CASE STUDY

How Markham Stouffville Hospital Developed Their Hospital-to-Home Program

Reducing avoidable admissions by providing care to complex patients at home

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Table of contents

Overview . . . . pg. 03

Approach. . . . . pg. 04

Component 1: Identify target patient population. . . . . .pg. 05

Component 2: Enroll eligible patients in program. . . . . pg. 07

Component 3: Leverage an interdisciplinary team . . . . pg. 08

Results . . . . pg. 10

Related . . . . pg. 12

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Overview

The challenge

Some complex patients need medical care but not necessarily an acute care bed. Yet clinicians sometimes admit these patients to acute care because they worry those patients won't access the care they need in the community.

The organization

Markham Stouffville Hospital, a 350-bed community hospital in Ontario, Canada, created a hospital-to-home program in 2017.

The approach

Eligible complex but medically stable patients receive care from an interdisciplinary team at home rather than in a hospital.

The result

Within six months of implementing the hospital-to-home program, Markham saw an 80% decrease in ED visits among enrolled patients. Patients enrolled in the program also reported high satisfaction with services, quality of care, and support from hospital-to-home staff.

80%

Decrease in ED visits for enrolled patients within 6 months

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Approach

How Markham Stouffville developed their hospital-to-home program

To increase quality and patient satisfaction, Markham Stouffville Hospital sought to move certain patients out of the hospital and instead deliver care in their homes. Markham collected data to choose the right patients for the program, then leveraged a multilevel care team to safely deliver care in patients' homes.

The three components

Markham Stouffville's hospital-to-home program has three key components:

01 Identify patient population that will benefit most from hospital-to-home program

02 Enroll eligible patients in program

03 Leverage an interdisciplinary team to deliver comprehensive, subacute care at the patient's home

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01 Identify target patient population that will benefit most

The hospital-to-home program is resource intensive and best for a subset of patients with chronic, subacute care needs. To determine which patients to include in the program, leaders at Markham Stouffville analyzed data from 800 patients and found the following:

- 15% of admissions were patients with three or more comorbidities, who have been admitted to a hospital three or more times in the past six months.
- These same patients accounted for 60% of Markham's readmission rate.

We recommend a similar data analysis for other organizations looking to implement a hospital-to-home program. However, organizations unable to conduct a data analysis can consider targeting patients who are medically stable but do not receive the level of care they need outside of the hospital, such as: **geriatric, homebound, or polychronic patients.** In addition, consider targeting patients with high readmission rates, which can yield a significant return on investment.

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Eligibility criteria

Leaders at Markham Stouffville developed eligibility criteria for the program using results from their data analysis. Below is a sampling of their inclusion and exclusion criteria.

Inclusion and exclusion criteria for eligibility

Inclusion	Exclusion
Patient hospitalized in last three months	Patient was seen by a palliative care team
One or more ED visits in past three months	Patient has a visiting MD/NP
One or more of the following: - Live alone	Patient is admitted to a long-term care facility

Find the full version of this table in the supporting artifacts section on page 13.

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02 Enroll eligible patients in hospital-to-home program

Patients are enrolled in the hospital-to-home program in a number of ways. The most common enrollment point is when an eligible patient presents in the emergency department. When the ED physician assesses a patient and determines the patient does not need to be admitted but would benefit from care, staff then use the eligibility criteria to determine if the patient should be offered enrollment in the program. If the patient accepts, then they are enrolled and sent home that day.

However, clinicians across the care continuum, including PCPs, internists, and providers from retirement homes, can refer patients to the program at any point.

Markham Stouffville currently has 450 to 500 patients enrolled in the program.

Common points of entry into hospital-to-home program

Emergency department

Referral from PCPs and internists across the care continuum

Referral from retirement home providers

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03 Leverage an interdisciplinary team to deliver care at home

Once an enrolled patient is home, their care is delivered by an interprofessional care team that includes:

- **Nurse navigators**. Nurse navigators are integral to the program. They're a patient's first point of contact and reached via phone. They triage concerns, dispatch the appropriate provider, or refer the patient back to the ED.
- **Advanced care paramedics and nurse practitioners**. These two roles provide most of the care to patients at home. Most often, advanced care paramedics are first to respond to patients' acute care needs. Advanced care paramedics can administer basic medications and conduct point-of-care lab tests in the patient's home. If needed, paramedics also liaise with nurse practitioners to provide more acute care.
- **Internists.** Internists hold virtual consults with patients and nurse practitioners when an intervention is required, such as when there are changes to treatment plans and medication dosages. Internists are available for consults seven days a week via OTNConnect, a secure virtual platform, and conduct an average of five to six virtual consults per day.
- **Community PCPs**. Community PCPs are available to deliver routine primary care to patients if they do not have a PCP or their PCP does not conduct house calls.

