

# Integrated case management between primary care clinics and hospitals for frequent users of healthcare services: A multiple-case embedded study

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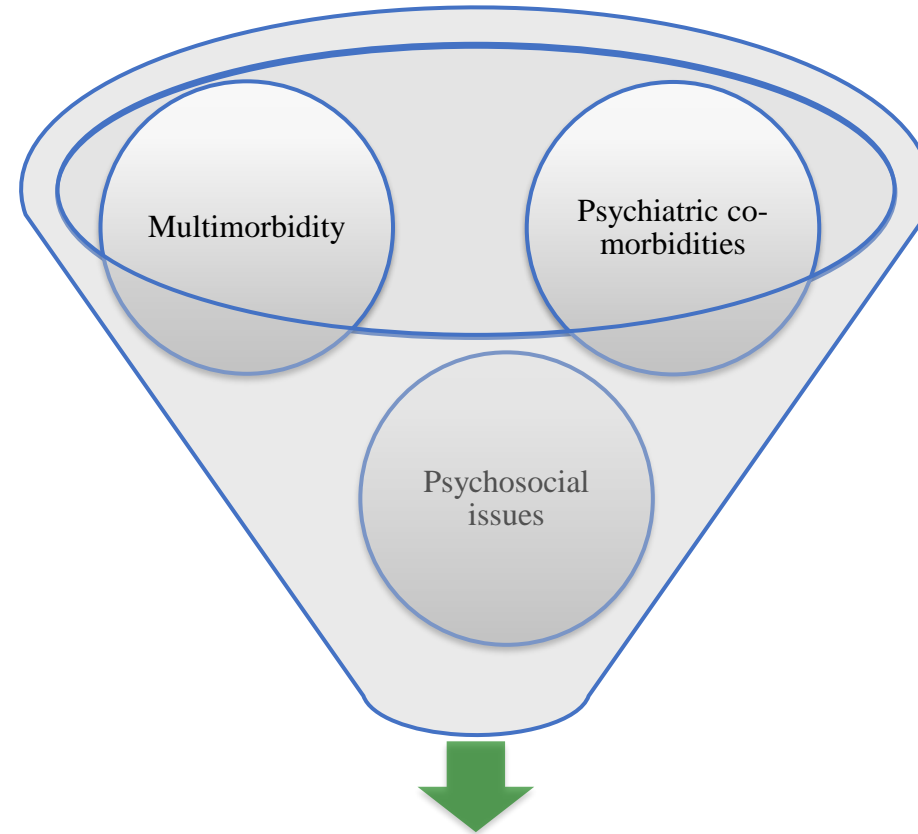
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Centre de recherche du CHUS

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# Team members

- ❖ Principal investigators: Catherine Hudon and Maud-Christine Chouinard
- ❖ Patient partner: Véronique Sabourin
- ❖ Research assistants: Annie-Pier Gobeil-Lavoie, Olivier Dumont-Samson and Mireille Lambert
- ❖ Co-Investigators: Yves Couturier, Marie-Eve Poitras and Thomas Poder
- ❖ Managers: Jean Morneau, Mélanie Paradis

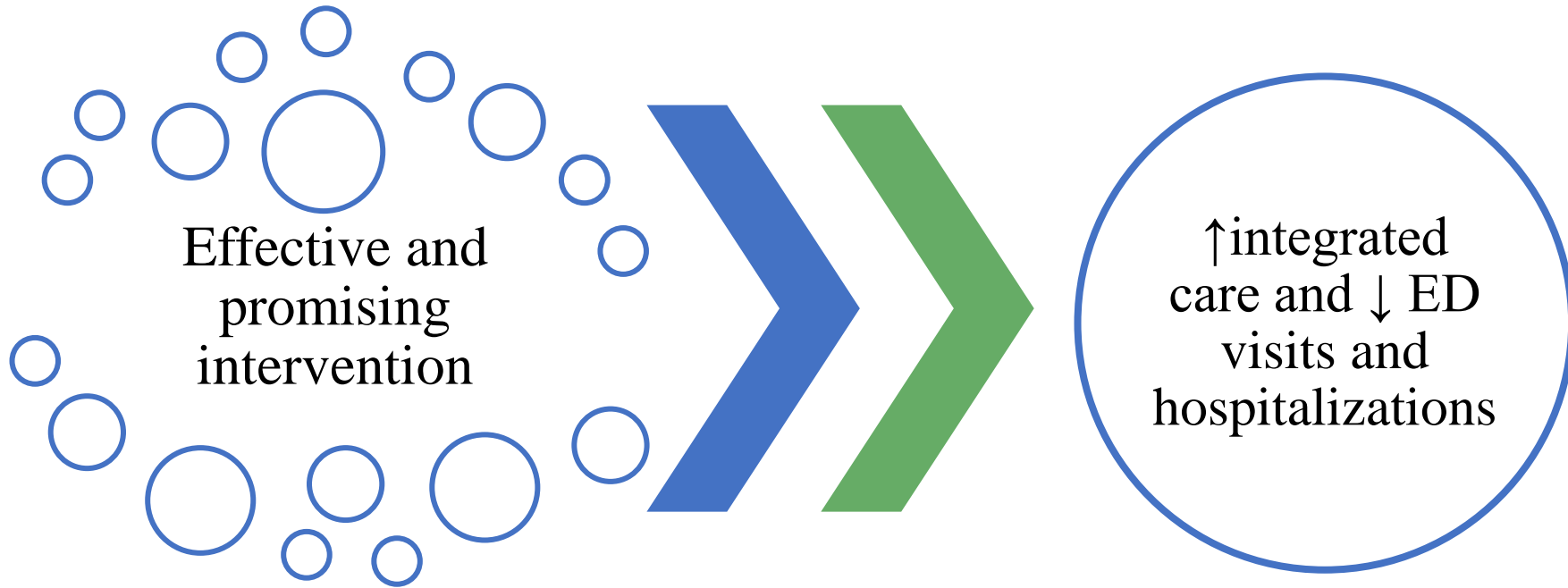
# Frequent use of healthcare services



Complex needs (Chan 2002; Ruger 2004; Lee 2006)  
and frequent use of healthcare services (Joo 2017; Soril 2015)



