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# A Research Program on Rapid Reviews

**Andrea C. Tricco MSc, PhD**

**Twitter: @ATricco**

Scientist, Knowledge Translation Program, Li Ka Shing Knowledge Institute of St. Michael's Hospital  
Co-Director, Queen's Collaboration for Health Care Quality Joanna Briggs Institute Centre of Excellence  
Associate Professor, Dalla Lana School of Public Health, University of Toronto

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RESEARCH ARTICLE

Open Access



# A scoping review of rapid review methods

Andrea C. Tricco<sup>1,2</sup>, Jesmin Antony<sup>1</sup>, Wasifa Zarin<sup>1</sup>, Lisa Striffler<sup>1,3</sup>, Marco Ghassemi<sup>1</sup>, John Ivory<sup>1</sup>, Laure Perrier<sup>3</sup>, Brian Hutton<sup>4</sup>, David Moher<sup>4</sup> and Sharon E. Straus<sup>1,5\*</sup>

## Objective:

- To examine rapid review approaches, guidance, impact, and comparisons through a scoping review

- Currently, there is no agreement on a definition for rapid reviews

*“streamlined traditional systematic review methods to synthesize evidence in a shorter timeframe” (Ganann et al 2010)*

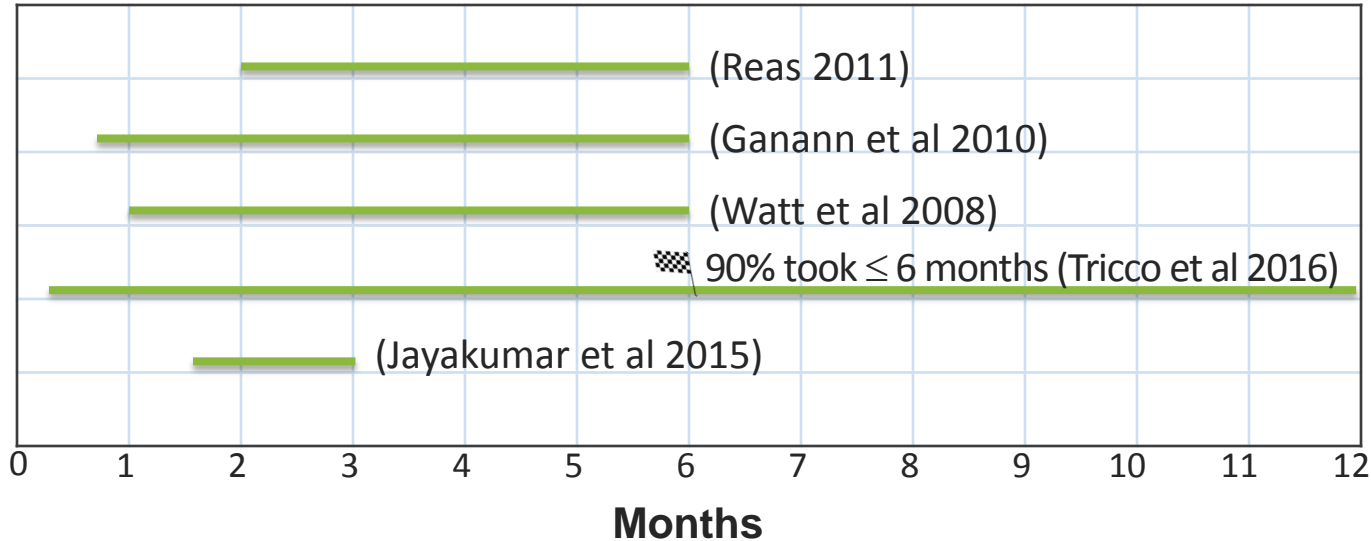
*“a streamlined approach to synthesizing evidence , typically for informing emergent decisions faced by decision-makers” (Khangura et al 2012)*

*“fluid and flexible based on decision-makers’ needs, and an organization’s definition of ‘rapid’, since the definition impacts both the timelines and the conduct of the evidence synthesis” (Polisena et al 2015)*

