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Advancing the Field of Scoping Study Methodology

Meeting Final Report

June 8-9th, 2015

Li Ka Shing Knowledge Institute,
St. Michael's Hospital, Toronto, Ontario, Canada

ACKNOWLEDGEMENTS

This meeting was funded by a Planning Grant from the Canadian Institutes of Health Research (CIHR). The meeting was also supported by the University of Toronto and the Li Ka Shing Knowledge Institute, St. Michael's Hospital (Canada). We also acknowledge support from Three Flying Piglets for the slide templates. We acknowledge Lisa Wickerson (Rehabilitation Sciences Institute, University of Toronto) who assisted in drafting this final report.



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MAIN MESSAGES

- ❖ **Goal of the meeting:** To advance the development of methodological quality criteria for conducting and reporting scoping studies* in order to enhance knowledge synthesis and translation of health and rehabilitation research among researchers, clinicians, and knowledge users.
- ❖ The specific objectives of the meeting were:
 1. To facilitate knowledge transfer and exchange (KTE) among researchers, clinicians and knowledge users about scoping study methodology.
 2. To establish a universal term and definition of scoping study.
 3. To establish consensus on the methodological steps for conducting and reporting scoping studies that will formulate future methodological quality criteria.
 4. To establish a scoping methodology collaborative.
- ❖ The international, two day meeting brought together 48 stakeholders, including researchers, clinicians, students, representatives from community organizations, people living with chronic disease and policy makers from Canada, UK and USA.
- ❖ We facilitated knowledge transfer and exchange (KTE) of scoping studies among stakeholders, and discussed the role of a scoping study collaborative (**Objectives 1 and 4**).
- ❖ We identified key characteristics and components of scoping methodology. The meeting highlighted a need for further clarity of terminology, definitions and methodological steps for conduct and reporting of scoping studies (**Objectives 2 and 3**).
- ❖ Evaluations of the meeting indicated that a majority of participants agreed that the meeting facilitated KTE and initiated interest in a scoping methodology collaborative; however further work is needed to establish a definition and consensus on methodological steps for the conduct and reporting of scoping studies. This meeting generated a number of key considerations going forward. Strengths of the meeting included high quality and informative presentations, a supportive group environment, diversity of perspectives and experiences of participants and an excellent opportunity for networking and future collaborations.
- ❖ Twitter updates were provided throughout the event: #scoping2015

***Note:** For the purposes of this meeting and report we used the term 'scoping study' throughout in accordance with the Arksey and O'Malley Framework.

EXECUTIVE SUMMARY

Members of a Canada-United Kingdom (UK) partnership hosted the first international two-day meeting titled *Advancing the Field of Scoping Study Methodology* on June 8-9th, 2015 at the Li Ka Shing Knowledge Institute, St. Michael's Hospital in Toronto, Ontario, Canada.

What was the goal of the meeting? To advance the development of methodological quality criteria for conducting and reporting scoping studies in order to enhance knowledge synthesis and translation of health and rehabilitation research.

Who Attended? The meeting brought together 48 academic and community partners including researchers, educators, healthcare professionals, policy makers, community representatives, students and individuals living with chronic disease from Canada, the UK and USA.

This report provides an overview of the *Advancing the Field of Scoping Study Methodology* meeting. The meeting was organized into two days. The objectives for the first day were to facilitate knowledge transfer and exchange on scoping studies and to establish a clear, common definition of scoping studies as a research methodology. The objectives for the second day were to establish consensus surrounding methodological steps of scoping studies and establish a scoping methodology collaborative. Nine speakers and a panel session of seven participants addressed issues related to scoping studies and knowledge synthesis methodology. Structured small and large group discussions, a Delphi process and multiple Q&A segments enabled participation throughout the day. Facilitators were in place to engage attendees while adhering to the agenda (please refer to Appendix A – Meeting Agenda).

What were the Strengths and Challenges of the Meeting? Evaluation of the meeting (n= 30 respondents) indicated that the meeting was well organized and the material presented was of high quality, extremely informative and applicable to their work. Speakers, panelists and participants represented a broad range of interdisciplinary stakeholders who contributed diverse perspectives and experience of knowledge synthesis methodology that facilitated knowledge transfer and exchange about scoping studies/reviews and lead to informative discussions. The diversity of participants' backgrounds, training and experiences led to challenges in reaching consensus on terminology and methodological steps. Overall, respondents found the meeting environment to be open and collegial. The majority of participants stated that they were interested in engaging in a future scoping study methodology research collaborative to remain up-to-date on emerging evidence on scoping methodology, further develop and disseminate scoping study methodology and identify future research priorities.

Who Do I Contact for More Information? For more information about the meeting please contact Kelly O'Brien (kelly.obrien@utoronto.ca), Heather Colquhoun (heather.colquhoun@utoronto.ca) or Danielle Levac (d.levac@neu.edu).

CONTEXT

Scoping studies are an ideal method to comprehensively synthesize evidence across a range of study designs in rehabilitation and chronic illness to inform practice and policy. Scoping studies examine the range, extent and nature of research activity, determine the value of undertaking a systematic review, synthesize and disseminate findings and identify gaps in research. In 2005, Arksey & O'Malley in the United Kingdom (UK) published a six stage methodological framework for conducting scoping studies.¹ In 2010, members of this meeting team proposed recommendations to build on each stage and highlighted considerations for advancement, application and relevance.² There has been an increased interest and publication rate of scoping studies in health and rehabilitation research. Unlike systematic reviews and clinical practice guidelines, there is no universal agreement on a definition or methodological steps for the conduct of this emerging research methodology. Therefore, there is a pressing need for ongoing advancement of this methodology and to establish criteria for the conduct and reporting of scoping studies to strengthen the methodological rigor, enhance the validity of the evidence and increase the potential for this form of knowledge synthesis.