# Case management (CM) intervention

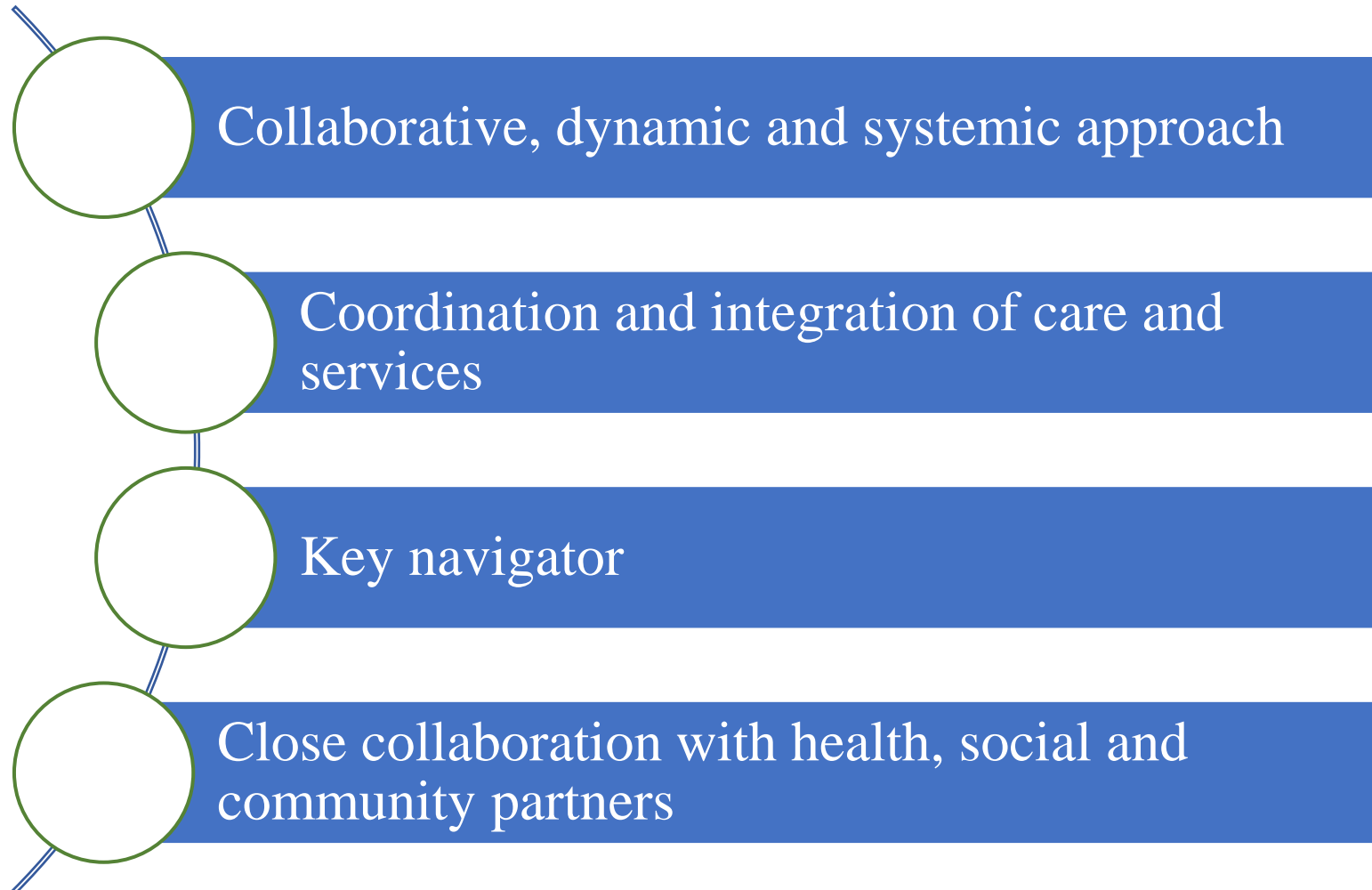


CM

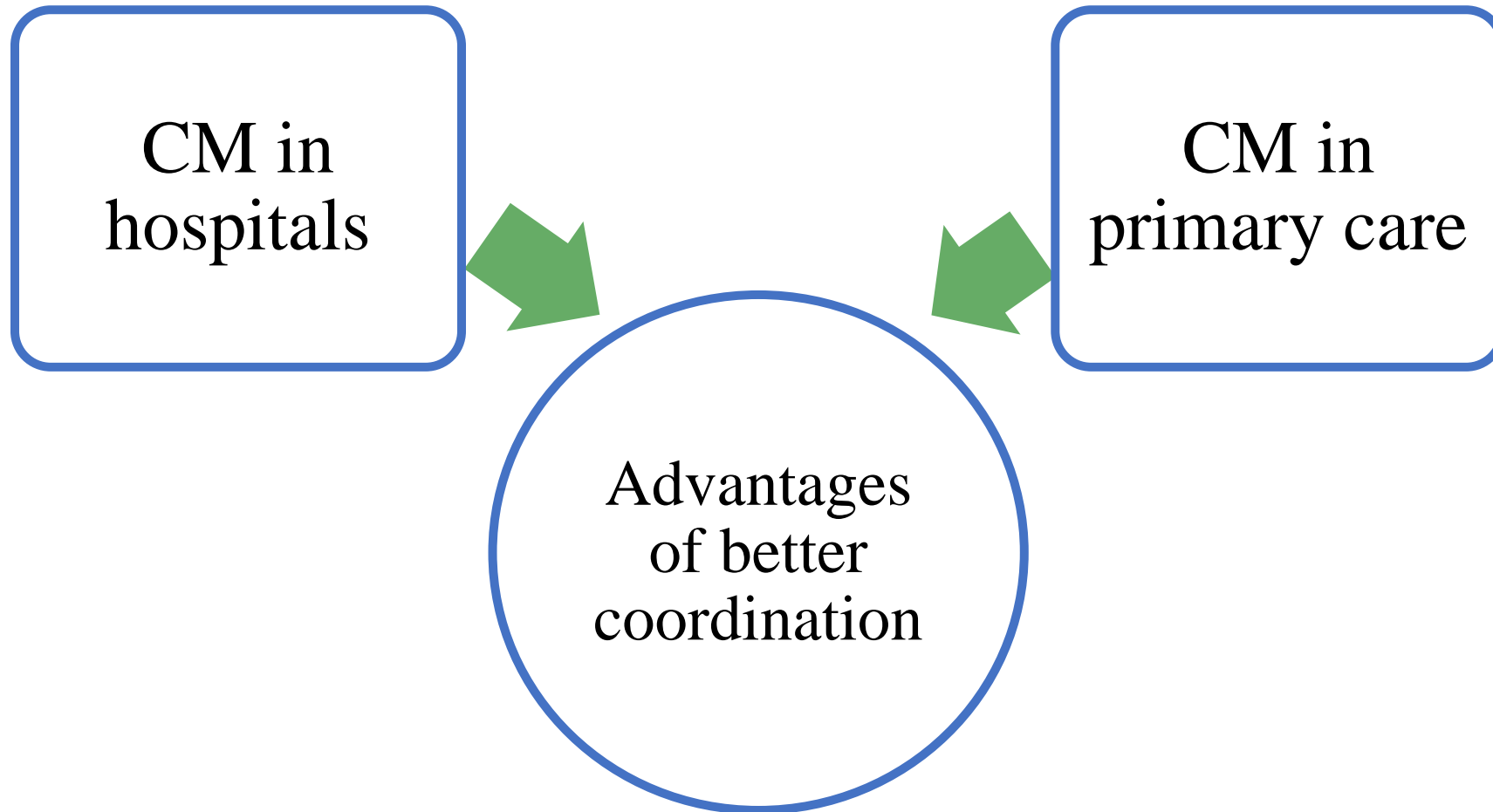
Frequent users



# Case management (CM) intervention



# Case management (CM) intervention: settings



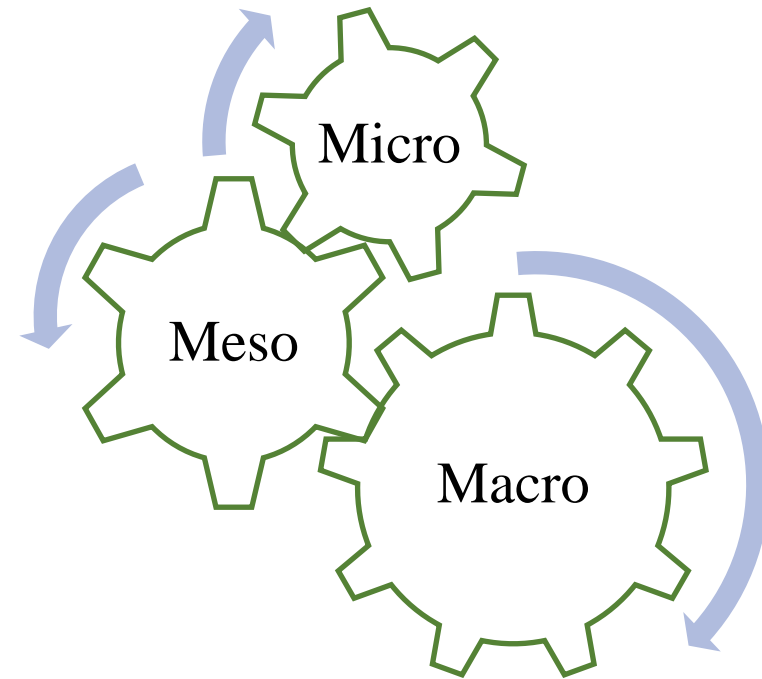
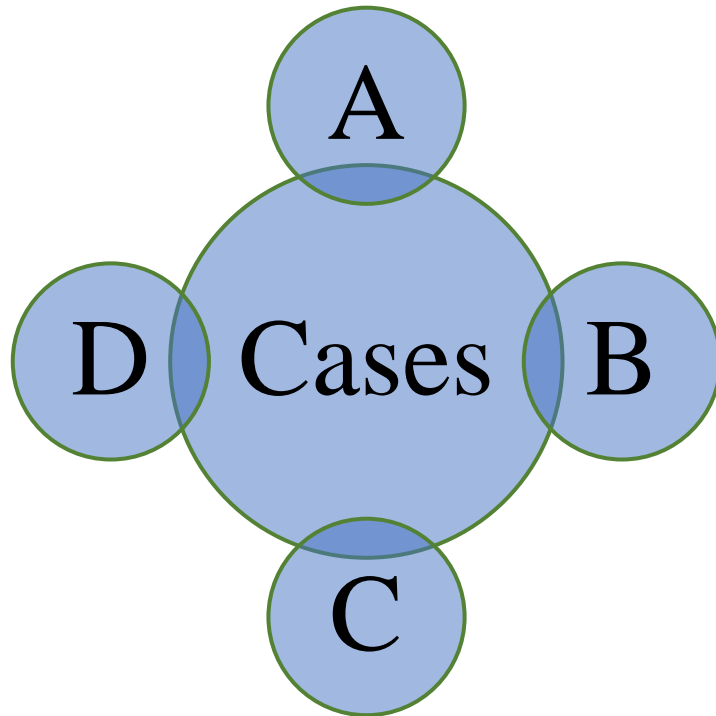
# Aim of the study

- ❖ To implement an integrated CM intervention where nurses of primary care clinics worked in close collaboration with a hospital case manager to provide an integrated CM intervention to frequent users of healthcare services
- ❖ To evaluate contextual factors facilitating or impairing implementation
- ❖ To evaluate qualitative and quantitative outcomes



