Using RE-AIM to Evaluate a Virtual-Only Specialty Care Program

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BACKGROUND

Problem Statement:

- Patients often have difficulty accessing in-person care, which results in delays and poor health outcomes. In South Carolina, all 46 counties are designated as having some health professional shortage areas.
- As a result, patients face challenges accessing specialty care, averaging a 3-6 month wait for in-person specialty care.
- Health systems are often tasked with the development, implementation and operation of telehealth programs. There is a need for efficient and effective tools to monitor program implementation, utilization and outcomes.

Study Objective: To develop a program evaluation system to engage administration, clinicians and researchers in systematically assessing the virtual specialty program.

Study Intervention:

- To overcome the access issues, a virtual-only specialty service line was developed to increase access to specialty providers and offer an alternative to in-person care.
- The model provides 100% virtual care in high-demand specialties and primary care. The Virtual Specialty program also coordinates local referrals for in-person lab work, imaging, and pharmaceuticals based on the patient's proximity.
- The program goals include reducing wait times and increasing access to specialty care.

The program includes Direct-to-Consumer for new and returning patients:

- Endocrinology
- Rheumatology
- Neurology
- Pulmonology
- Benign Hematology
- Sleep Medicine
- Primary Care

METHODS

- The RE-AIM (Reach, Effectiveness, Adoption, Implementation, Maintenance) framework guides a data-driven evaluation of the Virtual-only Specialty program, incorporating multiple data sources and evaluation tools to track process and outcome measures and inform program quality improvement and data-driven decision-making.
- Data sources include program tracking data, REDCap, the electronic medical record and the telehealth platforms, and qualitative data from users.
- Business Intelligence Tools are used to create program-level dashboard scorecards, and maps illustrating patient home locations.
- Dashboards have been designed to increase leadership's access to real-time data trends and facilitate quality improvement. Primary outcome domains of interest include utilization, patient satisfaction, patient costs associated with travel (e.g., transportation, lodging, time off work, childcare); and cancellations, wait times, reschedules, and no-show appointment rates. In addition, tracking the use of MUSC and Affiliate resources for testing and in-person care needs is important to validate the return on investment.
- Quantitative data are analyzed using descriptive statistics, and qualitative content analysis is utilized to identify themes.

Table 1: RE-AIM Evaluation Measures

RE-AIM Category	Measures
Reach	# Visits; Patient Demographics; % of patients participating
Effectiveness	Patient wait times; Patient satisfaction; Provider satisfaction; Cancelations/No-Show; Clinical outcomes per specialty
Adoption	#/Type of Providers; #/Type Specialties; #/Type of dedicated staff
Implementation	#/Type of program implementation changes; Program Costs
Maintenance	% New patients entering the system; % New patients remaining engaged in care; Health System Revenue; Changes in health system capacity; Geographic access across the state

