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UNITY HEALTH TORONTO

Co-production with patients and the public

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Unity Health Land Acknowledgement

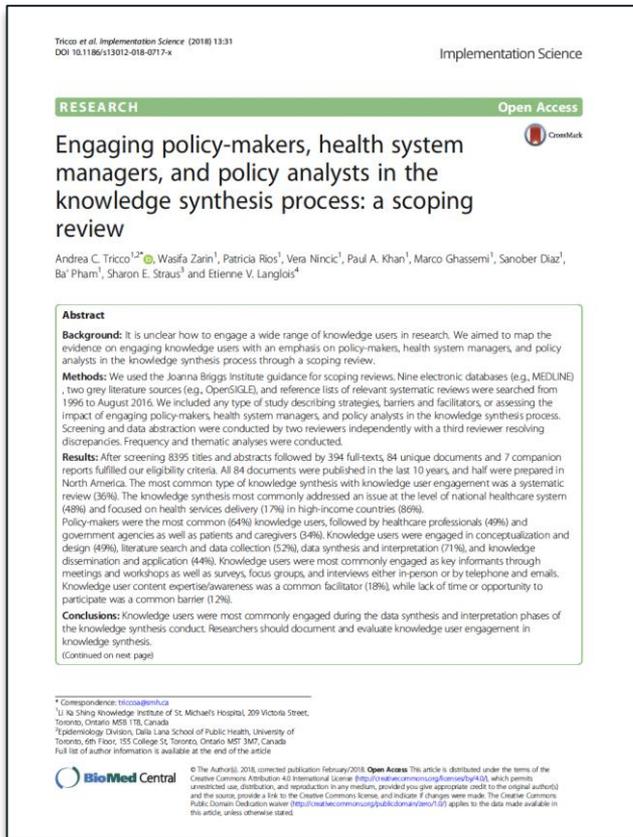
Unity Health Toronto acknowledges that the land on which we live, work, and operate on, Tkaranto, is part of the Dish with One Spoon Covenant territory and is the traditional and ancestral lands of many Nations including the Mississaugas of the Credit, the Anishinabek, the Haudenosaunee, the Chippewa, and the Wendat Nations. It is land that is part of Treaty 13 signed with the Mississaugas of the Credit in 1787, also known as the 'Toronto Purchase', which was revisited in 1805 and 2010. It is still home to many diverse First Nations, Inuit, and Metis peoples. By acknowledging the land, we acknowledge our treaty responsibilities in sharing this land and to the Indigenous people who have been the traditional caretakers of this land since time immemorial.

We invite you to reflect on our own relationship with the land on which you live and work and to Indigenous Peoples. We welcome those who know to share the name of the traditional lands from which you are joining us. If you do not know and would like to learn, you can check here: <https://www.whose.land/en/>

Disclosures

- **Financial competing interests:** I receive a stipend as Co-Editor in Chief for the Journal of Clinical Epidemiology
- **Academic competing interests:**
 - I hold a Tier 1 Canada Research Chair in Knowledge Synthesis for Knowledge Users and several grants to advance the science of knowledge synthesis/translation
 - I am the Nominated Principal Investigator of the Canadian Institutes of Health Research (CIHR) Strategy for Patient-Oriented Research (SPOR) Evidence Alliance
- **Other competing interests:**
 - I sit on the Editorial Board as an unpaid member for the BMC Medicine, Systematic Reviews, and JBI Evidence Synthesis journals
 - I was the Chair of the JBI Scoping Review Methodology Group from 2019 to 2025

Top 5 Barriers and Facilitators to Co-Production in Knowledge Synthesis



Tricco A, Zarin W, Rios P, Imp Sci 2018

Factor reported (N=31 studies)	Seen as a Facilitator	Seen as a Barrier
Knowledge user expertise	16.7%	6.0%
Time	3.6%	10.7%
Early relationship-building	8.3%	0
Forums for interaction	7.1%	1.2%
Ongoing collaboration	4.8%	0

Based on experience, the biggest facilitator/barrier is communication!

Tips on Engaging with Knowledge Users



Develop plan for engagement

Ensure appropriate resources

Provide capacity-building

Develop recruitment strategy

Consider barriers

Create positive environment

Show appropriate appreciation

Report engagement transparently

Evaluate engagement

Case Example 1: Minimal co-production

CMAJ

RESEARCH

Efficacy and safety of cognitive enhancers for patients with mild cognitive impairment: a systematic review and meta-analysis

Andrea C. Tricco PhD MSc, Charlene Soobiah BSc, Shirra Berliner RN MSc, Joanne M. Ho MD, Carmen H. Ng MSc BSc, Huda M. Ashoor BSc, Maggie H. Chen PhD MSc, Brenda Hemmelgarn MD PhD, Sharon E. Straus MD MSc

ABSTRACT

Background: Cognitive enhancers, including cholinesterase inhibitors and memantine, are used to treat dementia, but their effectiveness for mild cognitive impairment is unclear. We conducted a systematic review to examine the efficacy and safety of cognitive enhancers for mild cognitive impairment.