THE MEETING

On June 8-9th, 2015, members of a Canada-UK partnership hosted a meeting titled *Advancing the Field of Scoping Study Methodology*. The goal of this CIHR-funded meeting was to advance the development of methodological quality criteria for conducting and reporting scoping studies in order to enhance knowledge synthesis and translation of health and rehabilitation research among researchers, clinicians, and knowledge users.

The meeting was organized into two days. The objectives of day one were to 1) facilitate knowledge transfer and exchange (KTE) among researchers, clinicians and knowledge users about scoping study methodology and 2) establish a universal term and definition of scoping studies. The objectives of day two were to 1) establish consensus on the methodological steps for conducting and reporting scoping studies and 2) discuss the future of a scoping study collaborative.

The meeting was comprised of nine individual speaker sessions, a panel of seven participants, structured small and large group discussions, a Delphi process and multiple Q &A sessions.

APPROACH

The *Advancing the Field of Scoping Study Methodology* meeting was supported by a Planning Grant from the Canadian Institutes of Health Research (CIHR).

Meeting Core Planning Committee

In September 2013, a Core Planning Committee was formed which included co-principal investigators, co-investigators and collaborators of the CIHR Planning Grant. The purpose of the Core Planning Committee was to oversee the planning and implementation of the meeting. This Committee met 4 times leading up to the meeting to discuss developing a timeline for the meeting, confirming a venue, finalizing and distributing participant and speaker invitations, establishing opportunities and plan for student rapporteurs, finalizing the meeting program agenda and program, developing and implementing a pre-meeting environmental scan, and developing a Delphi questionnaire and process for the meeting, liaising with speakers prior to the meeting and developing an evaluation plan.

Invitations and Advertisement of the Meeting

The Core Planning Committee in consultation with the CIHR Planning Grant Team developed a list of invitees which included researchers, educators, policy makers, students and community members. Personal invitations requesting an RSVP were distributed between March 2015 and May 2015.

Excluding the Core Planning Committee, we sent out a total of 84 invitations. Initially, in March, we e-mailed personal invitations to 65 invitees of which 33 responded indicating that they could attend the meeting. We sent a reminder e-mail at the end of April to the invitees who had not yet responded. From these initial invitations sent out, multiple attendees as well as those who were unable to attend, suggested additional individuals that would be interested in this meeting or were experts in the field. The Core Planning Committee reviewed and approved the list of additional invitees. Through snowballing, 19 additional personal invitations were e-mailed between mid-April to the end of May (as suggestions were brought up) of which 15 responded indicating that they could attend.

We tracked all invitations and whether the individual could attend or not in a Microsoft Excel document. Our aim was to reach 50 attendees, as that was the amount of people that our meeting space was able to accommodate. Attendees were primarily local (to Ontario) as our budget was limited. We provided subsidy for travel or accommodation when we were able.

Invited Speakers, Volunteers and Participants

Prior to the meeting, an environmental scan was sent out to 85 individuals to request online ranking of the importance of methodological steps of scoping studies to prepare for the Delphi process on day two. Forty-eight researchers, clinicians, students, people living with chronic disease, representatives from community organizations and policy makers from Canada, UK and USA delivered individual presentations and participated in a panel discussion, small and large group discussions and a Delphi process throughout the two day meeting. Eight graduate students from the Rehabilitation Sciences Institute (RSI) at the University of Toronto were involved as panel speakers and rapporteurs. There was no registration fee for participants.

Meeting Program

The Core Planning Committee developed a meeting program, which contained the aims of the meeting, agenda, presentation slides and biographies of the speakers and rapporteurs.

Pre-meeting Planning Teleconferences

The Core Planning Committee held two pre-meeting teleconferences, one for the Panelists in May 2015 and one for the rapporteurs in May 2015. Three additional planning teleconferences by the Core Planning Committee were held throughout. The purpose of the Core Planning Committee teleconferences was to plan the scoping study meeting, review updates and plan any next steps. The purpose of the teleconferences for the panelists and rapporteurs was to allow them to get acquainted with each other before the event, discuss the meeting, discuss their role and address any questions.

Social Media

The team implemented a social media strategy during and after the meeting via Twitter: #scoping2015. To access the Twitter feed from the meeting go to: <https://twitter.com/search?q=%23scoping2015&src=typd&lang=en>

Post-meeting Activities

The scoping meeting team met once via teleconference after the meeting to debrief on the overall meeting process and to discuss next steps and the knowledge translation strategy.

MEETING OVERVIEW

The two-day meeting was held on June 8-9th, 2015. There were nine individual speaker sessions, a panel session with seven participants, structured small and large discussions, a Delphi process and question and answer sessions.

Discussion was encouraged through questions and answer sessions as well as informal discussions during break and lunch. The meeting included a number of features to enhance knowledge transfer and exchange. Participants were provided a hard copy of the meeting program, which included the aims, agenda, presentation slides, and biographies of all speakers, panelists and rapporteurs. All attendees were encouraged to use Twitter throughout to further translate highlights from the meeting. A graphic facilitation was produced on Day 1 of the meeting that visually represented a map of participants and their scoping experiences (**Figure 1**) and notes from all the sessions (**Figure 2**).