# Multiple embedded case study design

*Qualitative + Quantitative*





# Consolidated Framework for Implementation Research (CFIR)

## Five major domains

Intervention characteristics

Outer setting

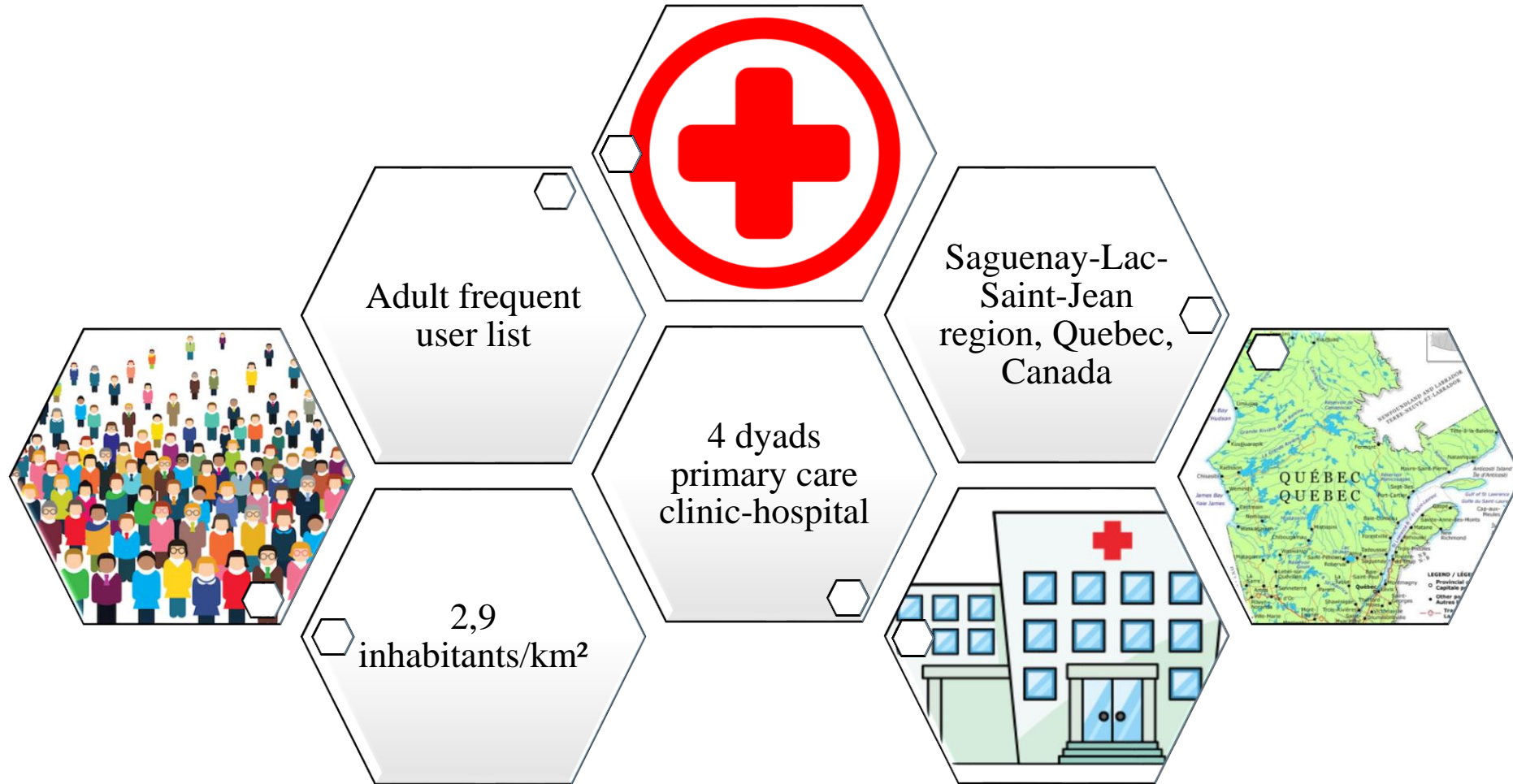
Inner setting

Characteristics of the individuals

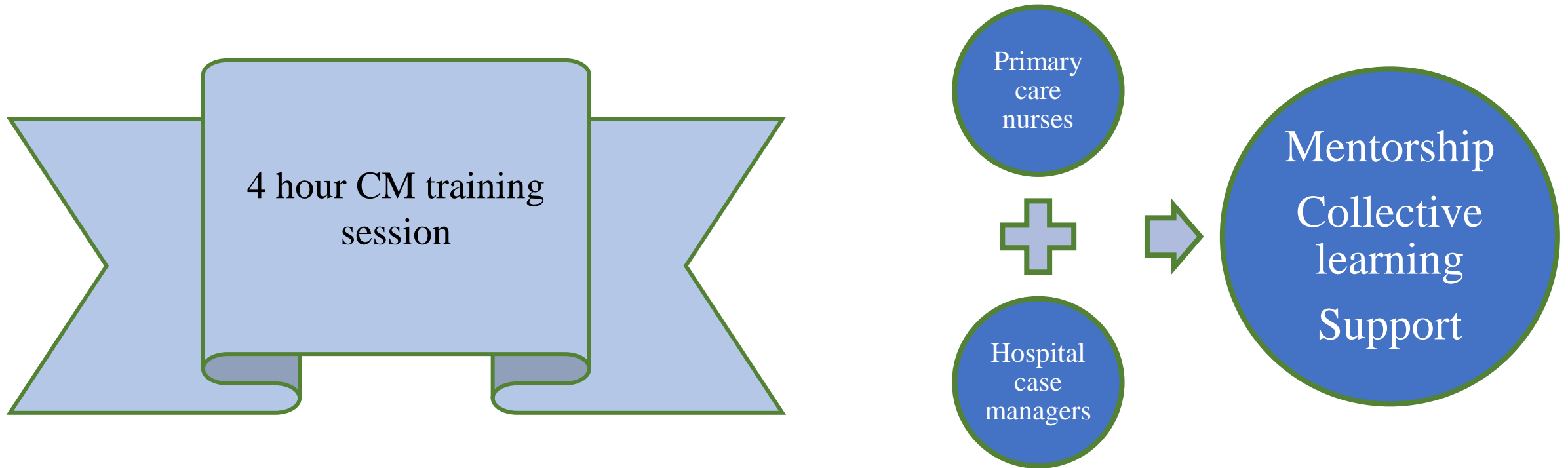
Process of implementation



# Setting and sampling



# CM training and community of practice

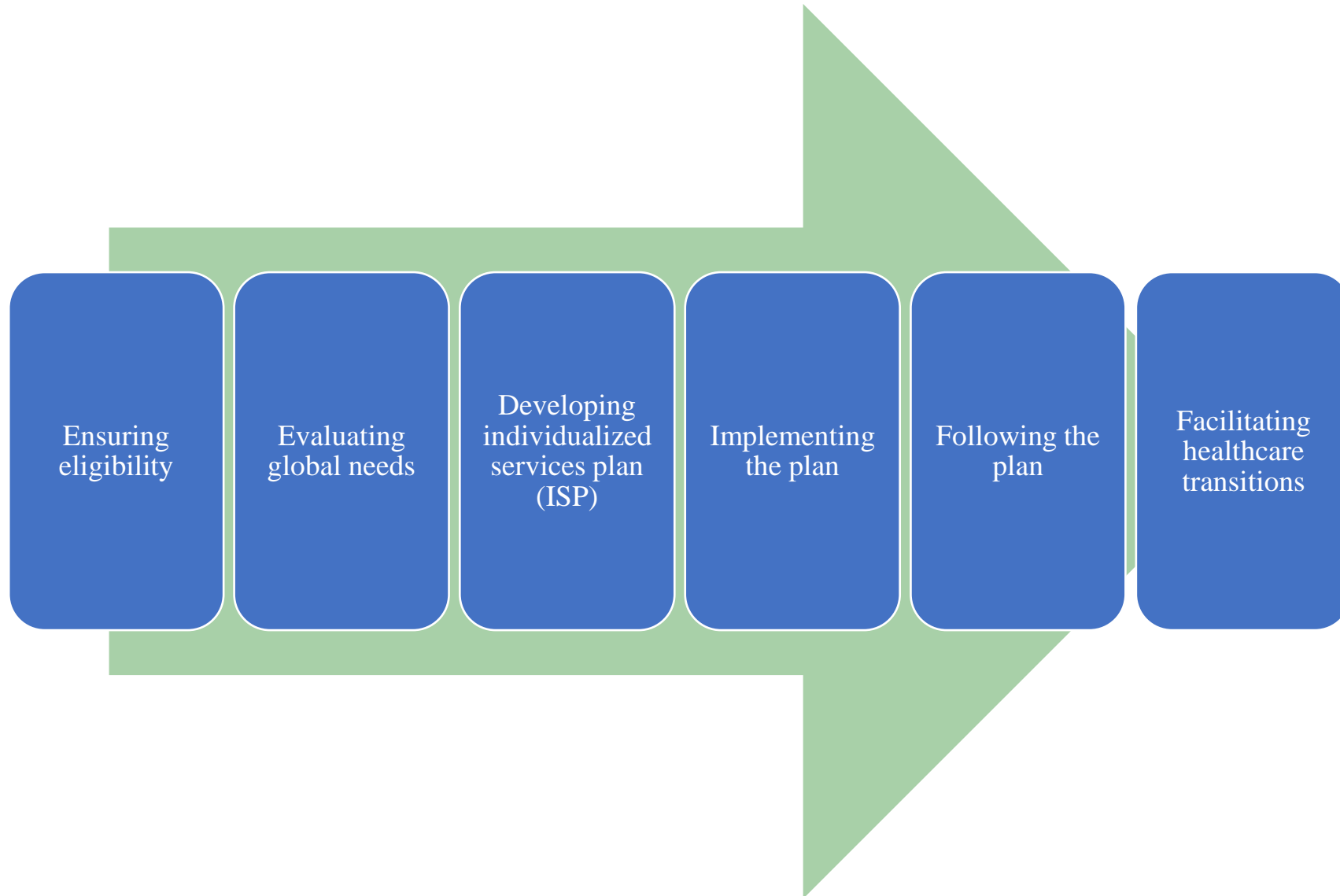


# Implementation committee

Meetings	
Purpose	Plan the project, obtain feedback from the field and address barriers
Frequency	1h every 2 weeks during implementation
Members	<ul style="list-style-type: none"> <li>• 2-5 managers</li> <li>• 1 patient partner</li> <li>• 1 research coordinator</li> <li>• 2 researchers</li> </ul>



# Integrated CM intervention steps



# Mixed-method data collection

Individual  
interviews and  
focus groups

Fieldnotes

Questionnaires

ED visits

# Quantitative measures

## Description

<b>Morbidity</b>
French version of the Disease Burden Morbidity Assessment (21 items)

## Outcomes

<b>Care integration</b>
French version of the Patient Experience of Integrated Care Scale (13 items)

<b>Self-management</b>
French version of the Partners in Health Scale (12 items)



# Analysis

Qualitative data: Deductive and inductive thematic analysis

Quantitative data:  
Wilcoxon test for continuous variables

Comparison and merging of qualitative and quantitative results for each case. Reporting and comparison of the 4 case stories