Methods: Our eligibility criteria were studies of the effects of donepezil, rivastigmine, galantamine or memantine on mild cognitive impairment reporting cognition, function, behaviour, global status, and mortality or harms. We identified relevant material by searching electronic databases (e.g., MEDLINE, Embase), the references of included studies, trial registries and conference proceedings, and by contacting experts. Two reviewers independently screened the results of the literature search, abstracted data and appraised risk of bias using the Cochrane risk-of-bias tool.

Results: We screened 15 554 titles and abstracts and 1384 full-text articles. Eight ran-

domized clinical trials and 3 companion reports met our inclusion criteria. We found no significant effects of cognitive enhancers on cognition (Mini-Mental State Examination: 3 randomized clinical trials [RCTs], mean difference [MD] 0.14, 95% confidence interval [CI] -0.22 to 0.50; Alzheimer's Disease Assessment Scale—cognition subscale: 3 RCTs, standardized MD -0.07, 95% CI -0.16 to 0.01) or function (Alzheimer's Disease Cooperative Study activities of daily living inventory: 2 RCTs, MD 0.30, 95% CI -0.26 to 0.86). Cognitive enhancers were associated with higher risks of nausea, diarrhea and vomiting than placebo.

Interpretation: Cognitive enhancers did not improve cognition or function among patients with mild cognitive impairment and were associated with a greater risk of gastrointestinal harms. Our findings do not support the use of cognitive enhancers for mild cognitive impairment.

Competing interests:

Andrea Tricco, Shirra Berliner, Joanne Ho, Huda Ashoor, Maggie Chen, Brenda Hemmelgarn and Sharon Straus have received grants from the Canadian Institutes for Health Research. Sharon Straus is an associate editor for CMAJ. She was not involved in the editorial decision-making process for this article. No other competing interests were declared.

This article has been peer reviewed.

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Older adults experiencing memory and cognition deficits without substantial limitations in activities of daily living may be given a diagnosis of mild cognitive impairment.¹ These patients often present with subjective memory loss, impairment of cognitive function and no change in their basic daily functioning. Mild cognitive impairment has recently been recognized as a distinct condition, with a prevalence that ranges from 3% to 42% and increases with age.² Because of the growing proportion of older adults worldwide, the prevalence of this condition will only increase in the future.³ Each year, 3%–17% of people with mild cognitive impairment experience progression to dementia,^{4,5} a rate that increases to between 11% and 33% by 2 years after the initial diagnosis.⁷ More than 4.6 million new cases

of dementia are diagnosed each year,³ and efforts to reduce this public health burden are essential. Strategies to delay the progression of mild cognitive impairment are being sought to meet this challenge.

One strategy that has been hypothesized to delay the progression from mild cognitive impairment to dementia is the use of cognitive enhancers, agents that are often used to treat dementia. These medications include cholinesterase inhibitors (e.g., donepezil, rivastigmine and galantamine) and the *N*-methyl-D-aspartic acid receptor antagonist memantine.⁶ Donepezil, rivastigmine and galantamine increase the concentration of acetylcholine at neurotransmitter sites,⁸ enhancing the brain's cholinergic function. Galantamine also influences activity at nicotinic receptors,⁹ whereas memantine modulates the neurotransmitter glutamate.⁹

- Researchers + 2 clinicians as coauthors
- No policy-maker knowledge user involved
- No patient or public partners engaged
- No trainees engaged

Case Example 2: Intermediate co-production




ScienceDirect
Contents lists available at sciencedirect.com
Journal homepage: www.elsevier.com/locate/jval

Systematic Literature Review

Systematic Review on the Cost-Effectiveness of Seasonal Influenza Vaccines in Older Adults

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ABSTRACT

Objectives: Older adults are at high risk of influenza-related complications or hospitalization. The purpose of this systematic review is to assess the relative cost-effectiveness of all influenza vaccine options for older adults.

Methods: This systematic review identified economic evaluation studies assessing the cost-effectiveness of influenza vaccines in adults ≥ 65 years of age from 5 literature databases. Two reviewers independently selected, extracted, and appraised relevant studies using the JBI Critical Appraisal Checklist for Economic Evaluations and Heyland's generalizability checklist. Costs were converted to 2019 Canadian dollars and adjusted for inflation and purchasing power parity.