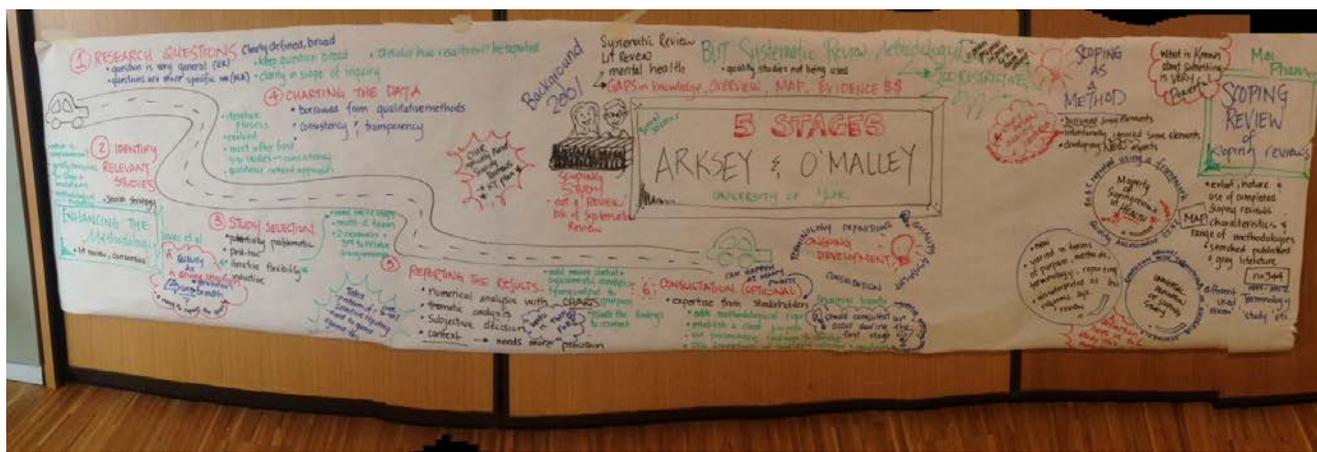


Figure 1: Graphic Facilitation Participants and Scoping Experience (Emily Ho; Rehabilitation Sciences Institute)

Speakers, Panelists and Participants

Meeting participants represented a broad range of stakeholders. See **Table 1** for an overview of characteristics of meeting participants.

Table 1 Characteristics of Meeting Participants (n=48)			
Participant's Affiliation	Meeting Participants (N (%))	Participant's Role	Meeting Participants (N (%))
Hospital	3 (6%)	Community Member	1 (2%)
Research Organization	6 (13%)	Educator	6 (13%)
Knowledge Broker/Translation Organization	4 (8%)	Service Provider	4 (8%)
University/Academic Institution	28 (58%)	Researcher	20 (42%)
Other (community organization, nonprofit, government organization)	7 (15%)	Student/Trainee	14 (29%)
		Other	3 (6%)

SUMMARY OF MEETING PRESENTATIONS AND DISCUSSIONS

There were nine individual presentations, a panel session, structured small and large group discussions and a facilitated Delphi process. Please see **Appendix A** for the Meeting Agenda.

DAY ONE (June 8th, 2015)

The keynote speaker **Lisa O'Malley**, researcher and co-author of the first scoping study framework from the University of York (UK), presented an **overview of scoping study methodology and development of the Arskey & O'Malley framework**.¹ Key messages from Lisa's presentation included:

- The scoping framework evolved from the social science field where protocol-driven systematic review methods were deemed too narrow for the broad questions being postulated such as 'What is known about' or 'How are certain strategies used'.
- Scoping methodology borrowed some elements of a systematic review (i.e. rigor, replicability, transparency), while overlooking other elements (i.e. quality appraisal, pre-determined protocol) and developed new aspects (i.e. consultation).
- The developed framework was intended to be a starting point for discussion.
- Defining a scoping study was not the intent of the original publication, and the term scoping 'study', as opposed to 'review', was intentionally chosen not as an intellectual decision but as an attempt to distance this type of study from the traditional systematic review.

Discussion points:

- The initial intent of a broad question such as 'what do we know about?' was to recognize that other types of research used to inform evidence based care for 'softer' or more complex multi-faceted interventions that were somewhat ignored by policy makers. There was an interest in exposing gaps and mapping multidisciplinary evidence for academic and political reasons.

- The decision not to be driven by a single protocol but rather an iterative process was deliberate. This has been a point of contention, particular with the issue of selective reporting.

Danielle Levac, Assistant Professor from Northeastern University (USA), presented on **enhancing scoping study methodology by building on the Arskey & O'Malley framework**.²

Key messages and discussion points from Danielle's presentation included:

- Considerations for advancement, application, and relevance of scoping studies in health research involved several enhancements to the original framework.
- The resistance to including a quality process in the scoping study process related to the lack of progress in developing quality appraisal for qualitative research and other forms of study designs included in scoping studies. There is a concern that if quality assessment becomes a driving factor of scoping studies the breadth of methods including innovative methods may be narrowed.
- Historically scoping studies were defined by what they don't do, and going forward should be defined as what they do.