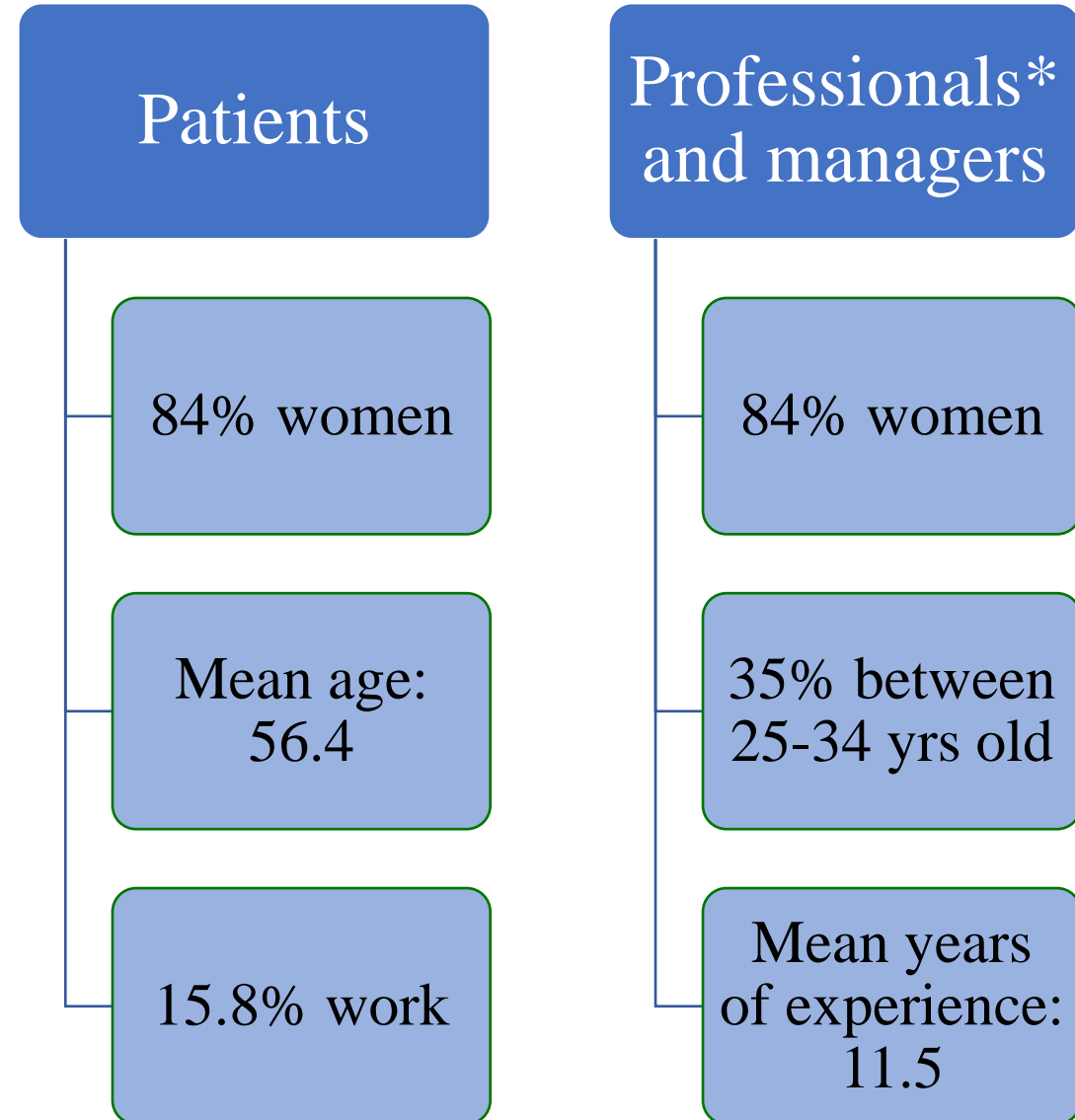


# Characteristics of the clinic in each dyad

A	B	C	D
<ul style="list-style-type: none"> <li>• 1 site</li> <li>• External to hospital</li> <li>• 14,000 registered patients</li> </ul>	<ul style="list-style-type: none"> <li>• 1 site</li> <li>• Internal to hospital</li> <li>• 15,000 registered patients</li> </ul>	<ul style="list-style-type: none"> <li>• 4 sites (1 participated)</li> <li>• Internal to the hospital</li> <li>• 27,000 registered patients</li> </ul>	<ul style="list-style-type: none"> <li>• 5 sites</li> <li>• External to hospital</li> <li>• 22,000 registered patients</li> </ul>

