

# Case Management and Self-Management Support for Frequent Hospital Services Users with Chronic Disease in Primary Care: Research Protocol of a Pragmatic Intervention

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## CONTEXT

- Chronic diseases (CD) are the leading cause of mortality.
- A number of people with CD require increased health services due to characteristics that increase their vulnerability such as poverty, mental health disease and multimorbidity.
- Case management by primary care nurses could be an effective mode of care for patients with CD.
- The positive effects of self-management groups are widely recognized to encourage people with CD in playing a greater role in the management of their health.
- Few studies have examined the implementation mechanisms of case management and self-management programs in primary care.

## OBJECTIVES

The present study aims to implement and evaluate an intervention combining case management by a primary care nurse with group support meetings encouraging self-management based on the Stanford Chronic Disease Self-Management Program for frequent emergency department services and hospitalization users.

The evaluation-specific objectives are to:

- Analyze the implementation of the intervention within the existing structures of four Family Medicine Groups (FMG) in the Saguenay-Lac-Saint-Jean region, Quebec, Canada;
- Evaluate the effects of this intervention among patients;
- Conduct an economic analysis of the cost-effectiveness and cost-benefit of the intervention.

## METHODS

The evaluative approach will focus on:

- The implementation analysis: descriptive qualitative methods within four categories of key informants:
  - FMG stakeholders (doctors/nurses)
  - Managers (FMG/ health and social services centers)
  - Patients and their family
  - Partners of case management (health and social services centres professionals, representatives of community organizations and community pharmacists) and volunteer leaders of self-management groups.
- A realistic evaluation will be used to explain how various contexts influence observed effects and a participatory evaluation to determine the elements that could inform and help improve future interventions and decision-making.
- The evaluation of the effects on patients: pragmatic randomized before-after experimental design with a delayed intervention control group (six months);
- The economic analysis: cost-effectiveness and cost-benefit analysis.

## INTERVENTION

- The case management intervention focuses on four main components:
- A thorough evaluation of patient needs and resources;
  - Establishment and maintenance of a patient-centred, individualized service plan (ISP);
  - Coordination of services among partners; and
  - Self-management support for patients and families.

