# The Benefits Of Providing Occupational Therapy In A Canadian Emergency Department

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## Introduction

The provision of Occupational Therapy (OT) services in the Emergency Department (ED) has been proven to benefit patients, the larger health system, and other health care providers in international settings[1]. A critical literature appraisal was completed in 2011 and presented at that year's CAOT conference detailing these benefits:

| Patient Benefits |
|---|
| Catching undiagnosed functional impairments/more comprehensive functional assessments |
| Promoting independence/staying in independent living environment longer |
| Decreased risk of falls |
| Reduced anxiety/fear |
| Individual attention |
| Prevention of unsafe discharges |
| General appreciation for OT service |
| Improved safety upon discharge |

| System Benefits |
|---|
| Prevention of inappropriate or unnecessary hospital admissions |
| Reductions in hospital length of stay |
| Prevention of subsequent hospital admissions |
| Better (more specific, targeted) referrals to community services |
| Earlier start in discharge planning |
| Decrease in cost per patient treated |
| Relative low cost of program implementation |
| Generally maximizing ED patient through-put |
| More efficient utilization of ED staff resources |

| Provider Benefits |
|---|
| General appreciation for OT service |
| Positive effect on ED "culture" |
| Offloading other service providers |
| Improvement in decision-making process/increased collaboration |
| Presence of ED contact person to community service providers |

## Objective

To determine if the literature-proven effects of providing an Occupational Therapy service in the ED can be replicated in a Canadian setting through a structured evaluation, focusing on:

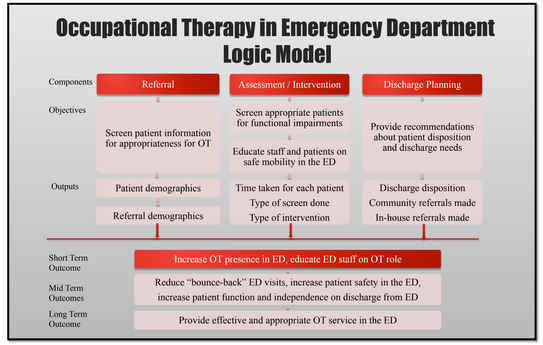
- Patients
- The larger health care system
- Other health care providers in the ED.

## Methods

A full-time Occupational Therapist position was piloted in a Canadian metropolitan hospital ED for ten months, focusing on ED patients over the age of 75 with functional impairments. The impact of this pilot project on patients, the system, and providers was evaluated using a mixed methods approach.

## Methods (continued)

The following logic model was constructed to guide program development and evaluation:




The OT intervention group was compared to a non-OT control group, examining ED return rates within 30 days. The control group was selected from patients age 75 and older who were discharged home from the same Emergency Department who did not receive OT assessment or intervention. A logistic regression was applied to an indicator (dummy) variable (whether or not the patient returned to an ED or Urgent Care Centre within Calgary within 30 days of the ED visit in question). Variables used in the model were:

- age at the time of the ED visit
- gender
- OT assessment/intervention
- assigned "Clinical Risk Grouper (CRG). The CRG is a tool used to classify individuals into severity-adjusted homogeneous groups, and was used in this study as a proxy measure of patient frailty.

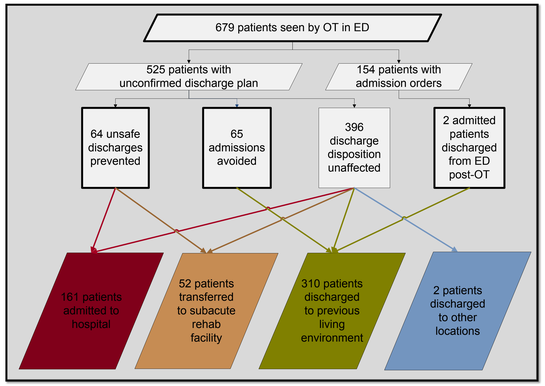
Each therapist and patient encounter (n=681) generated data on discharge-related outcomes: discharges supported by OT interventions /recommendations, and potentially unsafe discharges diverted. These were identified in the following fashion:

- Before the OT saw each patient, the referral source was asked whether the plan was likely for the patient to be admitted or discharged from the Emergency Department.
- Each time the OT intervention/recommendation changed that disposition from the original plan, that patient encounter was labeled as "admission avoided" or "unsafe discharge prevented".

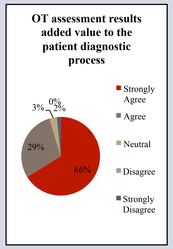
ED health care professionals were surveyed for their perception of the impact OT had on patient care and on the health care team, including perceived value added to the patient diagnostic and discharge planning processes.

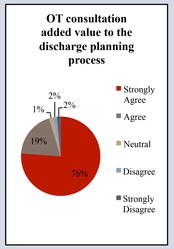
## Results

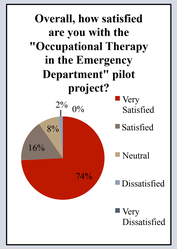
A total of 681 patients were seen by the OT in the Emergency Department over the 10 months of the pilot project. 2 patients were dropped from the examination of discharge disposition because of incomplete data. Of the remaining 679 patients, 154 already had hospital admission orders.
OT intervention led to a change in discharge disposition from the original plan in 129 cases (64 unsafe discharges from the ED prevented, 65 unnecessary admissions avoided).
A further 110 patients were impacted through linkages facilitated by the OT to specialized in-patient or community rehabilitation resources.




63 staff satisfaction surveys were returned fully or partially completed. Of the staff respondents, 14 were physicians (MDs), 38 were Registered Nurses (RNs), 7 were Transition Services RNs, 2 were Social Workers (SW), and 2 were Registered Orthopedic Technicians (ROTs).




## Results (continued)

Comparison between the OT (intervention) group and the control group did not show a reduction in odds of returning to the Emergency Department within 30 days of the original visit, even when controlling for age and CRG. (Odds ratio estimate with OT intervention = 1.625, 95% confidence limits 1.192-2.215, significant with a Pr > Chi Square of 00021)

## Discussion

Individual patients seen by the OT in the ED were significantly impacted through changes in discharge disposition, either through the prevention of unsafe discharges or admissions avoided. These two groups were almost the same size (N=64 vs. N=65), resulting in about the same total number of admissions/discharges, but with greater quality; the right patients accessing the system at the right time. Impacts of the OT assessment/intervention on individual patients could also be felt through connections with specialized rehabilitation resources, either in-patient (e.g. chest physiotherapy, wounds therapy) or out-patient (e.g. complex out-patient rehab clinics, resources for provision of adaptive equipment, chronic disease management groups, etc.).

Staff satisfaction with the program was high, with particular emphasis on the value the OT assessment/intervention added to the patient diagnostic and discharge planning processes. Satisfaction was consistently high between health care providers (physicians, nurses, social workers, and orthopedic technicians).

Study of the primary hospital/system-based outcome measure (return visits to ED within 30 days) did not show improvement. This may have been due to an imprecise manner of identifying similarly functionally impaired control patients (through retrospective application of Clinical Risk Grouper), and could be mitigated for in subsequent studies through the concurrent identification of controls.

## Conclusions

Providing full-time Occupational Therapy support in the Emergency Department affected patient- and health care provider-related outcomes, but not the primary hospital-related outcome. Further study will be focused on cost-benefit analysis of this program, on refining referral criteria, and on examination of causal factors in ED return rates.

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## Reference

Trenholm, J. (2011, June). OT Stat! Occupational Therapy in the Emergency Department (ED). Poster presentation at the annual conference of the Canadian Association of Occupational Therapists, Saskatoon, SK.