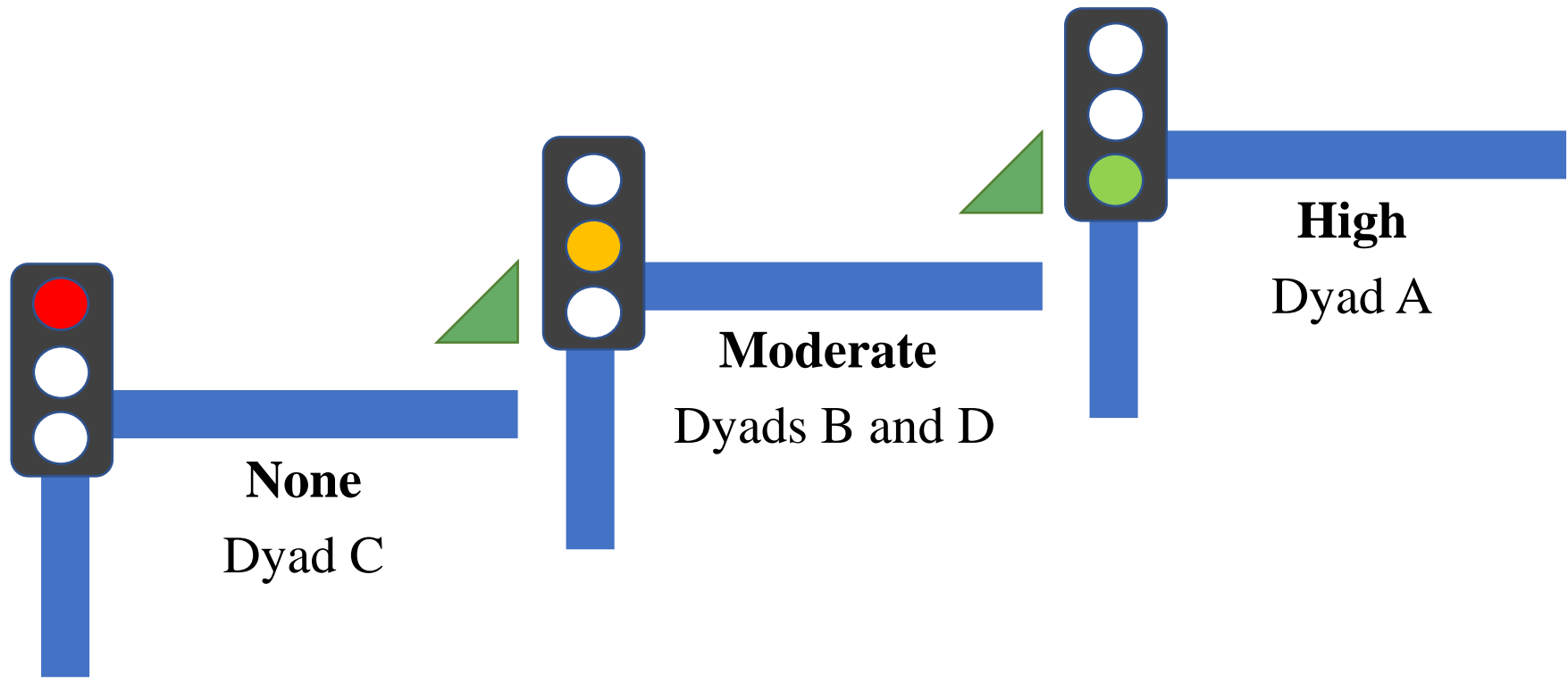


# Characteristics of the participants in the interviews and focus group

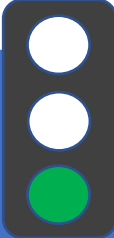
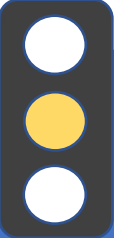
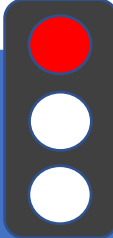



\*Including hospital case managers, primary care nurses, family physicians and other healthcare professionals

# Implementation level



# Qualitative outcomes in each dyad

Outcomes	A 	B 	C 	D 
Easier and quicker care access	✓	✓	-	✓
Patients' feeling of security	✓	✓	-	✓
Better self-management	(+/-)	✓	-	✓
Better patient management	✓	✓	-	✓
Less ED visits	✓	✓	-	✓
Overall satisfaction with the intervention	✓	✓	-	✓

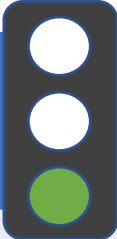

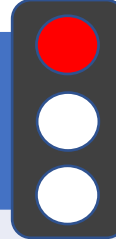



# Characteristics of participants who completed the questionnaire (n=33)

Characteristics	
Age: mean (SD)	56 (21)
Women: n (%)	27 (84)
Number of conditions: mean (SD)	5.6 (2.8)
Most frequent conditions: n (%)	
Depression & anxiety	24 (73)
Arthritis	19 (58)
Overweight	19 (58)
Back pain	18 (54)



# Quantitative outcomes in each dyad

Outcomes	A N=8	B N=12	C N=2	D N=11
<b>Care integration</b>				
Baseline mean (SD)	31.1 (6.4)	36.6 (6.7)	37.0 (4.2)	32.3 (7.5)
6 months mean (SD)	43.6 (3.1)	39.3 (5.7)	43.0 (1.4)	37.6 (6.0)
<b>P</b>	<b>0.01*</b>	<b>0.28</b>	<b>0.18</b>	<b>0.15</b>
<b>Self-management</b>				
Baseline mean (SD)	73.9 (9.0)	76.2 (8.6)	87.0	74.2 (12.8)
6 months mean (SD)	81.1 (5.1)	76.4 (10.7)	77.5	75.3 (7.3)
<b>P</b>	<b>0.06</b>	<b>0.48</b>	<b>-</b>	<b>0.67</b>
<b>ED visits</b>				
Baseline mean (SD)	5.4 (2.1)	3.3 (2.8)	3.0 (4.2)	2.7 (2.0)
6 months mean (SD)	1.9 (3.7)	1.9 (2.0)	3.5 (3.5)	1.5 (1.4)
<b>P</b>	<b>0.06</b>	<b>0.14</b>	<b>0.32</b>	<b>0.08</b>



# Case stories

A	B	C	D
<ul style="list-style-type: none"> <li>• <b>Great leadership of the whole team</b></li> <li>• Great collaboration with hospital case manager</li> <li>• Qualitative + quantitative outcomes</li> <li>• Motivated to continue</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Difficulty in identifying patients</b></li> <li>• <b>Good support from hospital case manager</b></li> <li>• Qualitative outcomes</li> <li>• Motivated to continue if easier to identify patients</li> </ul>	<ul style="list-style-type: none"> <li>• <b>No buy-in from the leader physician</b></li> <li>• Almost no implementation</li> <li>• No outcomes</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Lack of buy-in by the medical team at the beginning but great leadership from the leader physician and good support from hospital case manager</b></li> <li>• Positive perception of the intervention by the primary care nurses</li> <li>• Qualitative outcomes</li> <li>• Motivated to continue</li> </ul>