# Production Times

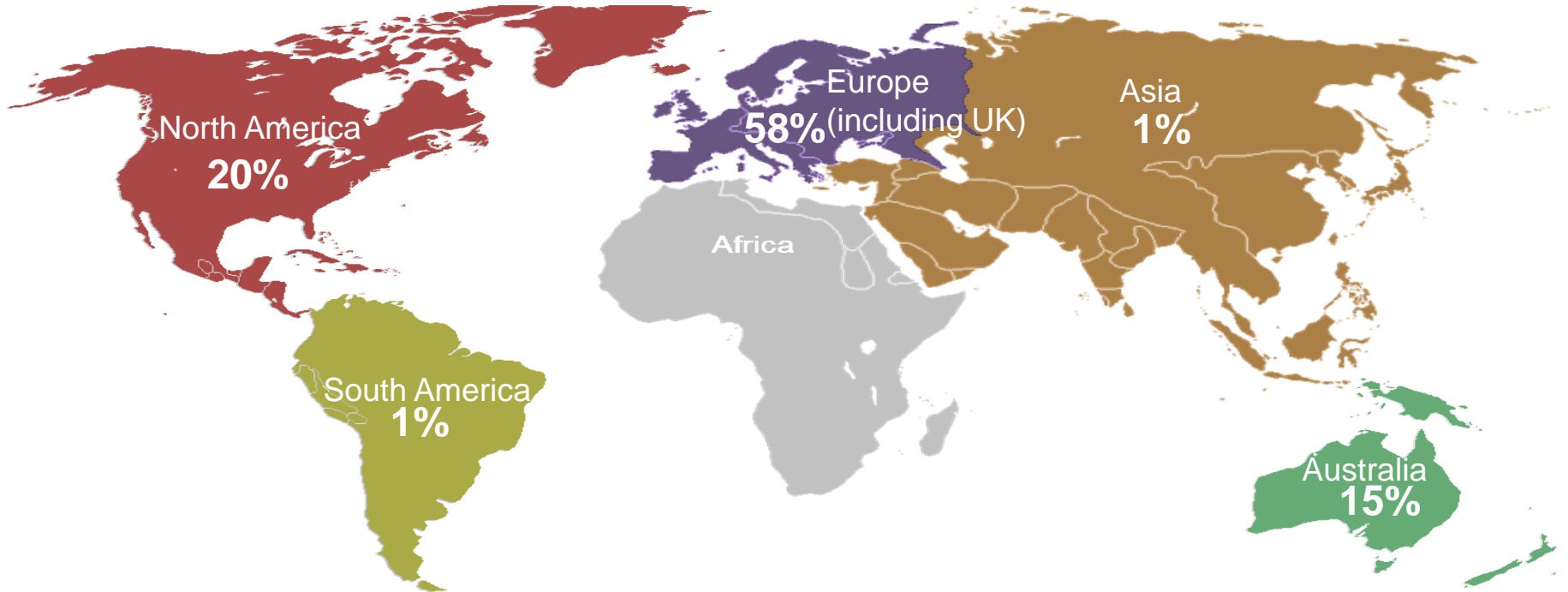


- Although reduced production time is considered a key feature of rapid review, a wide range of timeframes are reported in the literature



**Systematic reviews take >12 months to complete**

# Geographic Distribution of Publications



*\*3% Multiple Continents; 2% Not reported*

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ORIGINAL ARTICLE

An international survey and modified Delphi approach  
revealed numerous rapid review methods

Andrea C. Tricco<sup>a,b</sup>, Wasifa Zarin<sup>a</sup>, Jesmin Antony<sup>a</sup>, Brian Hutton<sup>c</sup>, David Moher<sup>c</sup>,  
Diana Sherifali<sup>d</sup>, Sharon E. Straus<sup>a,e,\*</sup>

**Objectives:**

- To solicit experiences with rapid reviews from rapid review producers
- To conduct a consensus-building exercise to select a rapid review approach that will be prospectively tested in a reliability study

# Results of Most Frequent Streamlined Approach

Review Stage	Most frequent streamlined approach	Count (%)
Identifying relevant studies	Used previous review(s) as a starting point	79 (92)
Limitations on search strategy	Limited review by date of publication	75 (88)
Study selection	Screening conducted by ONE reviewer only	68 (85)
Data Abstraction	Data abstraction performed by ONE reviewer only	67 (84)
Quality (risk of bias) appraisal process	Risk of bias assessed by ONE reviewer only	68 (86)
Synthesis	Narrative summary	75 (90)