Results: A total of 27 studies were included. There were 18 comparisons of quadrivalent inactivated vaccine (QIV) versus trivalent inactivated vaccine (TIV): 5 showed QIV dominated TIV (ie, lower costs and higher health benefit), and 13 showed the results depended on willingness to pay (WTP). There were 9 comparisons of high-dose TIV (TIV-HD) versus TIV: 5 showed TIV-HD dominated TIV, and 4 showed the results depended on WTP. There were 8 comparisons of adjuvanted TIV (TIV-ADJ) versus TIV: 4 showed TIV-ADJ dominated TIV, and 4 showed the results depended on WTP. There were few pairwise comparisons among QIV, TIV-HD, and TIV-ADJ.

Conclusions: The evidence suggests QIV, TIV-HD, and TIV-ADJ are cost-effective against TIV for a WTP threshold of \$50 000 per quality-adjusted life-year. Future studies should include new and existing vaccine options for broad age ranges and use more robust methodologies—such as real-world evaluations or modeling studies accounting for methodological, structural, and parameter uncertainty.

Keywords: cost-effectiveness, elderly, influenza, older adults, vaccine.

VALUE HEALTH. 2022; 25(8):1439–1458

Introduction

Influenza is an acute respiratory illness¹ with significant population impacts, such as high mortality in older adults,² high demand for healthcare resources,³ and significant productivity losses.^{4,5} Influenza vaccinations prevent influenza infection and its consequences, but their vaccine effectiveness for laboratory-confirmed influenza in vaccinated versus nonvaccinated individuals is often below 60% and fluctuates by circulating viruses from season to season.⁶ The increased vulnerability of older adults to influenza highlights the importance of targeting at-risk populations for vaccination. With older adults in particular, most vaccines are less immunogenic because of age-related changes in the immune system.⁷ To address this, newer vaccines have sought to improve vaccine effectiveness, especially vaccine options for older adults.

Vaccines recommended for immunizing the elderly include trivalent inactivated vaccine (TIV), quadrivalent inactivated vaccine (QIV), high-dose QIV (QIV-HD), cell culture-based QIV (QIV-cc), high-dose TIV (TIV-HD), and adjuvanted TIV (TIV-ADJ).^{8,9} TIV is designed to protect against 2 influenza A and 1 influenza B viruses, whereas QIV protects against 2 influenza A and 2 influenza B viruses. High-dose versions of QIV-HD and TIV-HD vaccines use higher antigen doses.¹⁰ TIV-ADJs use additive ingredients to help promote a better immune response,⁷ and QIV-ccs are grown in cultured mammalian cells rather than in chicken eggs like most inactivated influenza vaccines.¹¹ Nevertheless, across countries and jurisdiction, there are variations in standard vaccine options. In Canada, 6 types of influenza vaccines are authorized for use in adults ages 65 years and older: QIV-HD, QIV-cc, QIV, TIV-HD, TIV-ADJ, and TIV.⁸ Provincially in Ontario, QIV-HD, QIV, and TIV-ADJ are the standard vaccines made available to older adults at no charge.¹² In contrast, QIV and TIV are approved and covered for older adults in Hong Kong,¹³ whereas in South Korea, only TIV is publicly funded for older adults.¹⁴

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- Researchers + 2 clinicians as coauthors
- Included a trainee coauthor
- Policy-maker knowledge users (Public Health Agency of Canada) involved with conceptualization, literature search terms, study eligibility, data items
- Policy-maker knowledge users did not coauthor final paper
- No patient or public partners engaged

Case Example 3: Extensive co-production

Open access

Original research

BMJ Open Interventions for social isolation in older adults who have experienced a fall: a systematic review

Andrea C Tricco^{1,2}, Sonia M Thomas¹, Amruta Radhakrishnan¹, Naveeta Ramkissoon¹, Gary Mitchell³, Jennifer Fortune⁴, Ying Jiang⁵, Margaret de Groh⁵, Kerry Anderson⁶, Joan Barker¹, Amélie Gauthier-Beaupré^{6,7}, Jennifer Watt^{1,8}, Sharon E Straus^{1,8}

To cite: Tricco AC, Thomas SM, Radhakrishnan A, et al. Interventions for social isolation in older adults who have experienced a fall: a systematic review. *BMJ Open* 2022;12:e056540. doi:10.1136/bmjopen-2021-056540

► Prepublication history and additional supplemental material for this paper are available online. To view these files, please visit the journal online (<http://dx.doi.org/10.1136/bmjopen-2021-056540>).