# Strengths and limits



- In-depth description of the implementation context
- Diversity of the contexts



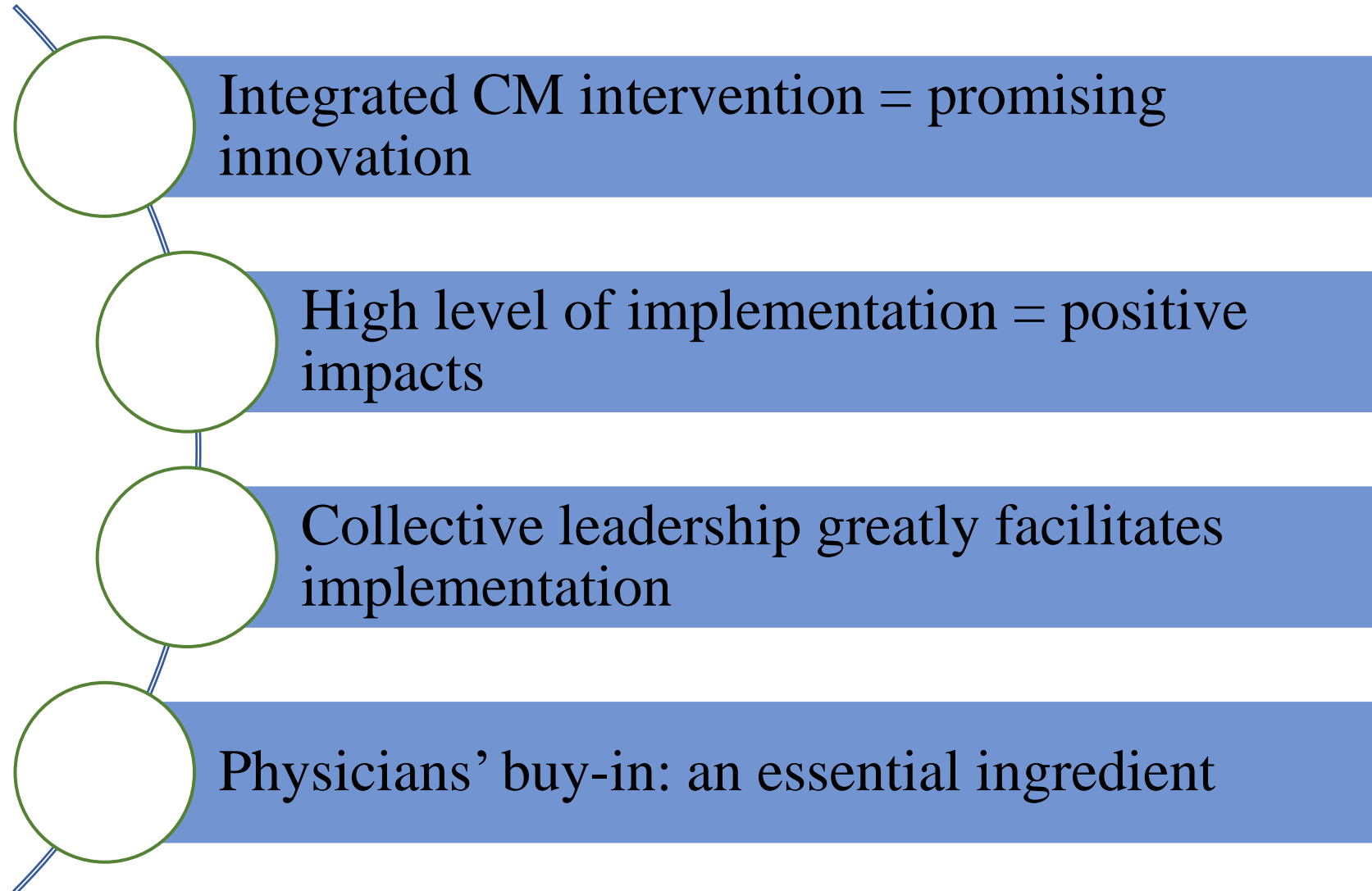
- Lack of power
- Transferable to similar contexts



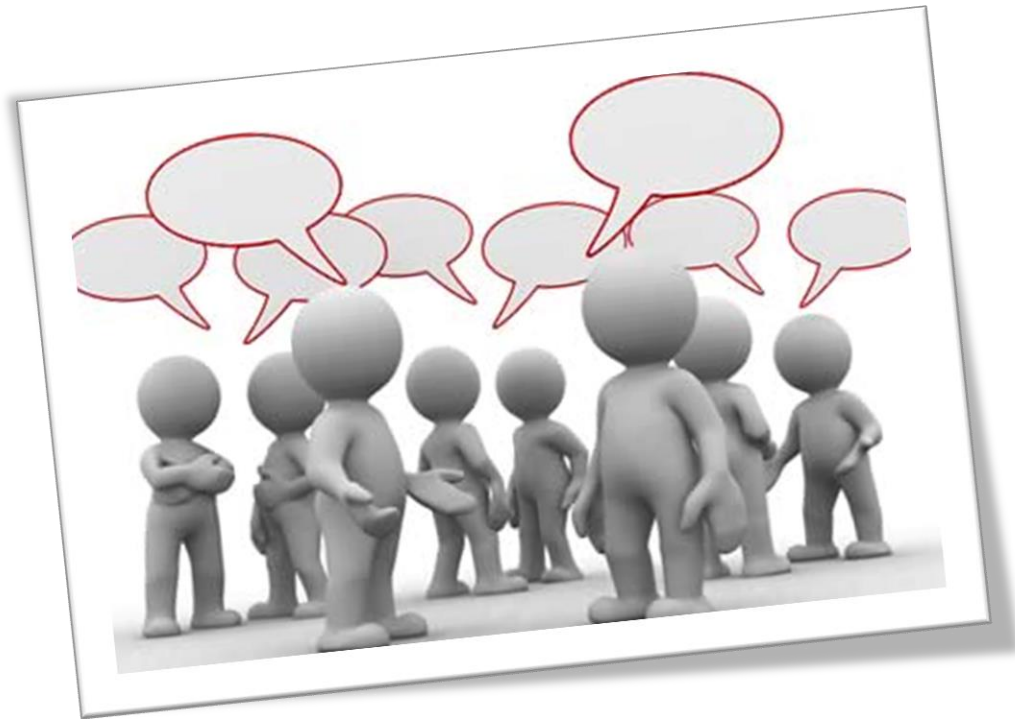
**Future research:** replicate on a larger scale with economic analysis



# Key messages



# Questions?



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