A realist evaluation of a nurse practitioner-led care transition intervention in Ontario, Canada

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OBJECTIVES

Nurse and nurse-practitioner care transition interventions have proven cost-effective at decreasing readmissions and emergency department visits among older, high-risk adults in the United States and Australia. However, there is a paucity of information regarding these types of interventions in a Canadian setting.

Using theory-driven evaluation based on Coleman's Transitional Care Model and Naylor's Transitional Care Model, a pilot nurse-practitioner-led care transition intervention was implemented in London, Ontario. This study aims to:

1) Apply theory-driven program evaluation to a nurse practitioner-led care transition intervention

1) Interpret the results of this program evaluation and determine whether or not the program was successful

DATA SOURCES & STUDY POPULATION

Data sources included:

- Patient chart reviews and primary data collection by a research assistant and a nurse-practitioner
- Semi-structured interviews of patients, hospital staff, CCAC managers, program steering-committee members, and the nurse-practitioner involved in the intervention.

The **study population** included all patients discharged from an acute care episode at participating hospitals between October 2010 and March 2011 who met the following criteria:

- Aged 65 years or older;
- Referred by hospital staff to an in-hospital CCAC case manager;
- Had a LACE score of greater than or equal to 10. The LACE screening tool has previously been validated to quantify risk of 30-day readmission based on length of stay, acuity, and co-morbidities during index admission, as well as emergency department visits in the six months prior to index admission.

MEASURES & ANALYSIS

Measures

- The primary outcome for the intervention was 30-day readmission to acute care. Readmission rates at 7, 60, and 90 days were also collected.
- Other patient baseline characteristics and health care use before and after the initial hospitalization were also measured.
- Semi-structured interviews were conducted at the end of the study to examine patients' experiences with the program [n=17], and program barriers and facilitators from providers and stakeholders [n=13] involved in the implementation of the intervention.

