



Community and Health Services Department
Office of the Commissioner

Memorandum

To: Members of Committee of the Whole

From: Adelina Urbanski
Commissioner of Community and Health Services

Date: November 3, 2016

Re: **Update on the Expanding Paramedicine in the Community Study**

The memorandum provides an update on the Expanding Paramedicine in the Community (EPIC) project that was approved by Council on February 21, 2013.

The EPIC trial was designed to evaluate the impact of integrating expanded scope community paramedics into Family Health Teams and is aimed at improving the health of patients with diabetes mellitus (DM), chronic obstructive pulmonary disease (COPD) and congestive heart failure (CHF).

Starting in July of 2013, 268 patients were enrolled in the EPIC research study. Of the 268 patients enrolled, 136 patients were randomly placed into the intervention group and received care from their regular family physician and the community paramedics; 132 patients were placed into the control group receiving the standard care from their family physician only.

On November 30, 2015, the research portion of EPIC was completed and paramedics and family physicians collaborated to ensure the patients needing the most support remained in the program while the results of the EPIC program were evaluated.

Analysis of the data collected during the EPIC project is now underway

Collection of final data and analysis began December 2015. As part of the analysis, several aspects of the program are being evaluated including:

- Rates of hospital admission
- Emergency Department use
- 911 calls for paramedic services

- Length of hospital stay if admitted to hospital
- Quality of life before and during enrollment in the EPIC program
- Patient, physician and paramedic satisfaction with the EPIC model
- Financial analysis of the EPIC model of care

A key element of the analysis comes from data that is collected from the Institute of Clinical and Evaluative Sciences (ICES) which capture the province-wide health care an individual uses over time. At the end of each calendar year, ICES begins to collect and prepare the previous year's data for researchers to analyze. The project's research partner, Rescu, is currently awaiting some elements of the data required from ICES to be able to finish evaluation of the program.

Analysis of Interim Data is showing promising results

As an interim measure, data was collected from Markham-Stouffville Hospital (MSH) to perform a preliminary assessment of the EPIC program. It is important to note that this data is only for patients who were seen at MSH and does not include any data from patients who have presented to other hospitals. Therefore, these results provide a partial picture of the EPIC program outcomes and the final results may vary from the examination of the full ICES data. However, this data does provide a promising snapshot of the effects of the program.

Paramedics safely managed 90% of patients experiencing complications in their home, stopping the need for a 911 call and being seen at an emergency department.

Patients in the EPIC program have the ability to call EPIC paramedics directly when they feel their health is worsening. In these cases, community paramedics proceed to the patient's home and are able to use their expanded skills, in collaboration with the patient's physician, to treat the patient in-place.

Over the course of the trial, paramedics responded to 136 calls for patients experiencing worsening of their condition and were able to manage over 90% of these calls in the patient's home, reducing the need for 911 calls and emergency department visits (*Figure 1, Attachment 1*).

EPIC resulted in 33% fewer visits to the emergency department

A before and after comparison of emergency department visits of patients in the treatment group showed a 33% reduction in visits after being enrolled in the EPIC program. (*Figure 2, Attachment 1*).

35% fewer calls were made to 911 by patients receiving community paramedic care

An analysis of 911 responses to patients who were enrolled in EPIC was completed using the Electronic Patient Care Reporting system. This comparison was done measuring 911 responses between the control and treatment groups. Patients enrolled in the treatment group made 35% less calls to 911 compared to patients in the control group (*Figure 3, Attachment 1*).

In 2015, York Region Paramedic Services responded to 14,507 patients with COPD, DM or CHF which accounts for 21% of the total annual responses. If this result was transposed Region-wide, over 7% of the current paramedic call volume (approximately 5,000 responses) would be prevented if residents had access to community paramedics.

Treatment group patients had shorter length of hospital stay by 44 days compared to control group patients

Patients with chronic medical conditions will generally worsen over time leading to increased need for hospitalization. Patients in the treatment group were 18% less likely to be admitted to hospital and, when admitted, showed a total decrease of 44 days in length of hospital stay (*Figure 4, Attachment 1*).

Patient satisfaction results demonstrate that patients are highly satisfied with the EPIC program

In reviewing satisfaction surveys of 97.5% of patients in the treatment group, overall satisfaction scores (0 lowest to 5 highest) ranged from 4.3 - 4.9 and the EPIC Community Paramedics were seen as valuable, compassionate, knowledgeable and sensitive. Patients were highly satisfied with the services provided, would recommend the program to others and felt highly motivated to maintain or improve their own health and well-being.

Patients in the treatment group also expressed that:

- The program offers them security and a safety net.
- They feel supported and have the ability to get quick care when they start to feel unwell.
- They feel safe and more connected to health care with regular paramedic visits.
- The program provides holistic care and empowers them to self- manage their condition.

EPIC received funding from the Ontario Ministry of Health and Long-Term Care between 2014 and 2016

Between 2014 and the end of September 2016 the total cost for the EPIC program has been \$1.198 million. In an effort to support Community Paramedicine programs, the Ministry of Health and Long-Term Care has committed \$639,700 in funding to this project until April 2017.