Mai Pham, PhD from University of Guelph (Canada), presented a **scoping review of scoping reviews**.³

Key messages and discussion points from Mai's presentation included:

- There is a need for a universal scoping study/review definition with an emphasis away from a rapid approach.
- Authors often misinterpret scoping studies as less rigorous than a systematic review. Methodological standardization, development of reporting guidelines and potential inclusion of quality assessment should be considered.
- Terms for scoping studies are becoming ubiquitous, and there is a need for guidance on what scoping studies are trying to achieve.
- There has been an increase in popularity of scoping studies, particularly in health research, however it is not known where within health research it is being used.

A **panel session on experiences, strengths, benefits, challenges and strategies for moving scoping studies forward** involved a diverse group of panelists including **Danielle Levac** (Assistant Professor, Northeastern University)^{4,5}, **Larry Baxter** (Knowledge User, Canada), **Dario Kuzmanovic** (Research Ethics Manager, University of Toronto, Canada), **Shaun Cleaver** (PhD candidate, University of Toronto, Canada)⁶, **Julie Vaughan-Graham** (PhD candidate, University of Toronto, Canada)^{7,8}, **Stephen Gentles** (PhD candidate, McMaster University, Canada)⁹ and **Zack Marshall** (Community-Based Researcher and PhD candidate, Memorial University)¹⁰. Key messages from the panel session include:

Experiences:

- Pre-scoping study/review consultation with multi-disciplinary members to ensure consistent methodology could be informative, as varying terminology used across disciplines can become an issue.

- Scoping studies permit the ability to explore a range of the evidence, identify gaps and make empirical recommendations without the limitations associated with syntheses that involve only randomized controlled trials (RCTs).^{7,8}
- A fundamental understanding is needed in content analysis, schematic representation of data and synthesis of themes and categories. Documentation of steps taken in data analysis, especially thematic analysis is essential.^{7,8}

Strengths/ benefits:

- Flexibility allows the ability to report on a different concept than the initial intent.⁶
- The inclusivity of all study designs including grey literature can provide a unique perspective on a collective body of work.^{7,8}

Challenges:

- Defining terms and narrowing down terminology if the literature is scattered. The huge variety in grey literature present a challenge for synthesizing in one report, and the volume of the data can become unmanageable.
- It can be difficult to find a journal that will publish scoping studies/reviews due to specific requirements on tables, graphs and word count.¹⁰
- The consultation piece may require extra time and funding and may not match with graduate student timelines (a target population increasingly using this methodology in their graduate studies).^{7,8}
- Mixing of terms (scoping studies/reviews, evidence maps, gap maps, environmental scan, systematic review).¹⁰

Strategies for moving scoping studies forward:

- Further guidance and specificity around methods of data analysis, and more clarity surrounding the consultation phase.¹⁰

Large group discussion points:

- Moving forward it is important to think about the objectives of the knowledge synthesis and how to match with the appropriate methodology.
- A distinct discourse / tension is emerging regarding different terminology and there is a need for reporting standards and a framework that finds space for work that does not involve RCTs.
- Scoping studies do not necessarily report on the effectiveness of interventions. Authors may find difficulties in being published if the scope and purpose of the review is poorly defined. Researchers should position the research question in terms of how it is unique and can complement other studies.
- Scoping studies support community-based research and have the power to change what is known and not known. They consider other types of evidence such as lived experiences and provide opportunities for lay people and community to influence research agenda. The consultation phase can be an integral part of this process, although it requires additional time commitment and is an optional stage.
- There is a disconnect that scoping studies fit within the context of a six to eight month window of a PhD comprehensive exam. PhD students' increased use of scoping studies may be due to a misguided understanding of what a scoping study is.

Andrea Tricco, Scientist, Li Ka Sing Knowledge Institute, St. Michael's Hospital, Canada, gave a presentation titled '**Are scoping reviews related to other types of knowledge synthesis?**'¹¹ Key messages from Andrea's presentation included:

- There are emerging knowledge synthesis methods (i.e. critical interpretive synthesis, integrative review, meta-ethnography, realist review, diagnostic review, systematic review, rapid review, rapid systematic review, narrative synthesis) that are sometimes used interchangeably and have led to confusion in the field.
- Systematic vs. rapid vs. scoping reviews vary in terms of timeframe, objective, research question, information sources, eligibility, quality appraisal, data abstraction, synthesis and conclusion. The choice of knowledge synthesis method to adopt depends on the research question.
- Well-established methods and reporting guidelines exist for systematic reviews but are lacking for rapid and scoping studies. Rapid reviews have seen an increase in publication and are often conducted for knowledge users outside the public domain.

Discussion points:

- Scoping studies may be seen as a way to integrate quantitative and qualitative research. They can be viewed as broader in scope and less empirical than systematic reviews. However there was debate on what constituted empirical evidence. It was unclear how the consultation exercise would be included if the goal of the scoping study was to synthesize peer-reviewed evidence. A case study of a lived experience is different than ruminations and opinions.
- An integrated knowledge translation approach rather than consultation may be used for policy makers that include talking to stakeholders up front, engaging different levels of involvement, discussing results and looking for consensus at bottom line. Policy makers may only want an answer, which may clash with the research community who may want a case report. Education and negotiation with policy makers on what a scoping review provides is needed.
- Meeting participants questioned whether scoping studies are just 'mapping' and do not result in recommendations. This was a source of debate as recommendations have been presented as an outcome in some scoping studies, particularly those involving the consultation phase.
- There are a range of synthesis methods that can be used to approach a body of data, and if this becomes too restrictive for scoping studies than the whole point of a method that is supposed to be open, inclusive, flexible and available may be lost.
- Researchers have used different methods in different ways and perhaps have not consistently been explicit about their choices for the method. Justification of the use of scoping study as a methodology over other forms of syntheses or literature reviews may be warranted. The aim of the presentation was to discuss matching methods to questions to illustrate how results would change based on the method that is chosen.