Analyses

- Thematic analysis of coded interviews

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RESULTS

FIGURE 1: CARE TRANSITION PROGRAM THEORY

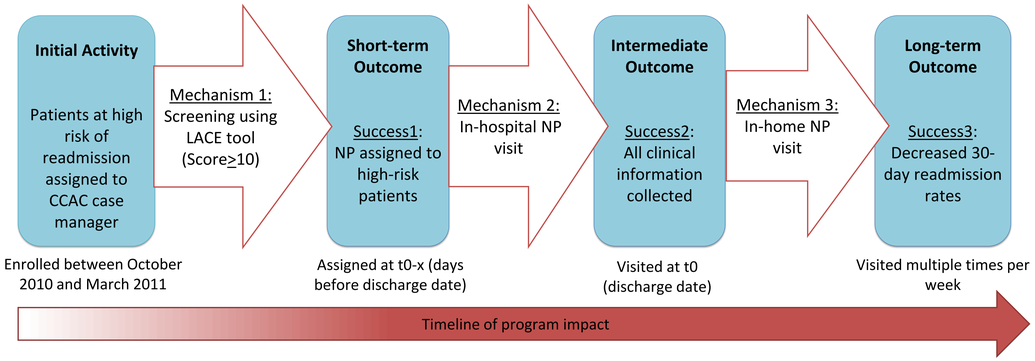


FIGURE 2: EVALUATION OF SHORT-TERM OUTCOME

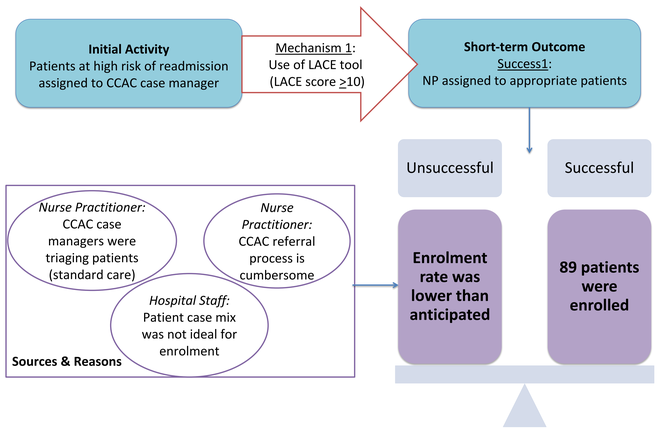


FIGURE 3: EVALUATION OF INTERMEDIATE OUTCOME

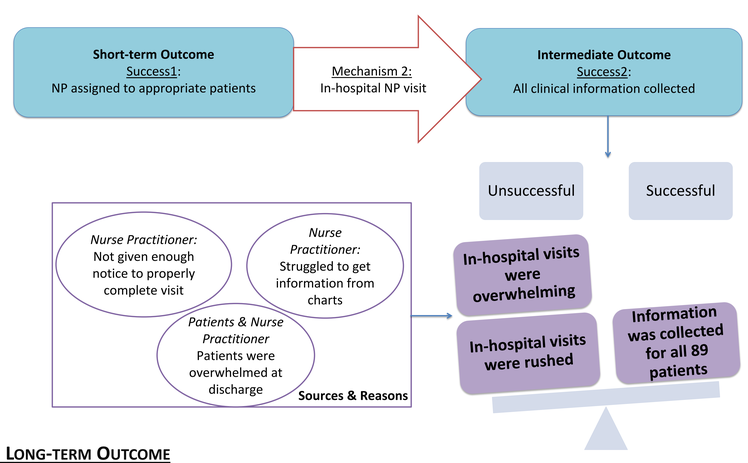
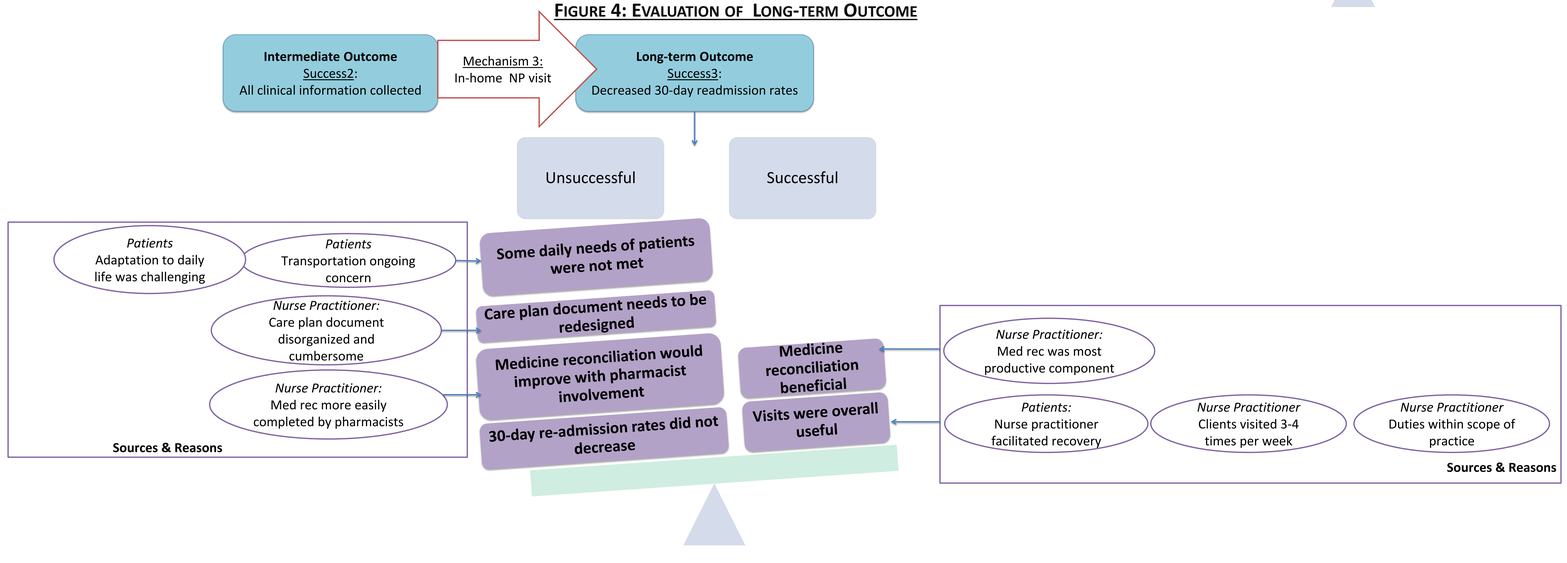


FIGURE 4: EVALUATION OF LONG-TERM OUTCOME



KEY FINDINGS

Short-term and Intermediate Outcomes were only partially successful

- 89 high-risk for readmission patients were enrolled in the program and visited by a nurse practitioner prior to discharge.
- Enrolment was lower than anticipated due to lack of adherence to study protocol, availability of appropriate patient case mix, and cumbersome CCAC referral process.
- In-hospital visits by the nurse practitioner felt rushed, were confusing to the patient, and collection of patient chart information was often difficult.

The program did not result in a decrease in 30-day readmission rates relative to comparative population

- In-home NP visits were useful for medication reconciliation only.

CCAC case managers and program steering committee stated that the program would be improved if:

- Implementation was less rushed
- Frontline staff were less confused and involved in program development
- Steering committee was more structured

Despite the partial success of this pilot program, according to patients, the in-home NP visits facilitated recovery.

IMPLICATIONS

The evaluation of patient-centred care-transition interventions targeted at high-user populations help guide policy makers in deciding how best to meet the needs of these high-cost patients. By evaluating small pilot programs using theory-driven evaluation, successful program elements can be elucidated and then adopted into larger more robust studies. Unsuccessful program elements can be restructured for further evaluation.

Theory-driven evaluation is a relatively new approach compared to traditional program evaluation systems. This study illustrates the usefulness of theory-driven evaluation in a transition to care intervention.

Future studies should focus on restructuring unsuccessful program elements to ultimately model a successful care transition intervention for this population.

ACKNOWLEDGMENTS

This research was supported by a research grant from the Ontario Ministry of Health and Long Term Care (MOHLTC) to the Health System Performance Research Network (HSPRN). The opinions, results and conclusions reported in this paper are those of the authors and are independent from the funding sources. No endorsement by the MOHLTC is intended or should be inferred.

Kristen Pitzul and Natasha Lane are supported by the Health System Performance Research Network (HSPRN) and the University of Toronto's School of Graduate Studies Travel Grant 2013. Natasha Lane is also supported by a CIHR MD/PhD Studentship and the 2013 R&F Ruggles Family Fellowship.

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