

# Understanding the perspectives, experiences, beliefs, and knowledge of health practitioners on the prevention, diagnosis, and treatment of Lyme disease in Canada

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# Study Context

## 1. Systematic review

- *Training initiatives that enhance knowledge, attitudes, and practices regarding the prevention, diagnosis and treatment of Lyme disease: A systematic review*

2. Grey Literature Review pertaining to healthcare professional's diagnosis, treatment, and prevention of LD.



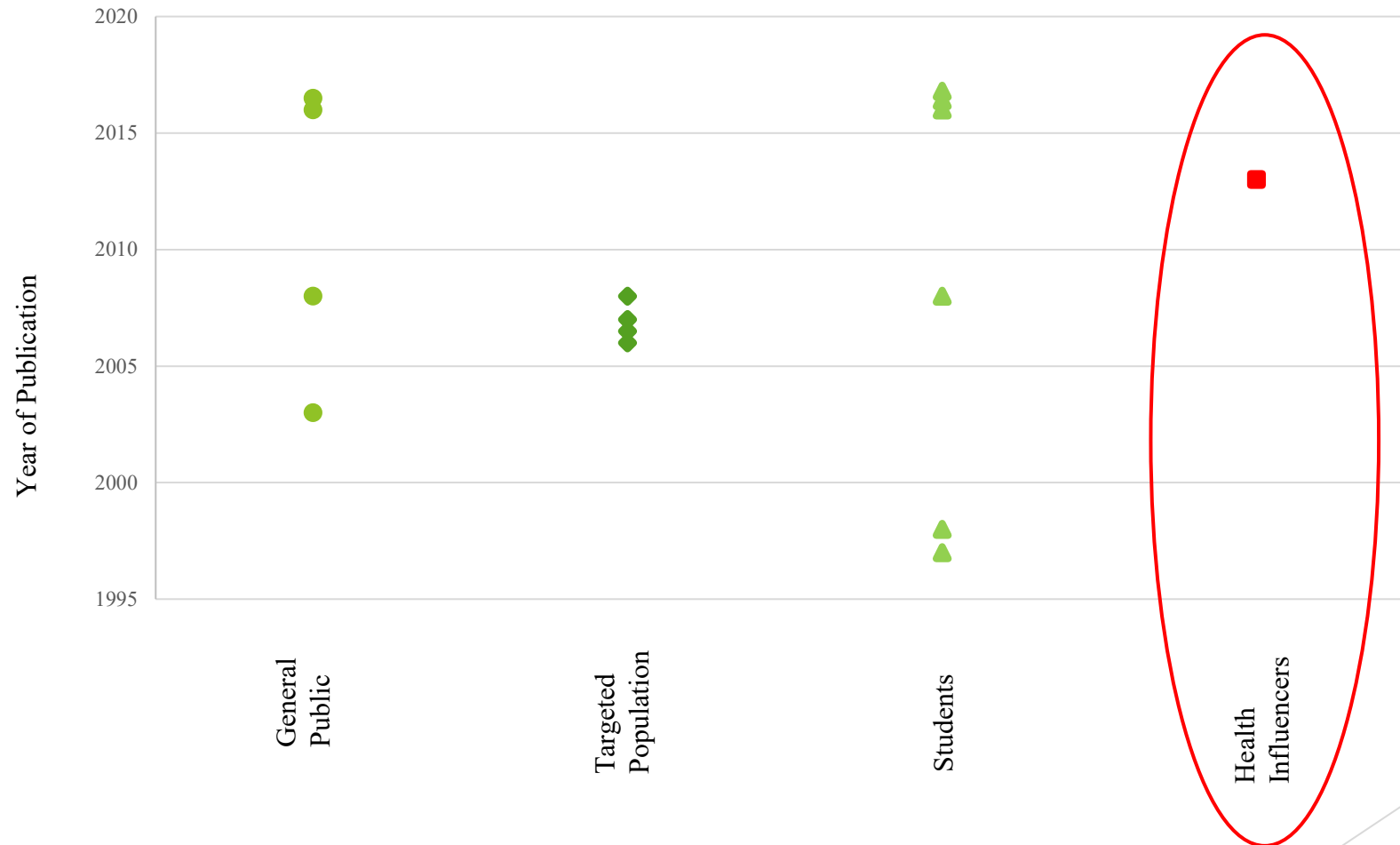
# Systematic Review

- ▶ Identify educational interventions for the prevention and treatment of LD
- ▶ 13 studies were included in this review
  - ▶ 12 reported educational interventions for the general public
  - ▶ 1 focused on physicians' diagnosis of LD
- ▶ No studies reported outcomes from interventions targeted at educating health influencers or patients on how to best manage 'early' or 'late' LD.



