



MID-ATLANTIC TELEHEALTH RESOURCE CENTER COMMUNITY RESPONSE TOOLKIT

Leveraging Telehealth for Home-Based Populations

Interactive Home Monitoring (IHM) Program

Background



The Interactive Home Monitoring (IHM) program and services began in October 2017. We started the IHM program to address the highest patient readmission rate identified on the Medical and Critical Care Service Line treated on the 3rd floor of the hospital. The initial goal was to reduce readmissions and since that time and due to the success of the program, IHM has expanded throughout the hospital into many other inpatient areas and specialty treatment areas too (e.g. Adult Liver and Lung Transplant, Cystectomy, High Risk OB, Pediatric Cardiology, Hem/Onc and Asthma). The goals now include continued work on readmissions

Background

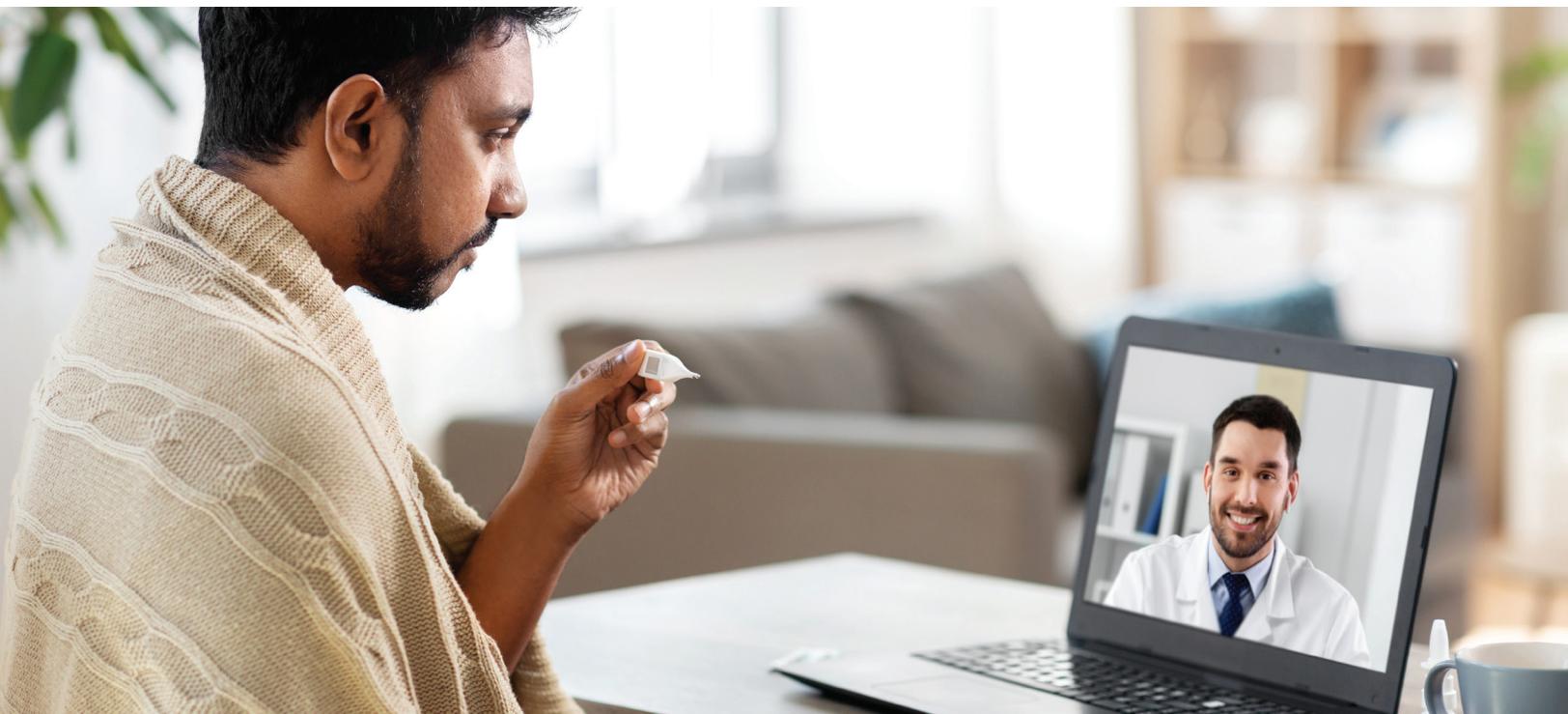


particularly in the low acuity, high utilizer patient population, decreasing inpatient LOS, non-emergent ED visits, addressing social determinants of health barriers to care and transitions of care gaps, as well as, establishing PCP care.

Because the foundation of the program was well-established, it was relatively easy to pivot and address the COVID pandemic needs in order to make sure patients were provided excellent care at home, but to also address the possibility for the lack of hospital beds in surge timeframes, as well as making sure the right patients were inpatient and the patients who didn't need admission,

could be provided clinical care at home. This work was a multipoint strategy and included hospital partners: ED, COVID Clinic, Ambulatory and Specialty Clinics, COVID inpatient units.

COVID patients are provided Monday – Sunday, 8am-8pm, monitoring by a well-seasoned APP team who is able to address prescription needs, establishment of PCP care, patient questions and concerns, PCP interaction and escalation, as needed, as well as escalation to the ED or COVID Respiratory Evaluation Clinics in Central and Northern Virginia.