RESULTS

Figure 1. Monthly Volumes

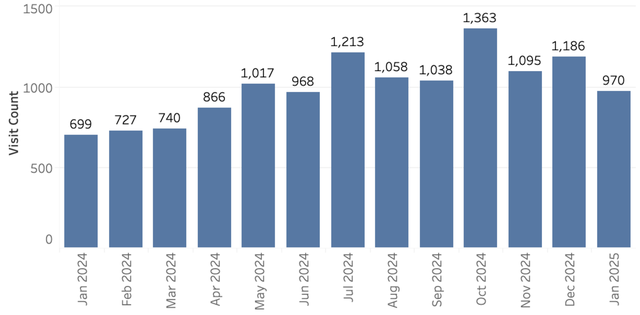


Figure 2. Volume by Specialty

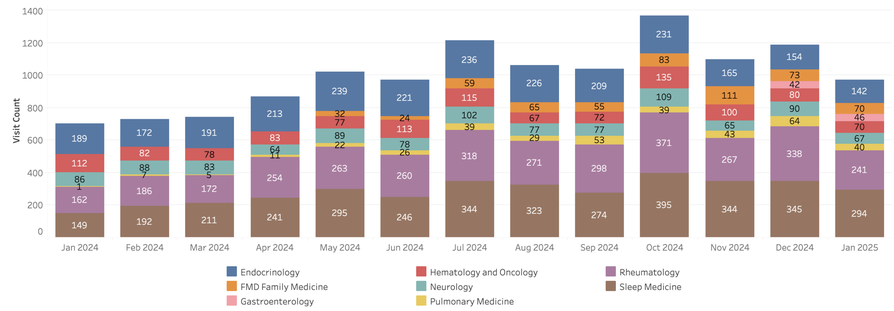


Figure 3. New and Returning Patient Volume

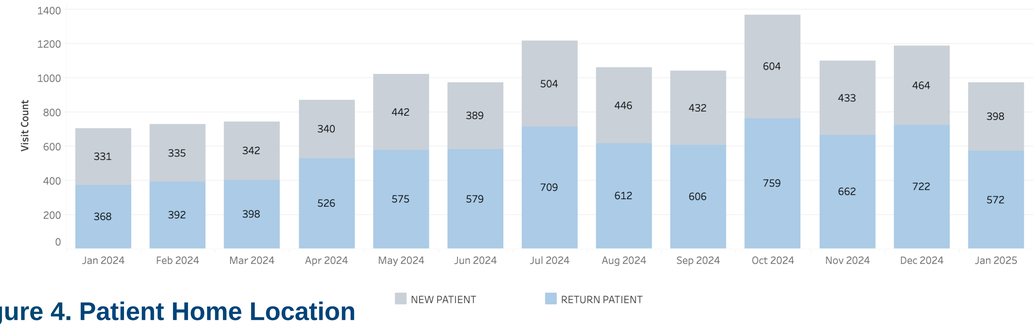
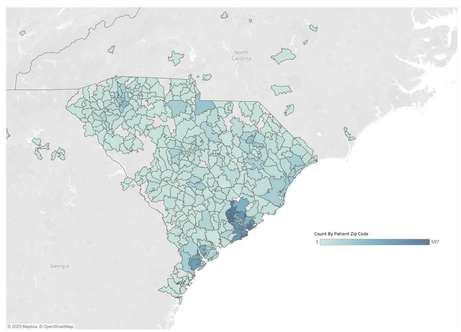


Figure 4. Patient Home Location



Results Continued:

Reach: To date, over 17,000 virtual specialty visits have occurred.
Effectiveness: New visit appointment wait times have been reduced to less than 7 days for Family Medicine and Rheumatology. The time to next appointment has decreased by several months for in-person waits in the other high-demand specialties. Patient experience ratings are consistently higher for the 100% virtual practice compared to hybrid in-person/virtual care. Patients report immediate impacts for the increased access, and ability to initiate medications and treatments faster than they would have with the first-available in-person visit.
Adoption: Endocrinology was consistently the highest volume service each month, followed by Rheumatology.
Implementation: The program went through a 4 phase implementation process.
Maintenance: Returning patients made up 58% of the visits. The Virtual Specialty patients reside across the entire state, saving considerable time and travel costs for the patients. Average monthly patient no-show rates are 9-11% (national Endocrinology benchmark is 14%)[1]. Specialty Pharmacy is an area of growth.

CONCLUSIONS

- Initial lessons learned include the challenge of establishing a highly accessible digital front door while also leveraging Electronic Health Record tools.
- In addition, current South Carolina regulation limitations on prescribing schedule 2 and 3 medications create barriers to care.
- Virtual Specialty service will continue to expand through innovative partnerships with divisions of MUSC, collaboration with additional specialty departments and providers, coordination with trusted affiliated organizations, successful continuity of care with in-person needs, and ensuring a patient-centric approach.
- Early results show increased access to timely care, improved patient experience, and lower patient no-show rates compared to national benchmarks.
- Navigating in-person needs across the state will require referral relationships in many communities and with the local MUSC providers.

Next Steps:

- Continued evaluation of RE-AIM steps
- Identification of comparison group

REFERENCES

1. Solution Reach (2025). Which Wins? The National Average No-show rate or yours? https://www.solutionreach.com/blog/which-wins-the-national-average-no-show-rate-or-yours-1

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