Figure 1. Intervention logic model

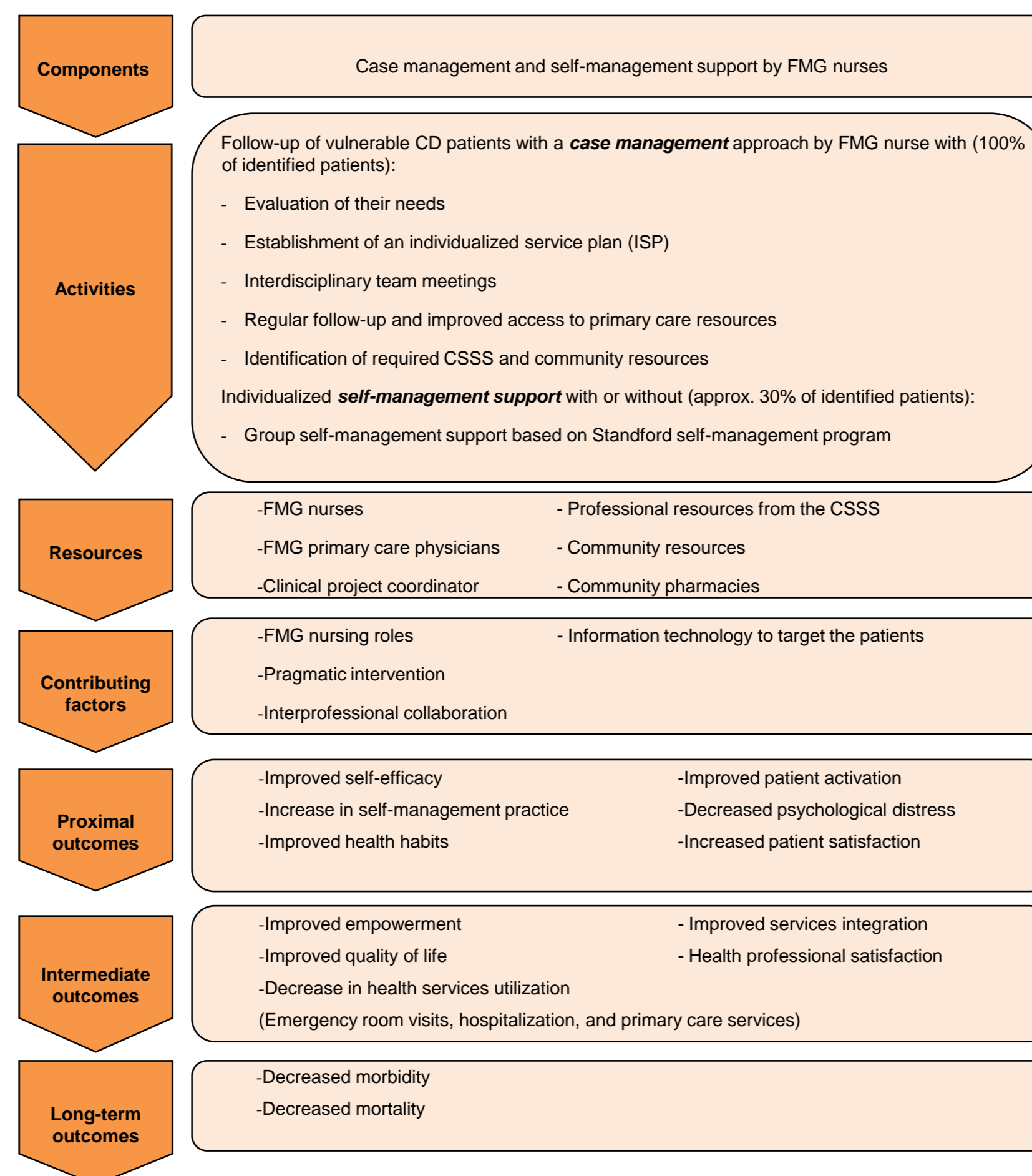


Figure 2. Study timeline

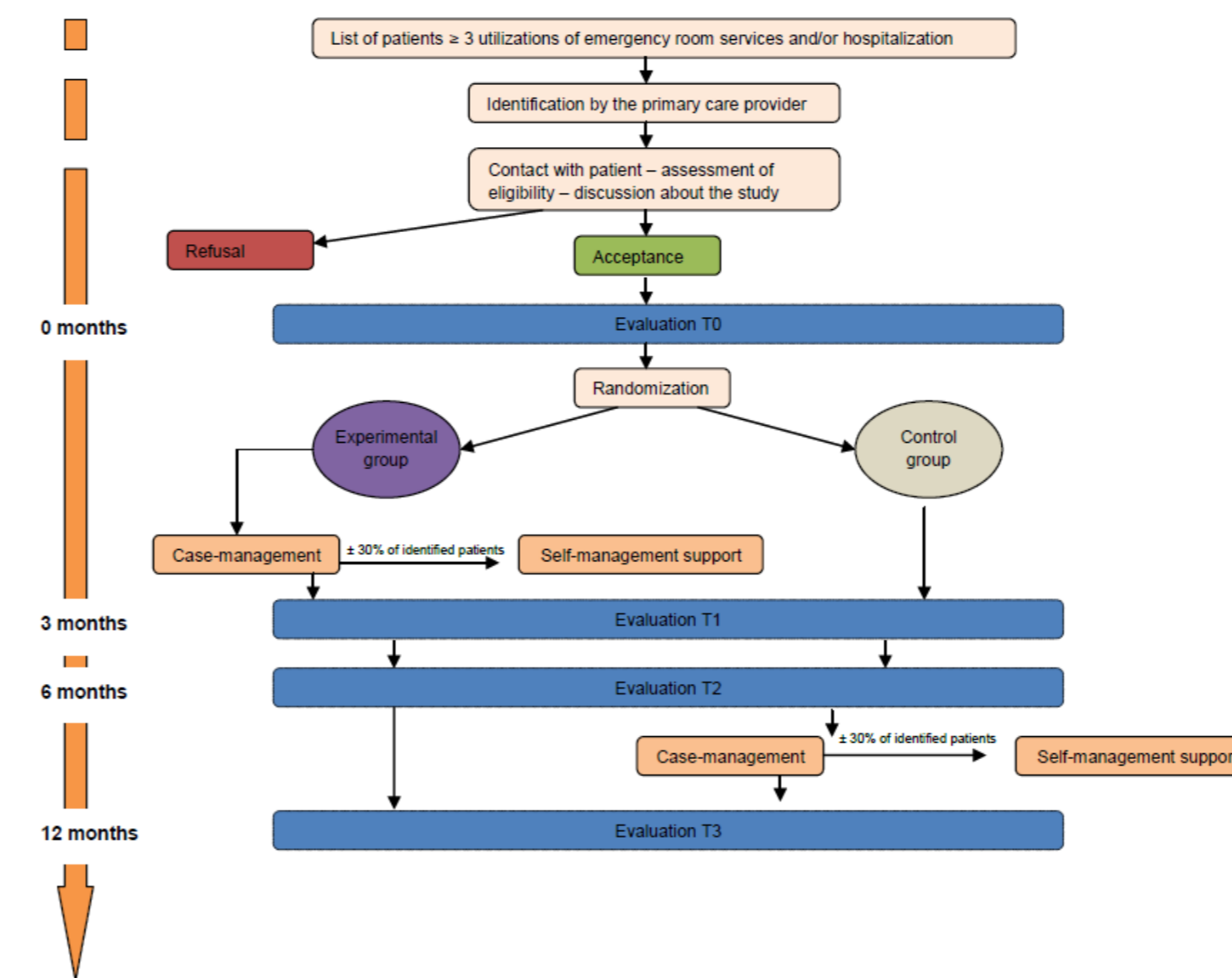


Table 1. Parameters of the implementation analysis

Parameters evaluated	FMG stakeholders	Managers	Patients / Family	Partners	Other sources
<b>Pre-implementation phase</b>					
Description of practice settings (contextual factors) (C)	FG ; II	II	FG	FG	
Description of the current processes, patient integration and satisfaction (C)	FG ; II	II	FG	FG	
Issues related to the implementation (C)	FG ; II	II	FG	FG	
<b>Implementation phase</b>					
Evolution of the processes and integration (I)	FG				
Identification of problems and failures (C)	FG				DR
Fidelity of the intervention (I)					IFC
<b>Post-implementation phase</b>					
Opinion about the implementation process (C)	FG ; II	II	FG	FG	
Identification of barriers and facilitating factors (C)	FG ; II	II	FG	FG	
Description of the impact on stakeholders/organizations (E)	FG ; II	II	FG	FG	
Satisfaction with the intervention (E)	FG ; II	II	FG	FG	

C : Context; I : Intervention; E : Effects.  
 FG: Focus group; II: Individual interview; DR: Documentation review; IFC: Intervention fidelity checklist.

Table 2. Measures

Variable	Instrument	Timeline
<b>COVARIABLES</b>		
Literacy	Newest Vital Sign (NVS)	0 month
Mental health	Hospital Anxiety and Depression Scale	0 month
Multimorbidity	Disease Burden Morbidity Assessment	0 month
<b>PROXIMAL OUTCOMES</b>		
Self-efficacy	Self-efficacy for Managing Chronic Disease	0, 3, and 6 months
Health habits	Questionnaire developed in the PRECISE study	0, 3, and 6 months