# Summary of Ranking Results by Approach



Rapid review Approach	Feasibility	Timeliness	Comprehensiveness	Risk of Bias
Approach 1	1 <sup>st</sup>	2 <sup>nd</sup>	5 <sup>th</sup>	1 <sup>st</sup>
Approach 2	2 <sup>nd</sup>	1 <sup>st</sup>	6 <sup>th</sup>	6 <sup>th</sup>
Approach 3	3 <sup>rd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	3 <sup>rd</sup>
Approach 4	4 <sup>th</sup>	4 <sup>th</sup>	3 <sup>rd</sup>	5 <sup>th</sup>
Approach 5	5 <sup>th</sup>	5 <sup>th</sup>	1 <sup>st</sup>	4 <sup>th</sup>

\*Ranked based on the distribution of "very" and "extremely" on the 7-point Likert scale, except Risk of Bias was ranked on distribution of "not at all" and "very"

- Search >1 database, published studies only, both date and language limitations, one reviewer screens, one person abstracts data and assesses risk of bias and another verifies**





ELSEVIER



CrossMark

**REVIEW**

**A retrospective comparison of systematic reviews with same-topic  
rapid reviews**

Emily Reynen<sup>a</sup>, Reid Robson<sup>b</sup>, John Ivory<sup>b</sup>, Jeremiah Hwee<sup>c</sup>, Sharon E. Straus<sup>b,d</sup>,  
Ba' Pham<sup>b</sup>, Andrea C. Tricco<sup>b,c,\*</sup>

**Objectives:**

- To compare rapid reviews (RRs) to same-topic systematic reviews (SRs) for methods, studies included, and conclusions.

# Results – SRs vs RRs



Systematic Reviews	Rapid Reviews
# study selection (using $\geq 2$ reviewers/1 reviewer & 1 verifier): 10	# study selection (using $\geq 2$ reviewers/1 reviewer & 1 verifier): 3
# data abstraction (using $\geq 2$ reviewers/1 reviewer & 1 verifier): 13	# data abstraction (using $\geq 2$ reviewers/1 reviewer & 1 verifier): 4
# of included studies (range): 5-14	# of included studies (range): 2-24
Mean AMSTAR score (range): 4.8 (1-9)	Mean AMSTAR score (range): 2 (0-4)

# SPARKS Study

## Systematic Prospective Assessment of Rapid Knowledge Synthesis

### Objectives:

- To prospectively evaluate pairs of rapid reviews and systematic reviews on the same review topics with respect to their results, step-specific process outcomes and usability
  1. Evaluate the reliability of conclusions, meta-analysis results of clinical benefits and harms, and implications to inform decisions
  2. Compare step-specific process outcomes (e.g., hours spent on tasks and costs)
  3. Compare feasibility, timeliness, comprehensiveness, fit-to-purpose, and perceived risk of bias from the broad perspectives of end-users of the rapid reviews and systematic reviews

