Adoption of a Telehealth Service Model for Preventive Cardiology Clinics

Disclosures: None

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Purpose

The Heart Institute at Cincinnati Children's Hospital Medical Center (CCHMC) hosts a Preventive Cardiology program to assess and manage cardiovascular risk factors for pediatric patients and some patients over 18 years of age. The lipid and hypertension clinics are staffed by providers from either: cardiology, endocrinology, or nephrology, and include registered nurses and dietitians.

Prior to the COVID-19 pandemic, the clinics did not offer a virtual care option and required patient families to attend all visits in-person either at the main hospital, satellite, or outreach locations. During the pandemic, concerns regarding exposure to COVID-19 created challenges for care delivery. Therefore, telehealth was adopted as a service modality to deliver immediate and billable care to patients with abnormal cholesterol levels.

Metrics and learnings have been captured to guide decision making, while also considering the viability for continued utilization of telehealth in Preventive Cardiology programs.

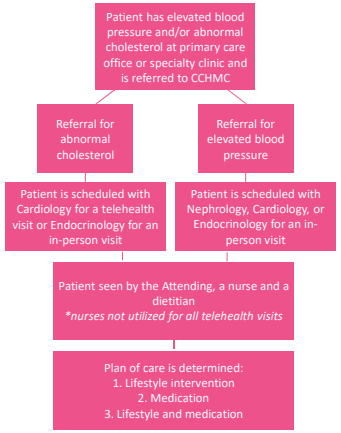


Figure 1: Preventive Cardiology Patient Flow Chart.
Patient families are referred to Preventive Cardiology services based on their recorded blood pressure or cholesterol. Patients are then scheduled to the appropriate providers for a visit in-person or via telehealth based on initial referral diagnosis.

Project Design

A systematic analysis was completed to incorporate data and commentary from schedule utilization, patient demographics, financial reporting, patient and family experience scores, and provider interviews. Our project focused specifically on the visits held by cardiologists in the program as these were the primary providers to offer telehealth services in addition to in-person visits during this time frame. The analysis focused on a two- year period from the onset of telehealth offerings beginning April 1, 2020 through March 31, 2022.

Results

Encounters

Over two years from April 1, 2020 through March 31, 2022:

- 678 unique patients attended 1,019 telehealth visits
- 456 unique patients attended 680 in-person visits
- 109 unique patients attended both visit modalities
- There was an average of 1.5 encounters/unique patient for both visit modalities
- The majority of patients seen via telehealth were lipid patients. The in-person visits were reserved for patients with blood pressure issues, a combination of blood pressure and lipids, or families who requested in-person visits for reasons such as language barriers.

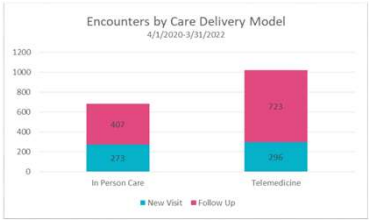
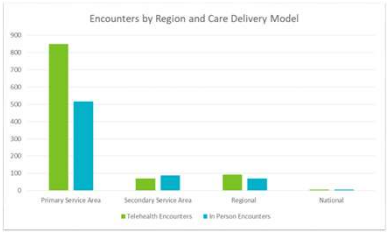


Figure 2: Encounters by Care Delivery Model
Approximately 29% of the completed telehealth visits were for a new appointment as opposed to a follow-up. By comparison, in-person visits saw approximately 40% new visits.

Demographics

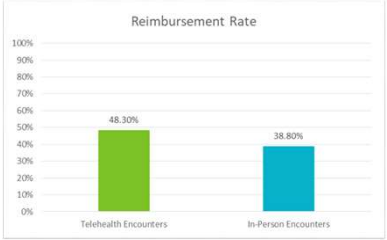
The vast majority of patients who utilized telehealth were from CCHMC's primary service area and were between the ages of 0-17. 22% of telehealth encounters were adult patients.

Figure 3: Encounters by Region and Care Delivery Model.
The majority of encounters were from the primary service area which includes the counties surrounding the main hospital and where the majority of satellite locations are located. The secondary and regional service areas encompass the Heart Institute's outreach locations in Ohio, Kentucky, and Indiana. National includes all other states.



Financials

Figure 4. Reimbursement Rate.
For encounters with available professional billing data, average reimbursement rate for telehealth professional billing across all payors was **48.3%**. In-person visits experienced a lower reimbursement rate of **38.8%** during the same timeframe



Results (continued)

Experience

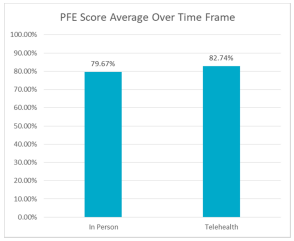


Figure 5: Patient and Family Experience (PFE) Scores.
While both care models yield overwhelmingly positive patient and family experience scores, it is important to note the differences between the in person and telehealth modalities. Provider, patient and family experience data on average demonstrated favorable satisfaction scores for telehealth in comparison to in-person visit evaluations (telehealth n=82, in-person n=100).

Provider interviews corroborated that implementation of telehealth increased ease of care for providers and their patients. It allowed families to decrease time spent away from school and work and enhanced flexibility for providers to conduct telehealth from various secure locations.

Conclusion

The Heart Institute at CCHMC adopted telehealth visits for the Preventive Cardiology Program during the COVID-19 pandemic. Within two years, telehealth visits have significantly benefited patients through increased access to care. Telehealth has shown positive patient and family experience scores, with slightly higher scores for telehealth vs in-person visits. This may be due to the enhanced convenience with telehealth and less time lost from work and school. Furthermore, the program realized favorable professional billing reimbursement relative to comparable in-person visits.

Future Directions

- As demand increases for telehealth in the future, capacity and infrastructure will be needed to operationalize growth. This will be critically important for program recognition and to provide coverage for patients outside of local areas.
- Continued success will greatly rely on payor support, especially for a patient population that depends heavily on government insurance.
- Advocacy is required for continued reimbursement, as well as for telehealth infrastructure for patients and families who may be under-resourced in technology or internet connections.
- Additional research is needed to analyze patient outcomes and treatment adherence in telehealth versus in-person care for Preventive Cardiology.

Acknowledgements

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