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ABSTRACT

Objectives The objective of our systematic review was to identify the effective interventions to prevent or mitigate social isolation and/or loneliness in older adults who experienced a fall.

Design Systematic review.

Data sources MEDLINE, Embase, the Cochrane Central Register of Controlled Trials and Ageline were searched (from inception to February 2020).

Methods Studies were eligible if they described any intervention for social isolation in older adults living in a community setting who experienced a fall, and reported outcomes related to social isolation or loneliness. Two independent reviewers screened citations, abstracted data and appraised risk of bias using the Cochrane risk of bias tool. The results were summarised descriptively.

Results After screening 4069 citations and 55 full-text articles, four studies were included. The four studies varied in study design, including a randomised controlled trial, non-randomised controlled trial, an uncontrolled before-after study and a quasiexperimental study. Interventions varied widely, and included singing in a choir, a patient-centred, interprofessional primary care team-based approach, a multifactorial assessment targeting fall risk, appropriate medication use, loneliness and frailty, and a community-based care model that included comprehensive assessments and multilevel care coordination. Outcome measures varied and included scales for loneliness, social isolation, social interaction, social networks and social satisfaction. Mixed results were found, with three studies reporting no differences in social isolation or loneliness after the intervention. Only the multifactorial assessment intervention demonstrated a small positive effect on loneliness compared with the control group after adjustment ($B=-0.18$, 95% CI -0.35 to -0.02).

Conclusions Few studies examined the interventions for social isolation or loneliness in older adults who experienced a fall. More research is warranted in this area. **PROSPERO registration number** CRD42020198487.

INTRODUCTION

Worldwide, more than 37 million falls occur requiring medical attention every year.¹ Almost 650 000 people die every year from a

Strengths and limitations of this study

- We conducted a comprehensive search of four databases, using a search strategy which was peer reviewed by a second librarian, and supplemented this by searching grey literature and scanning references of included studies and relevant reviews.
- We followed the methodology outlined by the Cochrane Handbook, with screening, data abstraction and risk of bias appraisal being conducted in duplicate by independent reviewers, and our findings were reported using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses 2020 checklist.
- We deviated from our protocol slightly due to the limited data on older adults in a community setting who had experienced a fall and expanded our inclusion criteria to include studies where some participants (not all) had a history of falling.
- Our included studies were plagued by risk of bias across several components, including poor allocation concealment, lack of random sequence generation and a lack of blinding of participants, personnel and outcome assessors.
- A lack of standardisation was observed across the outcomes assessed in the included studies due to lack of consensus on measures for social isolation and loneliness.

fall, with those aged 65 years and older experiencing the greatest number of fatal falls.¹ Falls are associated with considerable negative outcomes on older adults, such as physical inactivity, anxiety, depressive symptoms and fear of falling.^{2,3}

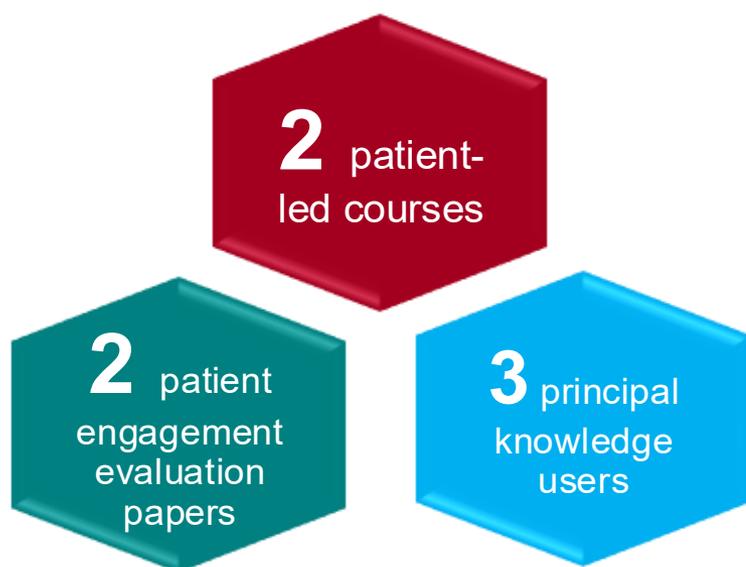
Social isolation is a serious consequence among older adults who have experienced a fall.⁴ Social isolation is a complex phenomenon that can be characterised by five key attributes: decreased number of social contacts, decreased feeling of belonging, reduced or lack of fulfilling relationships, decreased engagement with others and