Danielle Levac gave an **introduction to establishing a common definition and terminology of scoping studies/reviews**.¹² Key messages from Danielle's presentation included:

- A lack of clarity in terms of definition and terminology limits the potential of scoping studies/reviews to advance health care practice, policy, and research, and prevents readers

from evaluating methodological rigor and quality of conduct. The use of the term scoping study vs. scoping review still warrants consideration.

- The continued use of the Arksey & O'Malley (2005) framework is encouraged, along with the recommendations proposed by Levac et al. (2010).
- There were two opposing preferences: a) to align scoping studies/reviews with other types of reviews, and b) to distinguish scoping studies/reviews from other types of reviews.

A **small group breakout session** followed by a **large group discussion** focused around the **strengths and challenges of scoping studies and developing a definition and terminology**. Key discussion points included:

Ideal terminology (scoping study vs. scoping review):

- No clear consensus was reached. The term *scoping review* was felt to tie in better with other literature review and synthesis methodology. Rationale for the term *scoping study* was that the consultation piece results in the generation of new data aligning it towards a traditional study definition. Several participants preferred a basket of terms with sub-categories.

Distinguishing characteristics of scoping studies:

- The breadth of the research question, mapping the extent, range and nature of the literature, identifying gaps in the evidence, allowing flexibility and an iterative process during all stages, inclusivity of a range of evidence, possibility for qualitative and quantitative synthesis and the consultation stage.
- There was discourse on whether scoping studies can evaluate effectiveness and make recommendations after mapping/charting the literature. A different paradigm was felt to exist between policy recommendations and clinical intervention recommendations.
- Historically the exclusion of a quality assessment was a political stance as opposed to a scientific stance in order to differentiate scoping studies from systematic reviews. Some participants felt strongly that quality assessment and risk assessment should not be allowed and that scoping terminology should reflect gathering of information vs. judgment. Others felt that the definition of quality assessment was important and its inclusion depends on the research question. If a cluster of evidence in one area is found then a quality assessment may be useful to assess the quality of that evidence.

Key concepts of a definition:

- The majority did not endorse the term “synthesis” and suggested integrating, characterizing, mapping or charting. Others differentiated synthesizing findings/results vs. synthesizing methods and characteristics of studies. It was felt that the term synthesis was related more to quantitative methods such as effect size, and the definition may require further clarity and a broader definition.
- The definition of mapping was not clear to everyone. Potential ways to demonstrate relationships can occur through evidence-maps, gap-maps, concept-maps and other types of visual representation. Mapping was felt to have a time-limited element representing a snapshot of what is known and not known at a given point in time.

- Participants felt that the consultative stage should be allowed at all stages of the scoping study to add context and provide new information. The term consultation has been used in a variety of ways (i.e. integrated knowledge translation throughout the process versus end-of-study consultation and interpretation phase) and could be better defined.

Other discussion:

- Discussion centered on how to encourage and support graduate students conducting a consultation stage, as this may be challenging for students with limited partnerships or collaborations. The consideration of integrated KT and consultation at the end of the scoping study with stakeholder’s contributions raises issues of feasibility for students. The consultation exercise has to be meaningful to the student and tailored appropriately to the target audience, whether contextualized into an intellectual debate or rooted in practice.
- Nevertheless, scoping study methodology should not be bound or dictated by the least resourced group conducting the study. Individuals engaging in scoping studies/reviews should be explicit and transparent about their resources and feasibility issues up front.



Figure 2: Graphic facilitation of all sessions (Emily Ho; Rehabilitation Sciences Institute)

Lisa O’Malley provided a **summary, reflection and recommendations** from Day One. Key messages included:

- Historically, scoping studies started from a desire not to be a systematic review, but are moving from a deficit model towards shaping it in its own way and using terminology that is more positive. Scoping studies are forward thinking and can capture possibilities of what can be done further.
- The purpose of the scoping study can vary, which can make it difficult to define. Two elements of methodology that remain crucial are the breadth of the searching method including non-peer reviewed literature and the methods of qualitative and quantitative synthesis/analysis.
- Knowledge synthesis and language should be accessible across a wide range of disciplines.
- Multi-stakeholder participation is important in order to represent perspectives across different contexts and areas of expertise.
- There is an emerging notion that some forms of knowledge have more importance because of numbers and the ability to include synthesis methods such as meta-analysis, however scoping

studies are built on different types of knowledge such as what is known about a problem and /or lived experiences.

DAY TWO (JUNE 9TH, 2015)

Heather Colquhoun, Assistant Professor, University of Toronto, Canada, presented a **review of the common characteristics of a definition based on Day One discussions**. Key messages of Heather's presentation included:

- The words/terminology and the fundamental principles and concepts will continue to plague this field.
- Mapping a defined area may become what defines a scoping study, as other characteristics speak to knowledge synthesis more broadly.
- The research question should dictate the methods.