# Systematic Review

Intervention Targets Versus Year of Publication



# Grey Literature Review

- ▶ Inclusion of knowledge training resources and documents available to *Canadian physicians, nurse practitioners, pharmacists, naturopaths and homeopaths*
- ▶ Over 160 documents included
- ▶ Findings organized into themes: Prevention, Stages of LD (early localized, early disseminated, late, and post-treatment LD), and Unspecified stages (e.g. co-infections, re-infection)
- ▶ Little variability in the data across some themes/categories (e.g. prevention) BUT discord between other areas (i.e. etiology of LD & recommendations)



# The Current Study

This study has been developed to better understand practitioners' experiences, beliefs, practices, and knowledge related to the diagnosis and treatment of LD in Canada. Using this information, we hope to provide more effective and efficient knowledge translation and advocacy aligned to rapidly evolving evidence from the literature.



# Research Questions

- ▶ The research questions for this study are:
  1. *What are health influencers' understandings, practices, and experiences in diagnosing and treating Lyme disease in Canada?*
  2. *How effective are current guidelines in supporting health practitioners to diagnose and treat Lyme disease in Canada?*
  3. *What are the perceived changes needed to current Lyme disease practice guidelines, to support practitioners' effective care for patients with Lyme disease?*



# Study Background

- ▶ The number of reported LD cases in Canada continues to grow, and has increased from 144 cases in 2009, to 2025 reported cases in 2017
- ▶ Primary care providers (i.e., family practitioners, pediatricians, and emergency physicians) often the first to encounter suspected LD patients'
- ▶ Due to a lack of definitive testing, physicians and patients can often be put in a difficult position<sup>3</sup>





# Background

- ▶ There is little known research regarding healthcare practitioners' knowledge and perspectives pertaining to guidelines for diagnosing and treating LD
  - ▶ Lack of research depicting clinical LD decision making
- ▶ There is a need to better understand these perspectives to optimize knowledge translation efforts for healthcare professionals in Canada