# SPARKS Study

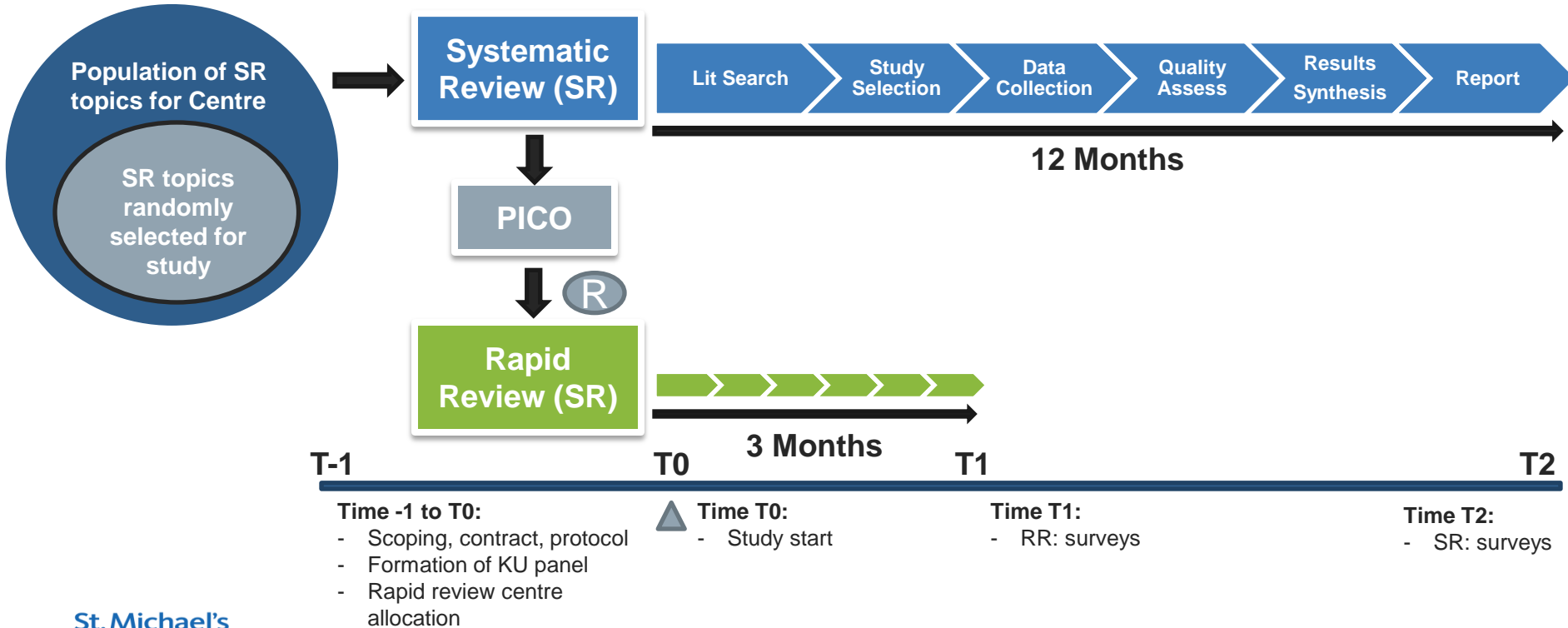
## Systematic Prospective Assessment of Rapid Knowledge Synthesis

### Methods:

- Collaboration between 3 systematic review centers
- For each systematic review that a center is conducting, another center will be randomized to conduct a rapid review, continuing until 25 rapid reviews and 25 systematic reviews conducted
- Will compare the conclusions, meta-analysis results of clinical benefits and harms, implications to inform decision-making, step-specific process outcomes, including hours spent on tasks
- Adjusted kappa coefficients will be calculated to measure agreement

# SPARKS Study

## Systematic Prospective Assessment of Rapid Knowledge Synthesis



# Two Rapid Review Programs in Canada



- The Canadian government has invested in 2 rapid review programs:
  1. Drug safety and effectiveness network
  2. Strategic Patient Oriented Research (SPOR) Evidence Alliance



**SPOR**   
Strategy for Patient-Oriented Research  
**EVIDENCE  
ALLIANCE**

Strategy for Patient-Oriented Research  
**SPOR**  
Putting Patients First 

# The SPOR Evidence Alliance

*A Canada-wide alliance of researchers, patients, clinicians, and decision-makers*

## Andrea C. Tricco MSc, PhD

**Nominated Principal Investigator** of the SPOR Evidence Alliance

**Scientist and Director** of the Knowledge Synthesis Team, Knowledge Translation Program, Li Ka Shing Knowledge Institute of St. Michael's Hospital