Wasifa Zarin and **Erin Lillie**, Research Coordinators, Li Ka Shing Knowledge Institute, St. Michael's Hospital, Canada, presented '**Conduct and Reporting of Scoping Reviews: A Scoping Review**'.¹³ Key messages from Wasifa and Erin's presentation included:

- The synthesis revealed large methodological variability in the conduct and reporting of scoping reviews, these variable steps included predefined protocol, research question, literature search, data mapping/charting, implications/recommendations and consultation. This highlights a need for a framework/standard approach for conducting and reporting.
- A goal is to develop a checklist for reporting scoping studies and research protocols.
- Variability is not necessarily a negative aspect in scoping studies, however authors should provide clear rationale for their methodological approach and be transparent in reporting it.
- Consideration of grey literature sources are an important way to ensure the study results will have relevance for policymakers.

Discussion points:

- Although the research question may be broad with scoping studies, the number of included articles/ information sources may be a smaller number than originally conceptualized. Large scoping studies often use strategies to incorporate a high volume of articles such as focusing exclusively on abstracts for data.
- Minimum standards for screening and reporting are needed in order to raise the reputation of scoping studies. Flexibility and iteration is important but must be reported and justified.
- A number of rehabilitation journals do not accept scoping studies as they find they have no way to evaluate quality.

David Moher, Senior Scientist, Ottawa Hospital Research Institute and Assistant Professor, University of Ottawa, Canada, gave a presentation titled '**What is EQUATOR and what are the considerations for developing health research reporting guidelines?**' Key messages and discussion points from David's presentation included his experience developing the PRISMA statement on preferred reporting items for systematic reviews and meta-analyses¹⁴:

- The EQUATOR network is trying to move reporting earlier into the protocol stage to improve the conduct and reporting of the research question and methodology and decreasing selective reporting and biased reports in order to empower the reader.
- The development of guidelines for conducting and reporting scoping studies/reviews was recommended such as checklists, flow diagrams and tool kits. However, providing guidance was felt to be a challenge because at this time the definition and terminology of scoping studies are unclear and a foundation is still being laid.

Heather Colquhoun and **Andrea Tricco** presented on **establishing methodological steps for conducting scoping studies** and facilitated a Delphi process using a modified RAND method to assess group judgment. Consensus was pre-defined at 85% agreement level of responses of 6 or 7 (very important and extremely important) on a 7-point ordinal scale. Items were chosen based on empirical evidence from Mai Pham’s scoping review of scoping reviews, the ‘scoping review of scoping reviews’ currently being conducted, and input from the research team. Items specifically related to the reporting of scoping studies (i.e. incorporating a study flow diagram, putting results in a tabular format or graphs and reporting study characteristics) were not included. See **Appendix B** for the Delphi Questionnaire.

- Seven items that reached high agreement included:
 - searching greater than one database
 - consulting a librarian/IT specialist to ensure strategy is appropriate
 - keeping the search strategy unrestricted to study design
 - titles and abstracts screening for relevance
 - full-text screening for relevance
 - formal data charting/abstraction using standardized form(s)
 - at least two independent reviewers for title and abstract screening for relevance
- The following 19 items did not reach consensus, and discussion points included:
 - *Establishing a research protocol a priori to conduct of study* – Participants recognized that a mechanism to record decision-making and deviations to a research protocol is important to adopt. The term ‘protocol’ was felt to be reductionist and clearly linked to systematic reviews and ‘plan’ may be a more appropriate term. The protocol/plan should allow an open narrative discussion about what the researcher is going to do. There was concern that PROSPERO may not recognize the iterative process of scoping studies/reviews, and not allow for amendments.
 - **3 items around the iterative process: iteratively defining the research question, eligibility criteria and search parameters** – Participants generally supported these items, however it was not clear at what stage iterations do and should occur. There

was expressed concern about changing the research question and to map the evidence and re-doing the results.

- *Consulting topic experts to identify key search terms*- Many deemed the expertise of the research team and consultation with experts as important, particularly with complex research questions in order to identify a wide range of terms for a particular concept. It was not clear if this item captured ideas around clarity and cultural sensitivity.
- *Scanning reference lists of relevant articles*- Although the aim of a scoping study/review is to cast a wide net and map the literature, this requires time and resources. Whether reference lists are scanned can also depend on the research question and purpose.
- *Searching unpublished and ongoing studies (i.e. grey literature)* - If 'mapping' is left in the definition of a scoping study/review, then grey literature should be searched. Although some participants felt literature should not be differentiated on the basis of peer review, grey literature is not always easy to locate. Some felt that searching grey literature might depend on the research question.
- *Consulting topic experts to identify additional studies* - Participants questioned whether topic experts always have the capability to identify additional studies. Consulting with experts can be very helpful in the area of grey literature, and appears imperative for policy work.
- *Manually searching select journals*- Some would only consider this if they knew a key journal was not indexed.
- **2 items around restrictions in the search strategy: Keeping search strategy unrestricted to publication date and publication language**- The importance of not restricting to publication date was felt to stem directly from how the research question was defined. It would be important to know about articles published in a language other than English in order to fully map the literature. However, employing linguistic and translation programs to the search strategy can impact scoping study feasibility. Justifications should be reported for any search restrictions.
- *Formal quality assessment of included studies using standardized checklist(s)*- There was a lack of understanding of what assessing quality will look like in a scoping study. There are multiple tools to facilitate a risk of bias assessment, however some do not interpret risk of bias assessments to be the same as quality assessments. Quality assessment may not be relevant for scoping studies aimed at rapidly mapping the literature to determine if a systematic review should be conducted. Rationale for quality assessment should be linked to the scoping study objectives, as selecting and utilizing multiple quality assessment tools to account for variable approaches and appropriately assessing quality for different study designs are resource-intensive. It may depend on the scoping study, as assessing quality may help answer the question "so what?" and provide recommendations/implications.
- **3 items around number of reviewers: Involvement of at least two independent reviewers in screening full-text articles for relevance, formal charting/abstracting data**

