letter to the patient, informational pamphlets distributed in clinic, and direct education in clinic by the pharmacist.
- A clinic workflow was developed and implemented in September 2018 to streamline the patient referral process:

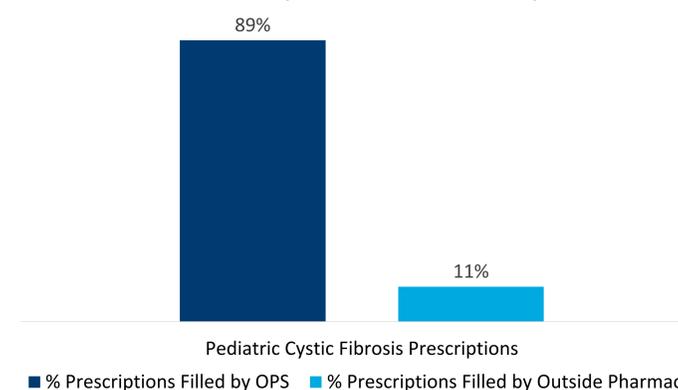


## Results

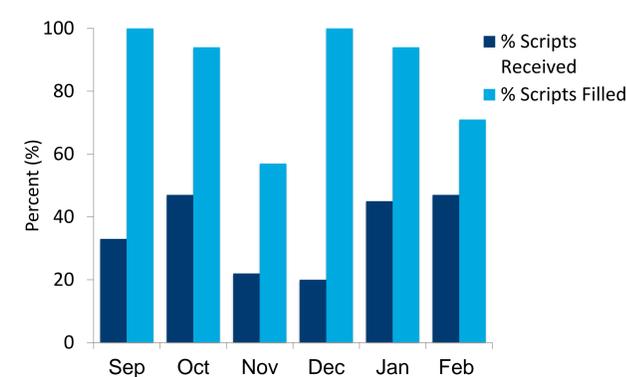
### Prescriptions Received by OPS



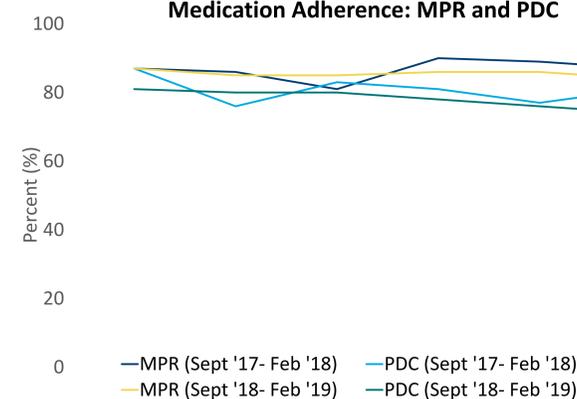
### OPS Fill Rate: September 2018 - February 2019



### Prescriptions Received and Filled by OPS: September 2018 – February 2019



### Medication Adherence: MPR and PDC



## Conclusions

- Challenges that were faced throughout the implementation of health-system specialty pharmacy services included integration of a new workflow into an existing one, patient buy-in, and insurance lockouts.
- Collaboration with members of the healthcare team in clinic to create minimal disturbance and a smooth integration is critical to successful implementation.

	Pre-Implementation	Post-Implementation
Prescriptions Written	65	142
Clinical Continuity Rate	7.7%	70.4%
Fill Rate	100%	89%
MPR	0.85	0.86
PDC	0.75	0.80

## Future Directions

- Development and implementation of collaborative practice agreements within the pediatric CF clinic
- Expansion of health-system specialty pharmacy services to other pediatric clinic settings to improve clinical continuity throughout the health system network

## Impact on the Patient Experience

- This single-center retrospective and prospective review of medication adherence showed improved and sustained patient medication adherence following implementation of health-system specialty pharmacy services.
- The increase in utilization of OPS led to an increase in prescriptions received and filled by the health-system specialty pharmacy.
- Implementation of a clinic workflow designed to increase specialty pharmacy services in pediatric patients with CF was associated with improvements in MPR and PDC, indicating sustained medication adherence by patients.