**Co-Director** of the Queen's Collaboration for Health Care Quality Joanna Briggs Institute Centre of Excellence

**Associate Professor**, Dalla Lana School of Public Health, University of Toronto

**Associate Editor** of BMC Med, J Clin Epi, BMC Med Res Methodol, Syst Rev

# Our Principal Investigators



**Pertice  
Moffit PhD**



**Linda Li  
Msc, PhD**



**Fiona  
Clement  
PhD**



**Ahmed  
Abou-Setta  
MD, PhD**



**Andrea  
Tricco  
MSc, PhD**



**Sharon Straus  
MD, FRCPC,  
MSc**



**Heather  
Colquhoun  
OT Reg. (ON),  
PhD**



**David  
Moher MSc,  
PhD**



**Wanrudee  
Isaranuwachai  
PhD**



**Christina  
Godfrey  
RN, PhD**



**Annie  
LeBlanc  
PhD**

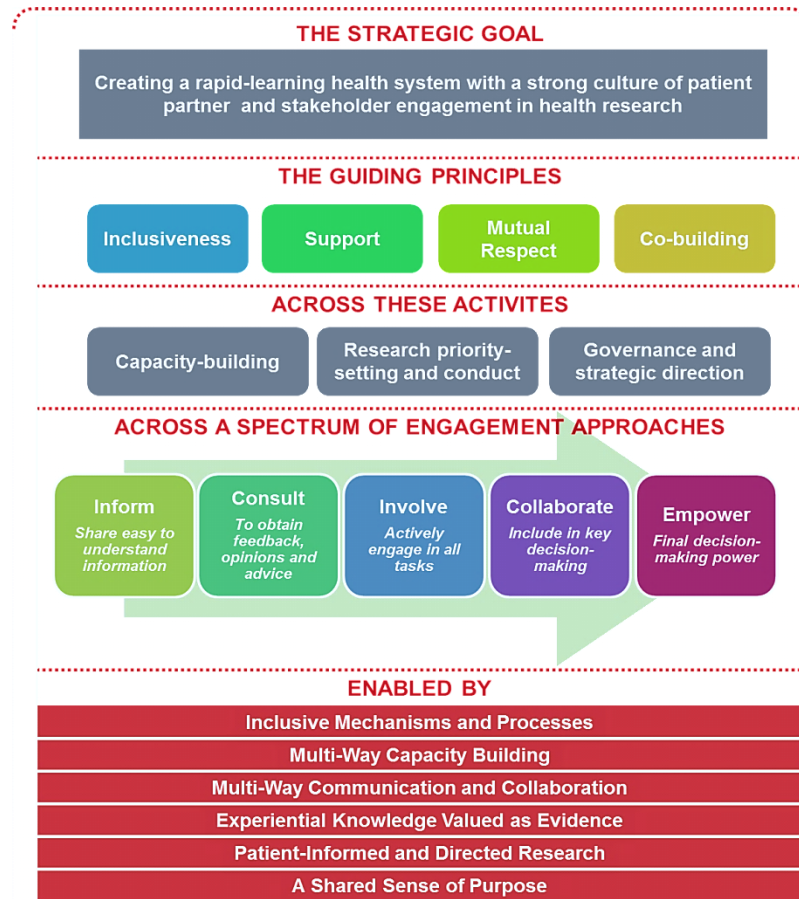


**Janet  
Curran  
PhD**



# Our Approach

- Our approach is governed by a commitment to shared values of respect, professionalism, trust, collegiality, & collaboration
- A culture of patient-oriented research & integrated knowledge translation
- Researchers, trainees, patients, healthcare providers, policy makers, and other knowledge users work together as equal partners in achieving our goals



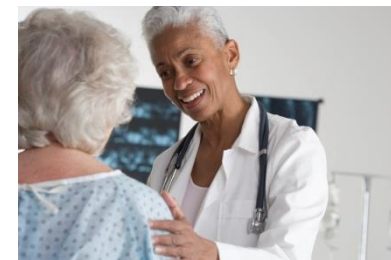
Adapted from:

CIHR. Strategy for Patient-Oriented Research - Patient Engagement Framework. Available from <http://www.cihr-irsc.gc.ca/e/48413.html> [accessed on June 4, 2018].

Health Quality Ontario. Patient Engagement Framework. Available from <http://www.hqontario.ca/Engaging-Patients/Patient-Engagement-Framework> [accessed on June 4, 2018].

# Our Governance

- 6 Committees
- Balanced distribution of all member types, geographic location, gender, and level of expertise
- Built on inclusiveness, supportive environment, mutual respect, collaboration, and shared decision-making



**Knowledge-users, trainees & patient partners sit on all committees**

# Creating and Sustaining a Collaborative Environment Towards Patient-Oriented Research

## THE STRATEGIC GOAL

To create a culture of learning that grows, supports and sustains the capacity for a collaborative, innovative and patient-oriented research environment for knowledge synthesis, clinical practice guideline development and knowledge translation

## THE GUIDING PRINCIPLES

Developing and mobilizing expertise

Supporting careers

Facilitating collaboration

Building a culture of knowledge-to-action research

## ACROSS THREE EDUCATIONAL STREAMS

1



**Graduate-level trainees and fellows**

2



**Researchers and research staff**

3



**Patient partners & knowledge users**  
(e.g. clinicians, policy makers, health system managers)

## WITH A RANGE OF TRAINING ACTIVITIES

- Courses to develop knowledge and understanding of research methods
- Mentorship program to develop and refine learning objectives and provide career support
- Practical experiences in collaborative environment to develop skills for lifelong success
- Courses to develop basic principles of science and practice of research
- Webinars every two months to share perspective and experiences in applying the training in their own setting
- Courses to develop basic knowledge of the science and how to apply the research evidence in practice
- Practical experiences in collaborative environment to develop research skills