using a standardized form(s) and formal quality assessment of included studies using standardized checklist(s)- Due to the breadth of the search the majority of participants felt it was useful but not essential to have two independent reviewers involved in the process to reduce error and provide verification.

- **3 items around synthesis/analysis:** *Inclusion of narrative synthesis, meta-analysis and qualitative analysis*- Involves a synthesis of the charting but does not necessarily include study findings.
- *Formal consultation exercise with relevant stakeholders*- The inclusion of the consultation exercise may depend on the research question. In instances of large gaps in the literature consultation can provide expert opinion to help inform implications for research agenda and prioritization. There was a recognized need to sort out different models of stakeholder engagement in terms of integrated vs. end of study consultation.
- Overall discussion:
 - Broad perspectives and epistemological differences lead to diversity in how scoping studies were conceptualized. Many defining characteristics of scoping studies appeared to depend on the research question with defining characteristics becoming less clear. There was a deep investment in the belief that there are multiple ways of approaching a question, however a range of acceptable methods should be outlined so scoping studies do not adopt an ‘anything goes’ approach.

Andrea Tricco, Heather Colquhoun, Kelly O’Brien, and Danielle Levac discussed **next steps for methodology, publications, KTE strategy and scoping methodology collaboration**. Key considerations included:

- This meeting highlighted the complexity language. The different working definitions of key concepts and use of language from a social scientist vs. healthcare perspective became more apparent.
- Publishing the environmental scan (not reported here) to describe perceptions on terminology and definition is a preliminary step.
- Moving forward, a main goal will be to develop a methods manual. Conceptually it is important to examine the evidence spectrum and consider where to position scoping studies.
- Prior to deciding on next steps, working frameworks and existing exemplars should be considered in addition to further exploring the issues identified at this meeting.

EVALUATION

Thirty participants completed the evaluation form, a response rate of 62%. The evaluation highlighted strengths and successes for this event and provided valuable feedback. The top five “take home messages” from the meeting were: 1) There is a need for further clarity on the definition and terminology of scoping studies, 2) The research question is essential, should align with the purpose and guide the choice of methodology, 3) A strength of scoping studies are their flexible and iterative approach, 4) Language matters, and the emotional and philosophical attachment to words can vary

between epistemological positions, and 5) There is a strong rationale for complete and transparent reporting guidelines for scoping studies.

Twenty-one of the 30 respondents (70%) agreed that the meeting achieved its goal of advancing the development of methodological criteria for conducting and reporting scoping studies. Twenty-eight of the 30 respondents (93%) agreed or strongly agreed that the meeting achieved its objective of facilitating knowledge transfer and exchange about scoping study methodology. Twenty-one of the 30 respondents (70%) agreed or strongly agreed that they made new contacts, which will be helpful to their work. All respondents agreed or strongly agreed that the presenters were knowledgeable and communicated clearly. Twenty-seven of the 30 respondents (90%) agreed or strongly agreed that it was useful to learn about scoping studies/reviews being carried out by other stakeholders. Twenty-six of the 30 respondents (87%) agreed or strongly agreed that there was adequate time for informal discussions during the meeting. A considerable degree of new and relevant knowledge and insight was gained in scoping study/review methodology (18/30 (60%)) and in strengths and challenges of conducting scoping studies/reviews (16/29 (55%)). A lesser degree of insight was gained in knowledge synthesis in health research, methodological steps for conducting scoping studies and overcoming challenges associated with conducting scoping studies. Twenty-seven of the 30 respondents (90%) reported being able to apply the meeting content to their work through future scoping studies, consideration of a consultation stage, asking questions of research teams regarding methodology, education of students and colleagues and in preparation for the PhD comprehensive exam process. Eighteen of 28 respondents (64%) envision collaborating with other meeting participants on future scoping study research initiatives.

Respondents provided informative and encouraging comments in regards to strengths and drawbacks of the meeting. Identified strengths of the meeting included the high quality presentations, a supportive and collegial atmosphere, the diversity of participants and perspectives and the presence of keynote speaker Lisa O'Malley. Identified drawbacks included a lack of operational definitions and confusion with terminology as well as the high criterion for consensus and the wording of the items of the Delphi process. Although consensus was not established for the majority of the methodological steps of scoping studies, respondents found that the meeting was a useful start to the process, the fundamental disagreements and differing perspectives provided valuable insight, and there was significant energy in post meeting activity. Twenty-two of 26 respondents (84%) expressed interest in becoming involved in a scoping methodology collaborative. The nature of this collaborative and engagement in the broader scheme of establishing future criteria for conduct and reporting scoping studies is still to be determined and will be part of the next steps. Overall, respondents found the meeting to be extremely well organized and conceptualized. Refer to **Appendix C** for the evaluation form.