- iPads are provided with built-in connectivity packages or patients are able to use their own smart devices or computer to access the web-based APP to enter vitals, send pictures or videos, have a telehealth visit with an APP team member.
- Non-Bluetooth patient kits are provided and include: BP cuff, pulse oximeter, thermometer, and in some cases, a spirometer.
- iPads and patient kits are deployed in the same day to patients living within 50 miles of the Medical Center or next day beyond the 50-mile range so that care and support can begin ASAP.
- Patients have accessibility to the UVA Health Patient Education Library and 24/7 technical assistance with the iPad or any of the peripherals.
- We use a vitals monitoring platform developed for UVA Health, Population Health, by our partners, Locus Health. The dashboard alerts a clinical team member when a vitals sign isn't WNL so outreach can occur. Additionally, the patient is able to communicate by sending concerns, pictures or videos to the clinical team. All of the vitals data flows directly into our EMR system, Epic in real time.
- The vitals dashboard for IHM-COVID and the UVA student health population, IHM-Student COVID, is managed by an APP team who signs up for shifts on a monthly basis. These team members are already UVA Health employees.
- The shifts are Monday – Sunday, 8am – 8pm and replace either canceled shifts due to low census or overstaffed departments in the hospital. All other shifts are managed as bonus shifts.
- The cost of the platform is covered by the contract Population Health holds with Locus Health and the cost of the APP team shifts are covered by COVID funds managed by UVA Health. The Director of Population Health also provides evening and weekend support to this program throughout the year.
- Every IHM program has a standard workflow which is considered to be a living document and fluid based on needs, changes, updates, revisions, patient census, Epic upgrades, etc.



Key stakeholders in this program include: UVA Health ED, Ambulatory and Specialty Clinics, referring LIPs, UVA Health Epic team, the APP team, Locus Health, COVID Clinic, and Population Health.

- Referrals into the program come from the UVA Health ED, Ambulatory and Specialty Clinics, the COVID Clinic, and directly from UVA LIPs.
- **The Epic team** is integral to build and connection of the referral order set and the live data flow between UVA Health data warehouse/Epic and Locus Health vitals monitoring platform.
- **The APP team** manages the enrollment of patients, communication with referring LIPs, as well as patient PCPs, referrals to the ED or respiratory evaluation clinics for escalation needs, the establishment of care with PCPs, and all vitals monitoring and prescription needs.
- **The Population Health Department Director** manages the operations and development of the entire process, as well as troubleshooting, if needed. Additionally, the Director serves as the point person, and manages APP evening and weekend needs.

Having the infrastructure built, standard processes in place, and more than three years of experience were key to quickly pivoting to care for COVID patients. The monitoring template, Epic order, and standard workflow was built, APP team recruited and trained on all workflows and processes, as well as communicating with all stakeholder's individual workflows was managed in one weeks' time.

Best Practices

- It is key to finding MD Champions in any space an institution wishes to implement telehealth.
- When working with a platform, it must be able to be duplicated/changed for different patient populations – quickly.
- Patients engage more when being provided with options to using the platform (either by our providing a smart device like an iPad OR letting them use their own smart device like a computer, iPad, iPhone, Android, tablet, etc.).
- While cost is a consideration when staffing a remote monitoring program, if you staff at a RN level, you'll at least need a clinical escalation ladder (RN, ANP or PA-C, PCP/ Specialist). Prescription needs including inhalers, 7-day scripts provided and prior authorization hasn't come through, clinical questions and providing care until a PCP is established are all needs that will present themselves where the RN can't assist.

Lessons Learned & Questions to Consider



- Start big with recruiting for filling shifts that aren't necessarily permanent, but needed and from the internal group of clinicians so that you don't have to worry about HR/Compensation/Contracting/etc. And it's okay to have more than initially needed. That's a good problem to have because as time goes by, fatigue grows, people leave the organization, and the fluidity of need will be constant. Continual recruiting will be necessary.
- Make sure to be open to opportunities to provide services. UVA Health, Population Health doesn't currently provide for pediatric patient populations. There was however, a referral of a 17-year old with a request for IHM (patient had asthma)

being discharged from the hospital. The age was close enough, caregiver agreed to assist and the experience was positive across the board. Ultimately, this led to another pediatric program with RPM being developed and offered because the referring physician saw the experience of his patient and knew the program was a game changer.

- Make sure however, to draw perimeters and stick to them where appropriate. One group can't be everything to every patient. The best course of action is collaboration across the health system and into the community. Far more can be done through this vein of practice.



Community Impact & Results

Overall, the IHM program was able to provide valuable services during a global pandemic and within multiple patient populations, as well as our own system. To date, UVA Health Medical Center has hospitalized 1,589 COVID patients and to date, IHM has provided care for ~1,020 patients. Imagine, the untenable stretch on the ED and the inpatient care teams and bed availability had IHM and services not been available.

The reach within our system, as well as community outreach provided throughout the state has impacted UVA Health and its patient populations in a multitude of ways including, decreased inpatient stays and readmissions, overall LOS for inpatients, decreased overextension in ambulatory in-person visits to avoid additional accessibility issues and crowded clinics and EDs managing a rapidly fluid and very contagious, deadly virus.

Acknowledgements

UVA Health – *Dr. Art Saavedra, Jennifer Frazer and the APP team, JoAnna Monroe, Vicky Stow, Dave Harlow, Leigh Ann Isenhower, Kelly Love-Schwarz, Dr. Debbie-Ann Shirley, Michelle Sutton, Katie Fellows, Anna Blackburn, Pam Trapani, IHM MD Champions within the inpatient, ambulatory, specialty, and ED departments, Population Health Advocate, Behavioral Health and Pharmacy teams*

Locus Health – *Kirby Farrell, Beth Curry, Nancy Addison, Daniel Gardiner, Carter Harris, Griffith Farrell*