- Researchers + 4 policy-makers (Public Health Agency of Canada) + 2 clinicians + 1 patient partner as coauthors
- Included 2 trainee coauthors
- Knowledge users involved with conceptualization, literature search terms, study eligibility, data items, interpretation of results, revised draft paper

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Patient and Public Engagement

Patient partnership integrated in research, leadership and governance



98 Patient and public submitted health research topics, **23** fully funded co-led projects.

13 Patient and public committee members in the governance structure with **4** serving as co-chairs

24 Patient and public peer reviewers for annual seed grants and research priority-setting panel

338 Patient and public partners engagements across 100 research projects

600+ Patient and public learners



SPOR Evidence Alliance

Strategy for Patient-Oriented Research

Alliance pour des données probantes de la SRAP 

Stratégie de recherche axée sur le patient



2021 Patient and Public Engagement in Rapid Reviews



2022 Patient and Public Engagement in Knowledge Synthesis



Co-building Patient and Community Capacity in Research

- **Background:**
 - Identified a need to include the perspectives of patients and community members in the research process, and that **training would be necessary for meaningful engagement.**
 - In collaboration with **two experienced patient partners**, SPOR Evidence Alliance co-produced and co-delivered two three-week courses over a span of 2 years.
- **Goal:**
 - Provide patient and community members with pragmatic tips and strategies to participate meaningfully in different knowledge synthesis projects.
- **Course Feedback:**
 - Overall, **over 90%** of the participants in both courses felt that the courses helped them achieve their learning goals and that **their learning experience was valuable.**