# Timeline

Submitted

- Systematic Review
- Completed and submitted to journal

In-progress

- Grey Literature Review
- Begun Spring 2020

In-progress

- Qualitative Interviews with Family Physicians
- Begun Spring 2020

2021

- Qualitative Interviews with Specialties
- To begin in 2021

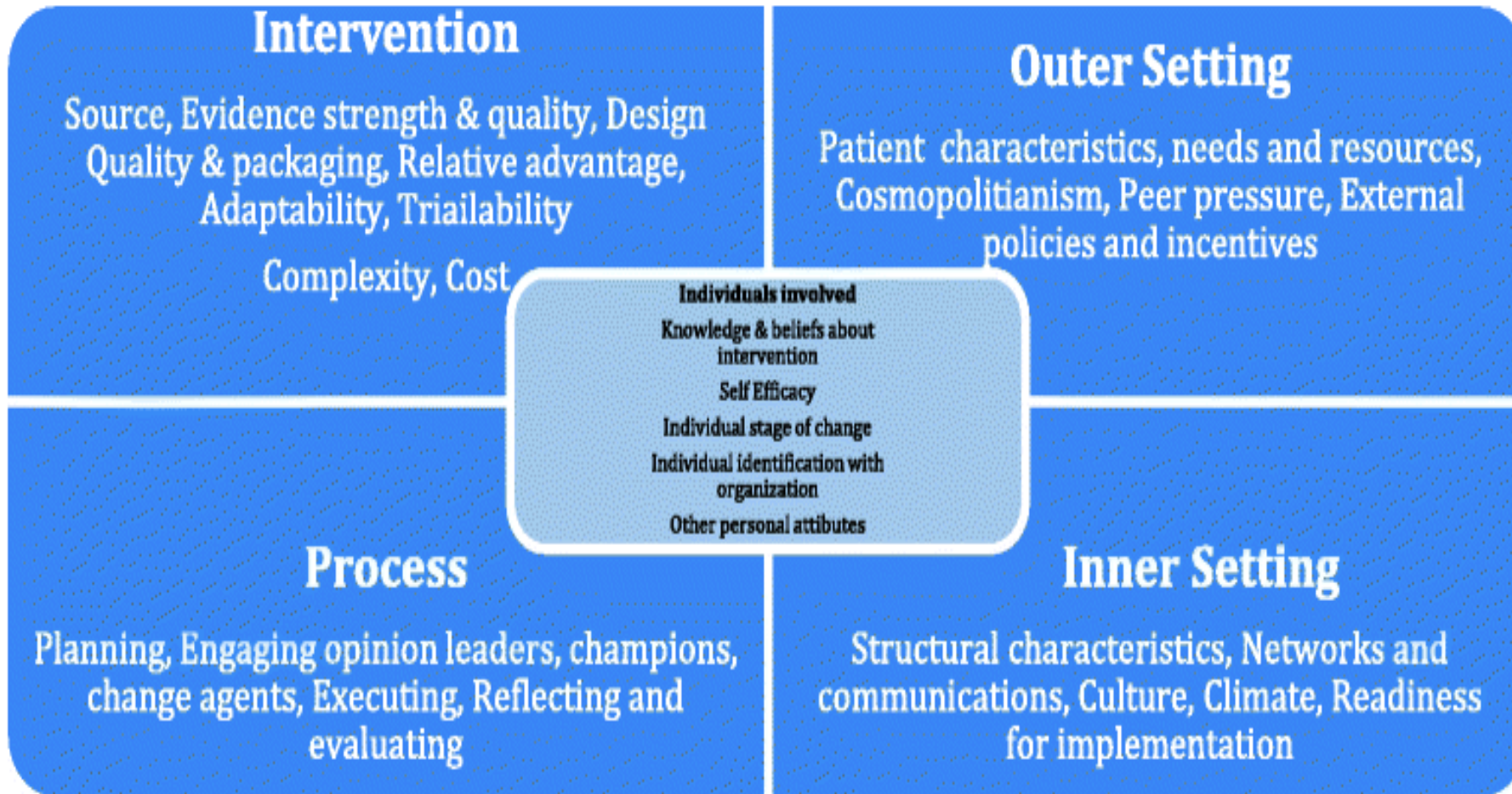


# Methods

- ▶ A constructivist paradigm was adopted to investigate how Canadian practitioners have constructed approaches to LD diagnosis and treatment
- ▶ This study involved a multi-phased implementation process.
  - ▶ **Phase 1:** Patient survey to assist recruitment
  - ▶ **Phase 2:** Primary care physicians, emergency physicians, and nurse practitioners recruited through patient survey, snowball sampling, and independent recruitment
  - ▶ **Phase 3:** Other physician specialists that diagnose and treat LD will be interviewed.



# The Consolidated Framework for Implementation Research



# Methods - Health Practitioner Interviews

- ▶ Health practitioners recruited through patient nominations, purposeful sampling via an internet search & CLyDRN network groups.
- ▶ Semi-structured interviews conducted by experienced research assistant .
- ▶ Interviews are based on an interview guide developed collaboratively with patient partners and professionals.



# Methods - Data Analysis

- ▶ Inductive thematic analysis will be used to analyze the interviews, using axial coding to identify major themes within and between identified participant strata.
  - ▶ The CFIR framework will be used to guide coding and assist in the situation of themes within the domains of the CFIR framework.
  - ▶ Coding will be completed by experienced research assistants and inter-rater reliability will be established.



# Preliminary Results

- ▶ We have completed 10 interviews with family physicians across Canada
  - ▶ 3 from Ontario
  - ▶ 3 from Nova Scotia
  - ▶ 2 from Alberta
  - ▶ 1 from British Columbia
  - ▶ 1 from Newfoundland
- ▶ Preliminary analysis and interrater reliability conducted on 4 interviews
  - ▶ 85% reliability reached between research assistants
- ▶ Two additional interview scheduled
  - ▶ Continuing to recruit participants for the study



# Preliminary Results

- ▶ Indicate a wide range of knowledge, beliefs and values surrounding:
  - ▶ Diagnosis and treatment protocols
  - ▶ Nature of Lyme disease
  - ▶ Stage of Lyme disease
  - ▶ Use of guidelines and protocols to treat and diagnose LD
  - ▶ Most effective knowledge translation for intervention protocols





# Next Steps

- ▶ Continue to recruit participants and complete interviews with family physicians across Canada
  - ▶ 50 interviews total
- ▶ Interview specialities and other professionals across Canada
- ▶ Analysis of interviews and patient surveys



Thank you!

Questions?