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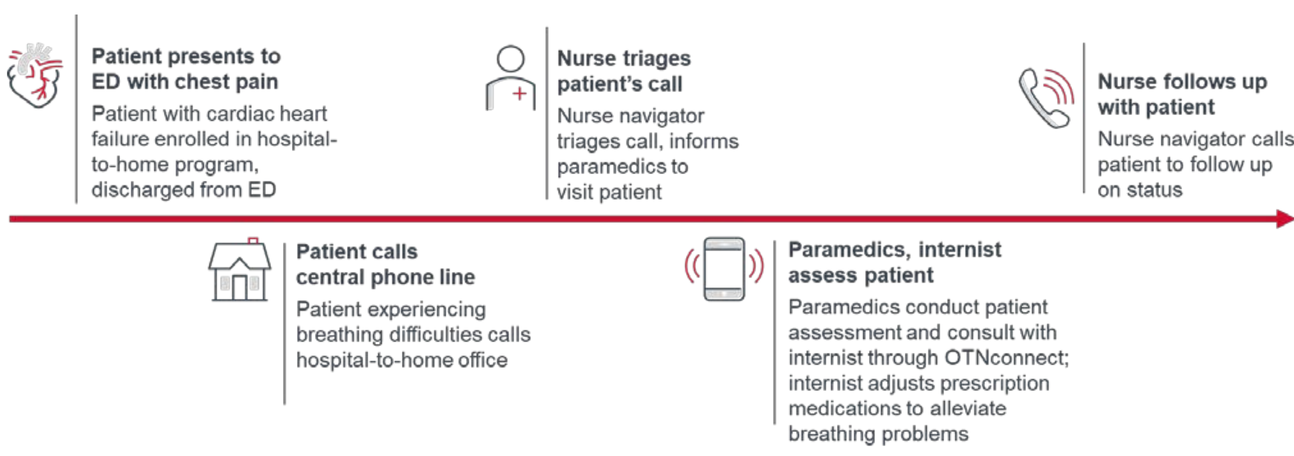
The interprofessional team provides comprehensive care to enrolled patients at home. Below is a snapshot of a patient's journey through the hospital-to-home program.

Patient's journey through Markham's hospital-to-home program



Once a patient is medically stable, they remain in the program for an additional six months. During this time, the nurse navigator periodically follows up with patients to identify any additional medical concerns or deterioration. After six months, the patient "graduates" out of the program.

Interprofessional team leverages technology to coordinate care

To ensure seamless care coordination, Markham Stouffville uses secure channels of communication, including dedicated phone lines and a virtual care platform called OTNConnect. OTNConnect is a secure mobile app used by providers across Ontario that allows for two-way videoconferencing, messaging, and calling. Its features ensure easy communication between patients and the care delivery team.

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Results

Hospital-to-home reduces ED visits, avoidable stays

The hospital-to-home program improved readmission rates at Markham Stouffville and increased patient satisfaction. By receiving care at home, patients also decrease their risk of hospital-acquired infections.

80% Decline in ED visits for enrolled patients over 6 months

95% Patient satisfaction with program services, quality of care, and support from hospital-to-home staff

Hospital-to-home supports patients' families and caretakers.

I am eternally grateful for having the support of the nurse navigator, paramedic, and nurse practitioner. I do not have adequate support from my family doctor for my elderly parents' care. This helps me know what to do and assists in frequent ED visits (my mom suffers delirium). Thank you so much for everything you do!

Daughter of hospital-to-home patient
Markham Stouffville Hospital

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RESULTS

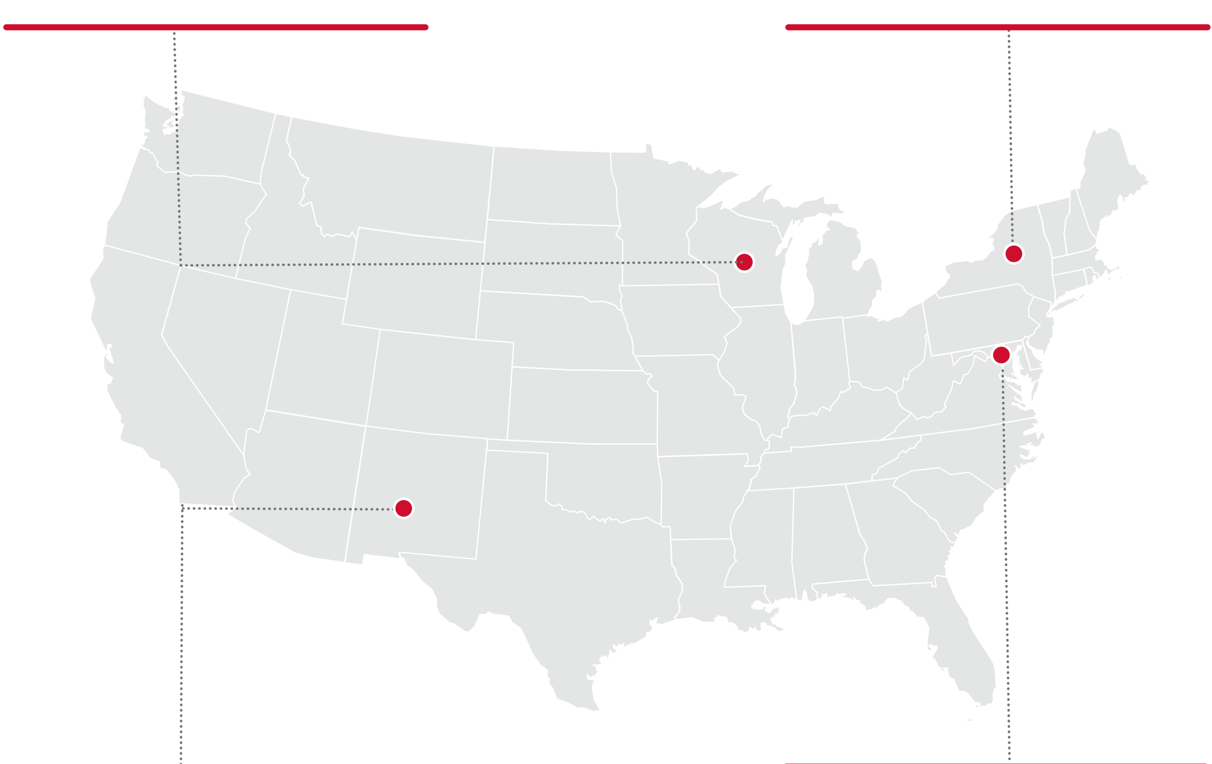
U.S. organizations have implemented similar home-care programs with comparable successes, including reductions in average length of stay (ALOS) and readmission rates, and high patient experience scores. Highlights of some of these programs are shown below.