In recent discussions with the Ministry we have been informed that future funding responsibility for Community Paramedicine programs will be shifted to the Local Health Integration Network (LHIN).

Community and Health Services along with Paramedic Services have been working with the Central LHIN to secure further funding for Community Paramedicine initiatives and other departmental and corporate priorities.

In conclusion, preliminary data is demonstrating that the EPIC program has the ability to decrease the amount of 911 responses, emergency department visits, hospital admissions and hospital length of stay in patients with COPD, DM and CHF.

It is important to note that the data presented is preliminary data and that full analysis of the EPIC program will be completed by Rescu our research partner.

Once full analysis is complete, staff will provide a full report to Council.

Adelina Urbanski
Commissioner of Community and Health
Services

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Attachment (1)

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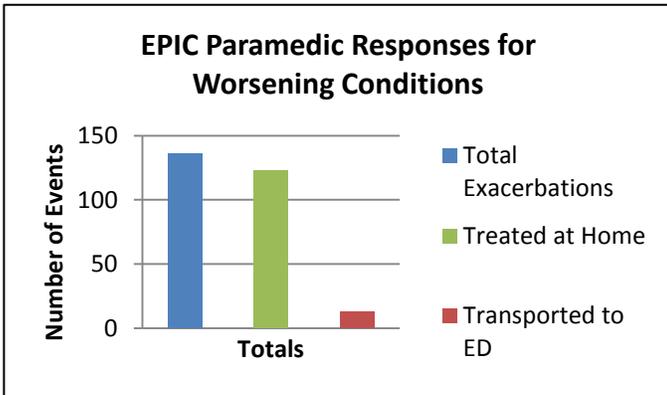


Figure 1: 90% of worsening condition calls from EPIC treatment patients were managed in the patient's home without the need for an emergency department (ED) visit.

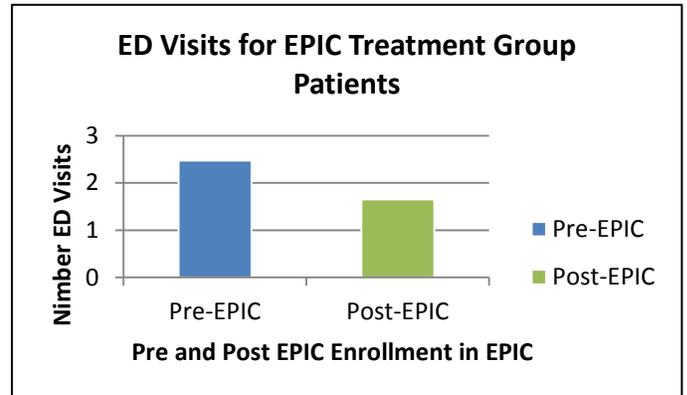


Figure 2: Patients enrolled in the EPIC treatment group had a 33% decrease in emergency department (ED) visits after enrollment in the EPIC program.

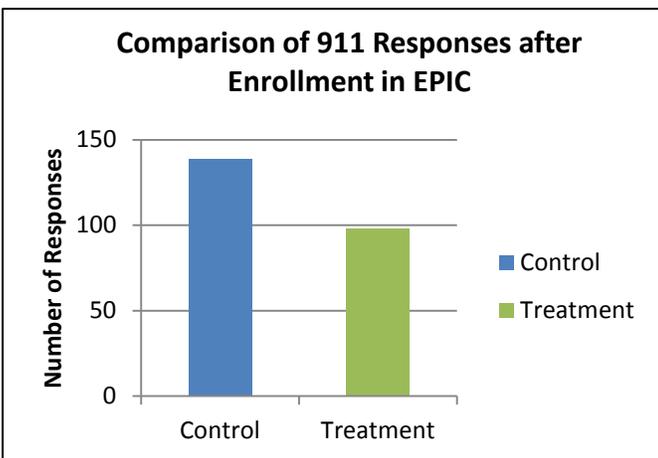


Figure 3: Patient enrolled in the EPIC treatment group demonstrated a 35% decrease in the need for a 911 response compared to the control group

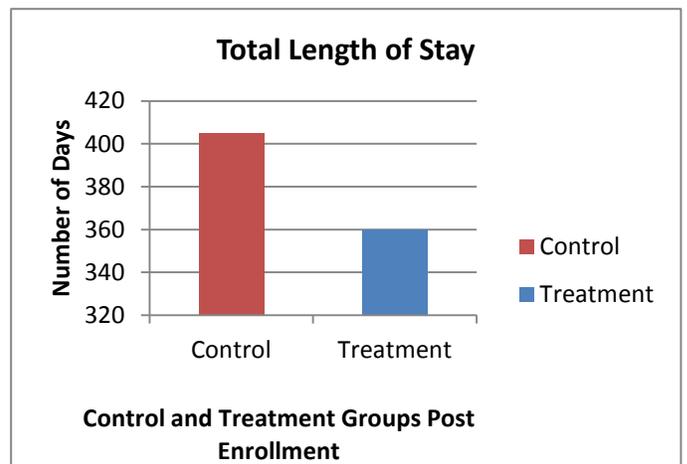


Figure 4: Treatment group patients had shorter length of hospital stay by 44 days.