Ethics guidance for partnerships with patients

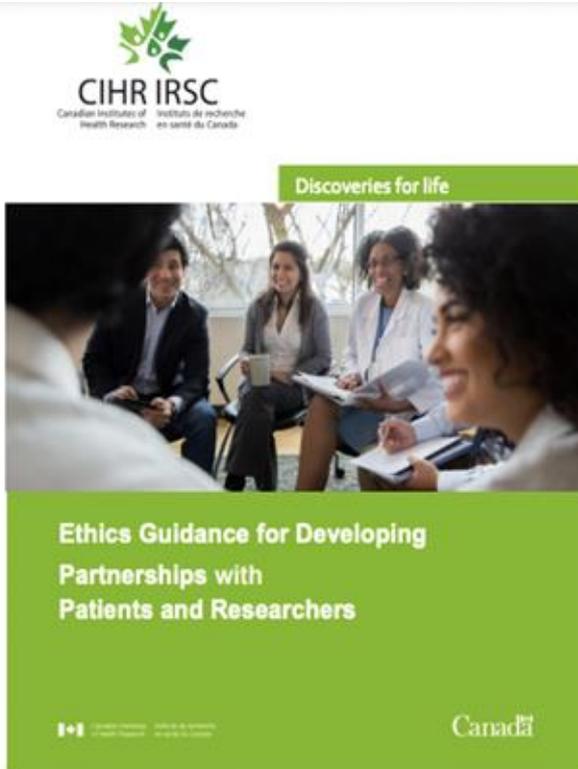
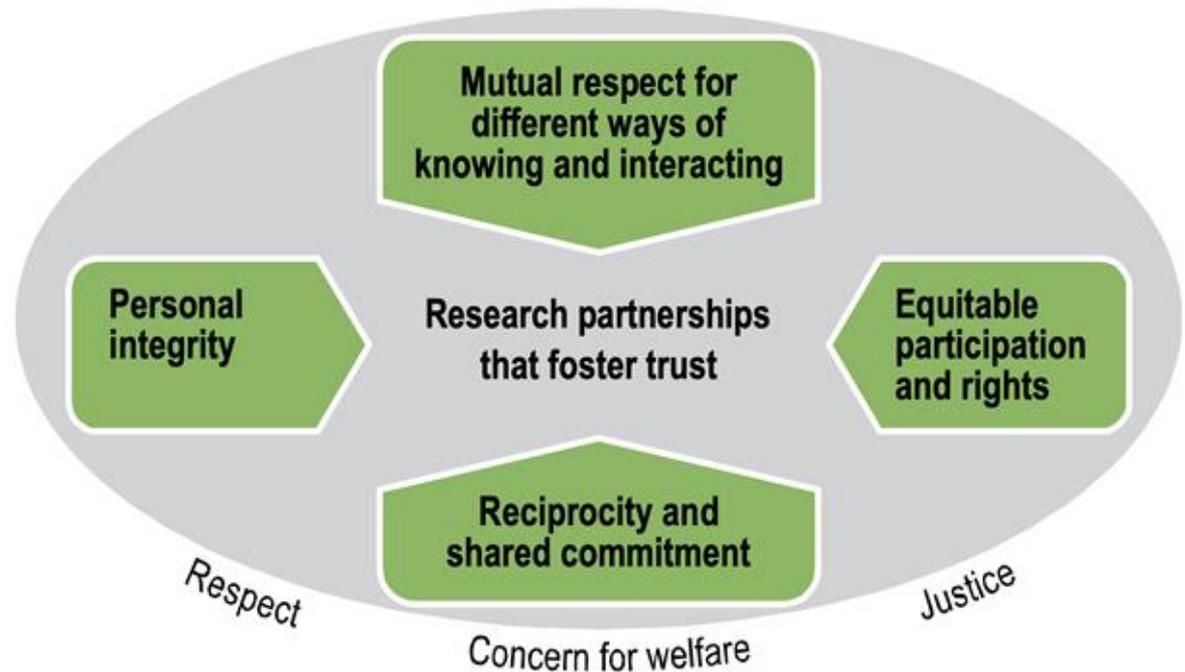
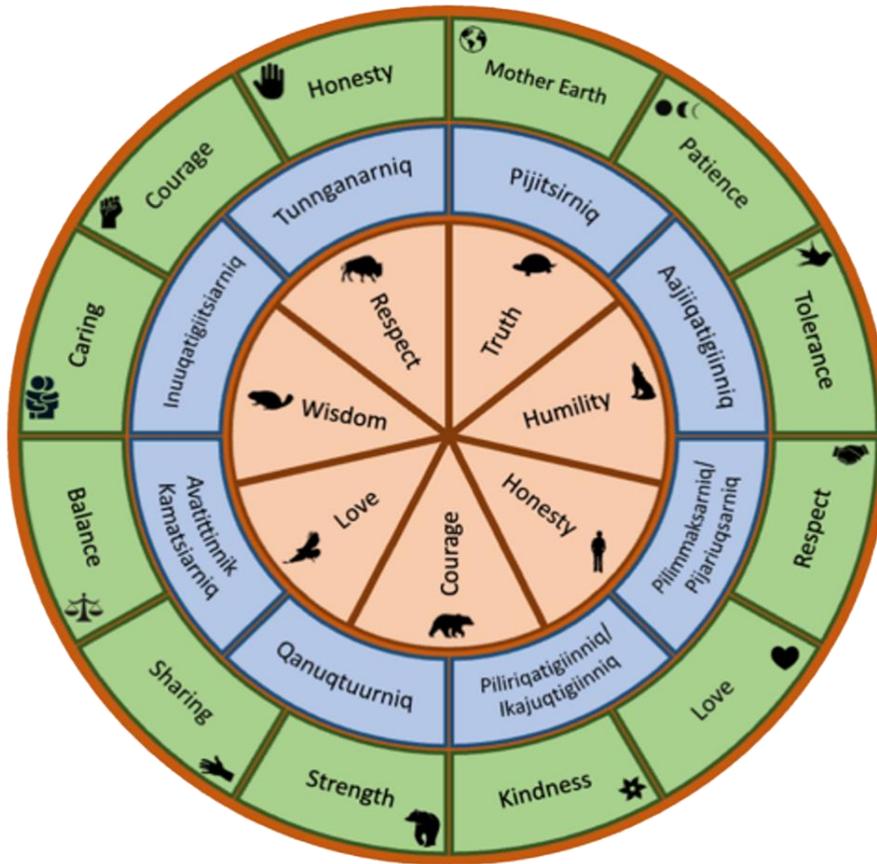


Figure 1. Core considerations for ethical research partnerships



New respect online cultural safety training



- Training program offered to all SPOR Evidence Alliance members by **Dr. Angela Mashford-Pringle**
- Course Objectives:** Address systemic anti-Indigenous racism by providing content that both embeds Power, Privilege and Positionality (the 3 Ps) and prompts critical self-reflection throughout

Meaningful and inclusive patient engagement



Provides guidance for teams looking to employ trauma-informed approaches, intersectional analysis, and critical reflexive practice in the co-production of meaningful, inclusive, and safe engagement strategies with patients and communities

Patient-Driven Research Projects

- We invite health research topics from patients and the public that identify an opportunity to improve health outcomes or medical or public health systems.
- Our model has enabled a space for research curated for patients and the public by patients and the public.
- Enabled an environment for collaborative learning and mutual respect between researchers, policy-makers, health system decision-makers, and patients and the public in doing research.
- Highest-priority topics were identified through a ranking exercise and deliberative dialogue by a steering panel (patient partners, the public, and researchers/health system decision-makers) and developed into research projects.