Marshfield Clinic Health System

93% patient satisfaction scores since inception, consistently higher than traditional inpatient scores

Mt. Sinai Health Systems

ALOS 2.3 days shorter; readmissions decreased to 8.6% from 15.6%; ED visits decreased to 5.8% from 11.7%



Presbyterian Health Services

ALOS .91 days shorter; mortality rates decreased from 3.4% to 0.93%; fall rates decreased from 0.8% to 0%

Johns Hopkins Health System

Patients and caregivers judge hospital-at-home care quality higher than acute hospital care in satisfaction surveys

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Supporting artifacts

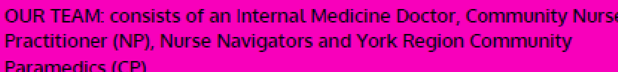
Markham Stouffville's hospital-to-home program pamphlet

Hospital to Home

MARKHAM STOUFFVILLE HOSPITAL

What is the Hospital to Home Program?

The Hospital to Home Program delivers comprehensive and timely care for patients with complex medical needs. We provide care to patients in the community as well as those transitioning home from the hospital. Care is provided in collaboration with community partners such as CLHIN, NLOT, Geriatric Outreach team and more.



OUR TEAM: consists of an Internal Medicine Doctor, Community Nurse Practitioner (NP), Nurse Navigators and York Region Community Paramedics (CP).

WHAT WE OFFER:
* 7 days a week access to Nurse Navigators for medical and community support
Mon-Fri 9:00am-7:00pm
Sat-Sun 9:00am-5:00pm
* Community care integration
* Consistent interprofessional care
* Resource for primary care professionals in the community looking for a second opinion or specialist consult

CARE IN THE HOME:
* Community NP care for complex patients who are bed-bound with no visiting primary care provider
* Servicing **Markham**, **Unionville** and **Stouffville**
* York Region CP available for complex patients with urgent (complex medical) concerns/issues
* CP visits include communication with MD or NP via phone or OTN

INCLUSION CRITERIA:
* **Complex** patients with multiple comorbidities
* Assessed need for **Longitudinal Care**
* Referrals from primary care physicians
https://www.msh.on.ca/sites/default/files/documents/M-COMMCHHPR%209-18.pdf

EXCLUSION/DISCHARGE CRITERIA:
* Patients seen by the Palliative Care Team
* Patients with a visiting MD/NP
* Admission to a long term care facility
* Stable for greater than 6 months

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Inclusion and exclusion criteria for eligibility

Inclusion criteria

A patient must have 2 or more of the following:

1. Patient hospitalized in the past 3 months.
2. One or more ED visits in the past 3 months.
3. One or more of the following:
   - Live alone
   - Poor nutrition
   - Failure to cope at home
   - Frailty
   - Risk of failing
   - 5 or more medications
   - Burned out care giver
   - Physical disability such as legal blindness or limited mobility
4. Chronic disease and unable to attend usual clinical follow-up or need at-home monitoring of chronic disease

Exclusion criteria

A patient is disqualified by any of the following:

1. Patient was seen by a palliative care team.
2. Patient has a visiting MD/NP.
3. Patient is admitted to a long-term care facility.
4. Patient has been stable for greater than 6 months.

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Related

RESEARCH REPORT
Nurse-Led Strategies for Preventing Avoidable Readmissions

TOOLKIT
The On-Time Discharge Toolkit

RESEARCH REPORT
Achieving Care Continuity

RESEARCH REPORT
Seamless Care Transitions

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