## TO BUILD THE FOLLOWING COMPETENCIES

**Demonstrate basic knowledge of the core research areas and are professionally collaborative**

**Able to effectively communicate and work with others in collaborative teams**

**Able to effectively produce and/or use research relevant for decision making**

**Researchers and decision makers understand the value of engaging patient partners in health research**

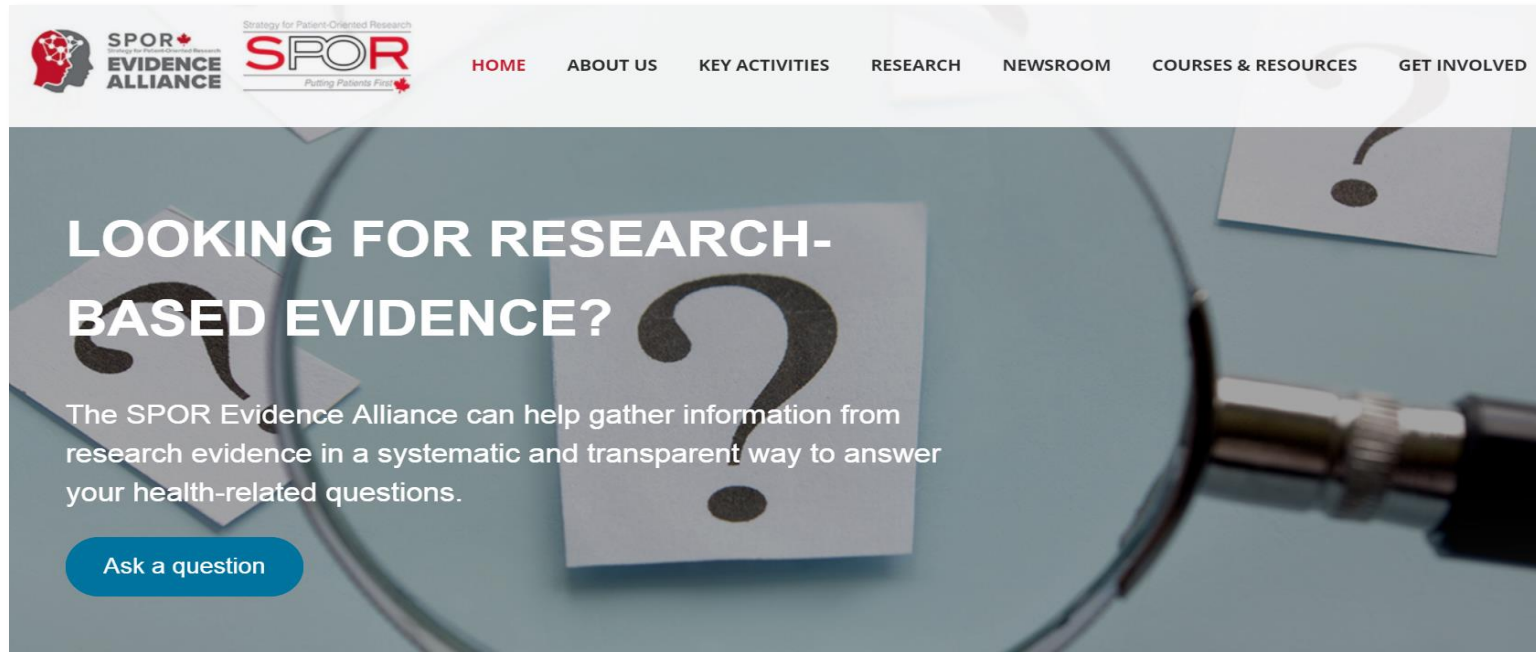
**Researchers demonstrate proficiency in the science and practice of the core research areas in a patient-oriented research environment**

Adapted from:  
CIHR. Capacity development framework. Available from <http://www.cihr-irsc.gc.ca/e/49307.html> [accessed on June 4, 2018].



# Visit Our Website to Learn More!

<https://sporevidencealliance.ca>



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- **Co-investigators:** Dr. Sharon Straus, Dr. David Moher, Dr. Brian Hutton, Dr. Diana Sherifali, Dr. Lisa Hartling, Dr. Tammy Clifford, Adrienne Stevens, Chantelle Garritty, Dr. Jemila Hamid

# Questions?