Patient/Public Partner Initiated Research: *research co-led by patients for patients*

Topic Submission



- Patients/public submit their research ideas using a brief web-based form.
- Any topics that identify an opportunity to improve health outcomes or medical or public health systems in Canada are eligible.

Patient-Identified Priorities

- All topics are reviewed and duplicate or overlapping ideas are combined.
- A librarian conducts literature searches to ensure the research idea has not been answered before.
- All topics are prioritized on an annual basis by a panel of patient/public partners, policy-makers, researchers, trainees, and other decision-makers using a modified James Lind Alliance Approach.
- Only the most impactful projects that can be answered through a knowledge synthesis, knowledge translation, or guideline approach are funded by the SPOR Evidence Alliance to proceed.



Research Partnership & Leadership



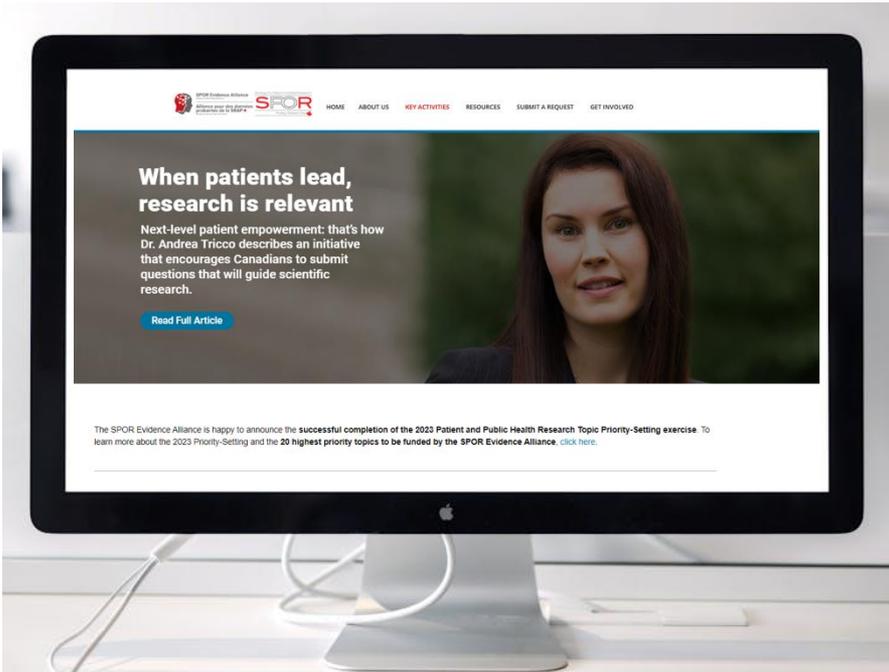
- The patients/public who submitted the topic will select a research team (when possible a local team) to carry out the work as equal partners in research.
- The patient/public partner and researcher co-leads work together to develop a work plan and budget.
- The patient/public partner and researcher co-leads identify 2-3 additional patient partners to join the team on the project.

Knowledge Dissemination

- Research findings are co-created and knowledge is shared using tailored dissemination strategies for the target audience.



Patient-Driven Research Projects



Details about the 23 patient-driven knowledge synthesis projects are available on our website: <https://sporevidencealliance.ca/patient-driven-research/>

Testimonials

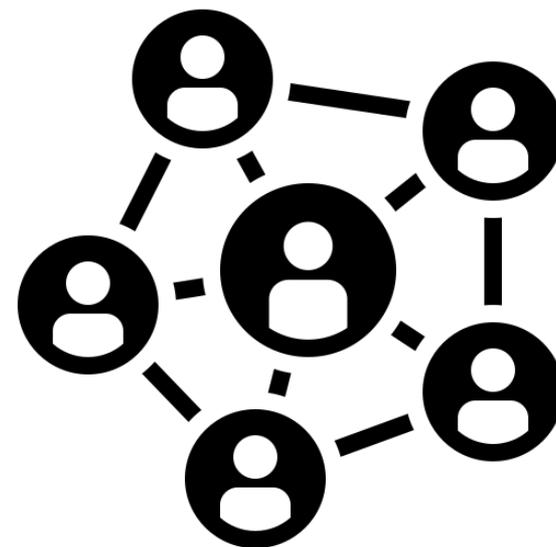
“[Patient partners] add heart and soul to the project”

“It challenges the research code book and encourages collaborative learning”

“It personalizes and humanizes the [research] process”

Communities of Practice (COPs) on Research Co-Leadership

- Formation of 5 COPs to support patient-driven research teams in research co-leadership.
 - Each COP will be led by expert members of the SPOR Evidence Alliance in patient-driven research.
- Objectives:
 1. Knowledge Sharing: Facilitate learning among members about patient-led research methodologies, ethics, and outcomes.
 2. Networking and Collaboration: Provide a platform for interaction among researchers, patients, and community knowledge users.
 3. Capacity and Skills Development: Enhance abilities in patient-driven research through structured support and shared resources.
 4. Advocacy: Promote the inclusion of patient-oriented principles in research funding and policy frameworks.