Patient activation	Patient Activation Measure (PAM)	0, 3, and 6 months
Psychological distress	Psychological Distress Scale	0, 3, and 6 months
<b>INTERMEDIATE OUTCOMES</b>		
Quality of life	SF-12	0 and 6 months
Empowerment	Health Education Impact Questionnaire (HeiQ)	0 and 6 months
Use of services (emergency department visits and hospitalizations)	MAGIC Chronique software by MédiaMed Technologies	0 and 6 months

## PARTICIPANTS

**Inclusion criteria:**

- ✓ 18 to 80 years old;
- ✓ Patient of the participating FMG;
- ✓ Frequent user of emergency department services and hospitalizations;
- ✓ Identified by the primary care provider as a potential participant.

## EXCLUSION CRITERIA

**Exclusion criteria:**

- ✓ Patient with serious cognitive problem, uncontrolled psychiatric illness and/or with a survival prognosis of less than one year;
- ✓ Patient already engaged in case management services.

## CONCLUSION

- The integration of a case management intervention delivered by nurses and self-management group support into primary care practices for frequent hospital services users with CD is a promising innovation in care delivery that needs to be thoroughly evaluated.
- This intervention has the potential to positively impact patient empowerment and quality of life and hopefully reduce the burden on health care.
- Decision-makers, managers and healthcare professionals will be aware of the factors to consider in promoting the implementation of this intervention into other primary care practices in the region and elsewhere.

