

Emergency Department Care Coordination Program Health System Case Study

University of Virginia Health's Medicine HOME Program Reduces Hospitalizations and Readmissions

Innovative software solution helps decrease costs associated with unnecessary hospitalizations and readmissions among patients with chronic medical and behavioral health conditions.

"We're always trying to break down barriers to care and information silos especially in treating our most vulnerable patients. We use the tools from the EDCC program to support a highly informed and highly coordinated approach that improves care and reduces costs for patients with complex diseases."

- Dr. Amber Inofuentes, Medical Director, UVA Medicine HOME Program

The Challenge

Nationally, 1% of patients account for a [disproportionate share of healthcare costs \(22%\)](#) related to emergency department (ED) utilization, hospitalization and hospital readmissions. Such patients include those with diabetes, mental health and substance use disorders, end-stage renal disease, sickle cell disease and other chronic health conditions.

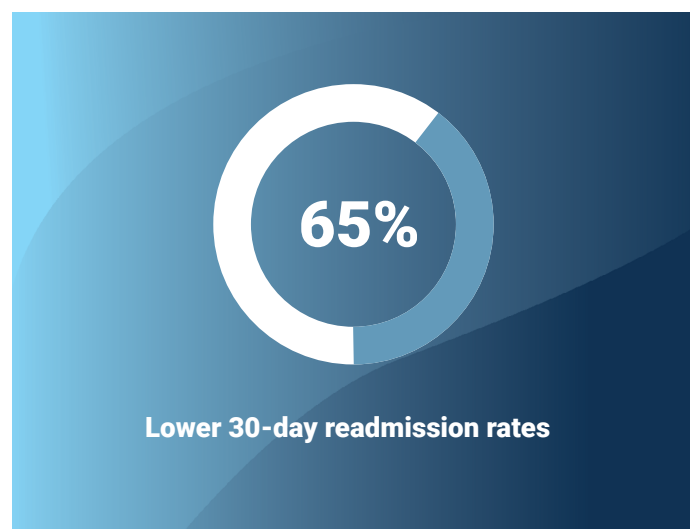
To help curb these costs, in 2017, UVA Health piloted its Medicine HOME program to reduce hospitalizations and readmissions among frequently hospitalized adult patients. UVA began the program with a cohort of ten adult patients with sickle cell disease. At the time, these patients accounted for 7% of all 30-day readmissions to general medicine services.

Under the program, each patient was provided an individualized care plan (ICP) developed by a multidisciplinary team of physicians, nurses and mental health professionals. ICPs provide [a rational, pre-specified approach](#) to workup and management and have been proven both at UVA [as well as](#)

[nationally](#) to reduce 30-day readmissions and total hospitalizations. ICPs also promote a more streamlined approach to care and treatment.

The pilot dramatically reduced hospital utilization: 30-day readmission rates fell by more than 65% and hospital bed-days decreased by 40%. The program's success led to its expansion to other patient populations with complex chronic medical conditions including diabetes, substance use disorders and end-stage renal disease. These groups comprise some of the most frequent users of the ED and patients with the highest number of hospitalizations and readmissions.

In addition to chronic medical conditions, many of these patients experience unstable living conditions, food insecurity and lack of transportation. These social determinants of health make them prone to seek care at multiple EDs in health systems across the state. This behavior leads to greater risks of patients receiving inappropriate care and treatment by providers without ready access to their medical records.



The Solution

In 2019, UVA Health's Medicine HOME team leveraged Virginia's [Emergency Department Care Coordination \(EDCC\) program](#), with technology provided by PointClickCare, to alert its care team when their patients seek care at any ED in Virginia.

When a patient enrolled in the Medicine HOME program presents to an ED, real-time alerts enable the HOME care team to contact the patient's ED team at the start of the visit. The HOME care team is then able to assist the ED treating physician to locate the patient's ICP.

"I get notifications by email and text every time a patient who is in our program registers in an ED anywhere in Virginia, and I can respond with that patient's ICP to help coordinate care," says Teresa Radford, BSN, CMSRN, clinical program coordinator of Medicine HOME. "I call and ask to speak to the physician or the nurse or the shift manager, depending on the situation, because so many things can get lost in written communication."

In one recent case, Radford received an alert that a Medicine HOME patient with a substance use disorder had arrived in another health system's ED. "Because we received that notification, we were able to reach out to the team at the ED and direct them to the patient's individual care plan which ultimately led to a better outcome for the patient. The EDCC portal really helps with real-time care coordination."

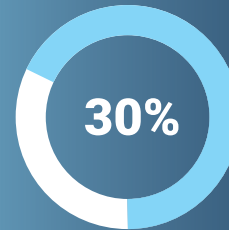
The impact of the Medicine HOME program on the care of patients with complex conditions has been substantial.

The Medicine HOME program goes beyond helping enrolled patients avoid hospital admissions. It can also help patients facing quality-of-life challenges. In one case, Dr. Amber Inofuentes, Medical Director of the Medicine HOME program, says her team was able to help a homeless patient who frequently visited the ED for help with basic needs such as stable housing.

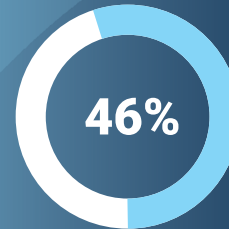
"We were able to get her housing where she would be safe and taken care of," says Inofuentes. "She's doing very well now and hasn't been in the emergency department in months because we were able to get her needs met."

Going forward, the Medicine HOME program will have the ability to collaborate with a newly established UVA community paramedicine program staffed by two pre-hospital clinicians stationed in the community.

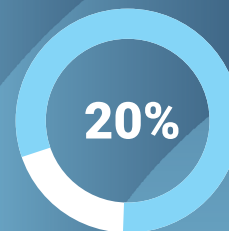
A 12-month pre-/post analysis of the Medicine HOME program found that overall:



Decreased inpatient and/or observational admissions



Decreased readmissions



Lower care costs

"That's going to be a wonderful extension of meeting people where they are—outside of the hospital," Dr. Inofuentes says. "The tools from the EDCC program provide us with a level of information sharing that promotes collaboration in care for people with complex disease."

In 2017 the Virginia General Assembly established the EDCC Program within the Virginia Department of Health (VDH) which facilitates real-time communication and collaboration among healthcare providers, clinical and care management personnel for patients receiving services in hospital EDs for the purpose of improving the quality of patient care services. VDH contracts with Virginia Health Information (www.vhi.org) to fulfill the requirements of this legislation which also administers health data collection programs and serves as the state designated Health Information Exchange (HIE). PointClickCare (formerly Collective Medical) was chosen as the EDCC Program technology partner.