# The Impact of Pharmacist Medication Management on 30-Day Hospital Re-admission Rates as a Member of a Rapid Response Transitional Team

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## Background

- Unplanned hospital admissions are associated with increased mortality and health care costs. In Canada, 1 in 11 patients are re-admitted within a month of discharge.[1]
- Median rates of re-admission due to drugs has been reported as 21%, those deemed preventable in 69% of cases.[2]
- Pharmacist involvement in hospital transitions of care can lead to reduced Emergency Room visits and hospital re-admissions.[3]
- Nurse-led Rapid Response Transitional Teams (RRTT) have been created to ensure patients thrive out of hospital to prevent hospital re-admissions, however very few of these teams include a pharmacist.

## Description

- The RRTT studied includes health care providers in a Local Health Integration Network (LHIN) in Ontario.
- Patients cared for by the RRTT are referred by their family practitioner or have been recently discharged from hospital that are deemed medically complex and high risk of hospital admission or re-admission.
- This LHIN RRTT has contracted pharmacists to conduct in-person medication management (MM) for patients in their homes since 2013.

## Action

- The RRTT nurse identified patients to be referred to a pharmacist for in-home medication management (MM) which includes the following:
  - Medication reconciliation
  - Identification and resolution of medication discrepancies and drug-related problems
  - Patient counselling, coaching and education
  - Provision of health literacy
  - Medication disposal
  - Follow-up with patient's primary care physician and community pharmacy
- The pharmacist utilized the electronic medical record (EMR), community pharmacy medication histories and other resources/tools as required.
- The patient encounter and pharmacist recommendations were documented in the RRTT EMR.

## Evaluation

**Table 1:** Rapid Response Transitional Team Patients Re-admission to Hospital Aug 2017 to Dec 2017

| Pharmacist Visit | Total | Readmitted To Hospital Within 30 Days | | Readmitted To Hospital After 30 Days | | Not Readmitted To Hospital | |
|---|---|---|---|---|---|---|---|
| | # Service Referrals | Service Referrals | | Service Referrals | | Service Referrals | |
| | | # | % | # | % | # | % |
| Total | 1,407 | 282 | 20.04 | 77 | 5.47 | 1,048 | 74.48 |
| No | 1,324 | 268 | 20.24 | 71 | 5.36 | 985 | 74.40 |
| Yes | 83 | 14 | 16.87 | 6 | 7.23 | 63 | 75.90 |

**Table 2:** Number of Days Until First Pharmacist Consult for Rapid Response Transitional Team (RRTT) Aug 2017 to Dec 2017

| | Total | Consultation Occurred While on RRTT | | Consultation Occurred Within A Week Of RRTT Ending | | Consultation Occurred Within A Month Of RRTT Ending | | Consultation Occurred After A Month Of RRTT Ending | |
|---|---|---|---|---|---|---|---|---|---|
| | | # | % | # | % | # | % | # | % |
| # Service Referrals | 83 | 60 | 72.29% | 18 | 21.69% | 3 | 3.61% | 2 | 2.41% |

## Results

- Patient referrals seen by the pharmacist as member of the Rapid Response Transition Team had a lower 30-day readmission rate (16.87 %) compared to patients who did not (20.24 %).
- The majority (94%) of referrals were seen by the Rapid Response Transitional Team Pharmacist while they were actively involved in the program, or within a week of the program ending.
  - 72.29 % while currently on the program, 21.69 % within a week of program ending.

## Conclusions

- Integrating pharmacists on Rapid Response Transitional Teams to conduct in-home medication management can lead to a decrease in 30-day hospital re-admissions.
- Adding a home visiting pharmacist to the provincially funded Rapid Response Transitional Teams for select patients on complex medication regimens should be considered by all Local Health Integration Networks.
- Further study on the impact of pharmacist medication management as a part of Rapid Response Transitional Teams specifically on:
  - Patient health care outcomes
  - Health care utilization (hospital re-admissions and Emergency Room visits) at one, three and six post discharge
  - The impact on hospital re-admissions and Emergency Room visits at one, three and six month attributed to drug therapy
  - Establishing criteria to identify those patients who would most benefit from a RRTT pharmacist referral.

## References

1. Canadian Institute for Health Information. https://yourhealthsystem.cihi.ca/hsp/inbrief?lang=en#!/indicators/006/all-patients-readmitted-to-hospital. Accessed Jan 7, 2019.
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3. Phatak A, Prusi R, Ward B et al. Impact of pharmacist involvement in the transitional care of high-risk patients through medication reconciliation, medication education, and post discharge call-backs. J Hospital Medicine 2106;11:39-44.

## Disclosure Summary

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