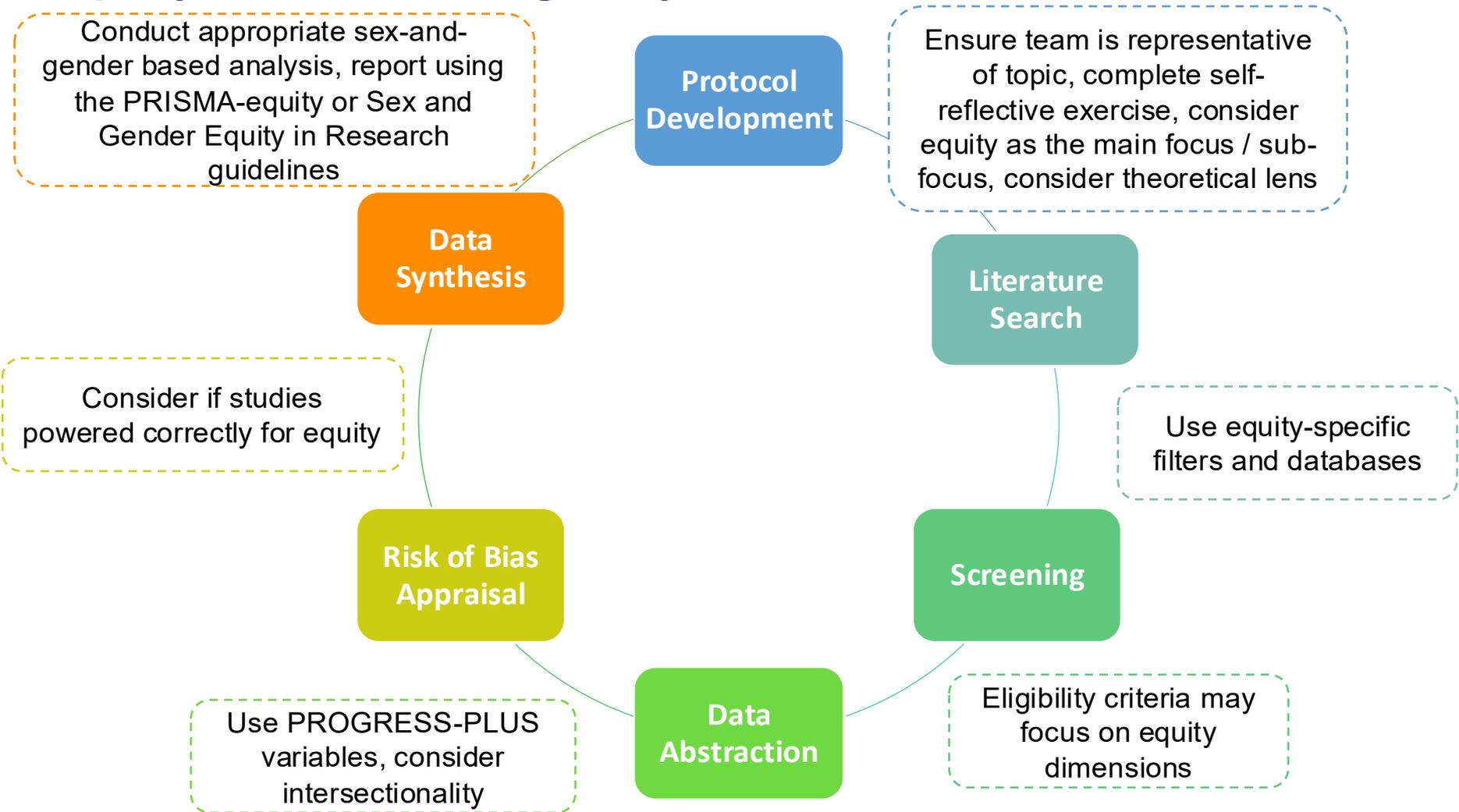


Incorporating equity into knowledge synthesis



- Provides practical guidance on considering equity in all stages of the review and guideline process
- Although the focus was on rapid reviews and guidelines, this guidance can be used for any type of research

Equity in Knowledge Synthesis



Thank you!

Andrea C. Tricco MSc, PhD

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Questions?