NEXT STEPS

Next steps in advancing scoping study methodology include:

- Establishing a universal definition of scoping study that encapsulates the key characteristics discussed at this meeting.
- Establishing a 'taxonomy' of where scoping studies are placed among other forms of knowledge syntheses (rapid reviews, systematic reviews, realist reviews, narrative reviews, etc.) and the broader knowledge synthesis context.

- Developing a scoping methods manual that clearly outlines the steps for conducting scoping studies. Meeting participants referred to the Cochrane Handbook¹⁵ that could provide guidance in how to develop the 'how to' for conducting studies and formulate a manual.
- Establishing guidelines for reporting of scoping studies. One may consider using the PRISMA as a model in which to develop reporting guidelines for scoping reviews (PRISMA-P – conducting guidelines; PRISMA – reporting guidelines).¹⁴
- Establishing methodological quality criteria will be the subsequent step that will build on the conduct and reporting guidelines.

CONCLUSION

This report summarizes the process and content from the *Advancing the Field of Scoping Study Methodology* meeting. Overall, the meeting was successful in facilitating knowledge translation and exchange about scoping study methodology and initiating a scoping study research collaborative. Further work is needed to clarify terminology and definitions in order to formulate methodological quality criteria for conducting and reporting the emerging field of scoping studies.

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Appendix A: Meeting Agenda

AGENDA - DAY 1

Monday June 8th, 2015 – Room 240 and 241, Li Ka Shing Knowledge Institute		
The Scoping Experience, Terminology and Definition		
Objectives: 1) To facilitate knowledge transfer and exchange (KTE) among researchers, clinicians and knowledge users about scoping study methodology. 2) To establish a universal term and definition of ‘scoping study’		
TIME	TOPIC	SPEAKERS
830-900	Registration –Breakfast / Coffee / Tea	
900-920	Welcome and Introductions Overview of Agenda and Objectives of the Meeting	Kelly O’Brien, Danielle Levac and Heather Colquhoun
920-1000	Overview of Scoping Study Methodology – Development of the Arksey and O’Malley Framework	Lisa O’Malley
1000-1020	Enhancing Scoping Study Methodology - Building on the Arksey and O’Malley Framework	Danielle Levac
1020-1040	Scoping review of Scoping Reviews	Mai Pham
1040-1100	Break	
1100-1230	Panel Session - Scoping Studies – Experiences, Strengths, Benefits and Challenges and Strategies for Moving Forward	<i>Panelists</i> Danielle Levac Larry Baxter Dario Kuzmanovic Shaun Cleaver Julie Vaughan-Graham Stephen Gentles Zack Marshall <i>Moderator: Kelly O’Brien</i>
1230-130	Lunch	
130-150	Are Scoping Reviews Related to Other Type of Knowledge Synthesis?	Andrea Tricco
150-210	Introduction to Establishing a Common Definition and Terminology of Scoping Studies / Reviews	Danielle Levac
210-315	Small Group Breakout Session –Strengths and Challenges of Scoping Studies & Developing a Definition and Terminology	All
315-330	Break	
330-430	Reporting Back to the Large Group – Large Group Discussion	All
430-500	Summary, Reflections and Recommendations Wrap Up of Day 1	Lisa O’Malley

AGENDA – DAY 2

Tuesday June 9 th , 2015 – Room 211 – Li Ka Shing Knowledge Institute		
Establishing the Methodological Steps		
Objectives: 1) To establish consensus on the methodological steps for conducting and reporting scoping studies. 2) To establish a scoping methodology collaborative .		
TIME	TOPIC	SPEAKERS
830-900	Breakfast / Coffee / Tea	
900-910	Welcome and Review of Day 1 Overview of Day 2 Agenda & Review of the Common Characteristics of a Definition based on the Day 1 Discussion	Heather Colquhoun
910-950	Results from a Knowledge Synthesis on Scoping Studies and Methodology Quality <ul style="list-style-type: none"> • Overview of the findings from the knowledge synthesis on scoping studies and quality criteria 	Wasifa Zarin & Erin Lillie
950-1030	What is EQUATOR and What Are the Considerations for Developing Health Research Reporting Guidelines?	David Moher
1030-1045	Break	
1045-1230	Introduction: Establishing Methodological Steps for Conducting Scoping Studies Large Group Discussion – Modified Delphi Process	Heather Colquhoun and Andrea Tricco
1230-130	Lunch	
130-300	Establishing Consensus on the Methodological Steps for Conducting Scoping Studies – Large Group Discussion Continued - Delphi	Heather Colquhoun and Andrea Tricco
300-315	Break	
315-415	Bringing it all Together – Next Steps for Methodology, Publications, KTE Strategy, Next Steps for Scoping Methodology Collaborative	Andrea Tricco Heather Colquhoun Kelly O'Brien and Danielle Levac
415-430	Wrap-Up and Evaluation	Kelly O'Brien

Appendix B: Delphi Questionnaire

Protocol Development

The following items pertain to **protocol development and iteration process** in a scoping review methodology.

From your perspective, please rank the importance of the items below using the 7-point scale.

For example, if you believe an item is highly important then please select "Extremely", but if you think that it is not at all important then select "Not at all".

	Not at all Important (1)	Very Little Importance (2)	Little Importance (3)	Neutral (4)	Moderately Important (5)	Very Important (6)	Extremely Important (7)
1. Developing a research protocol prior to conduct of study	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Iteratively defining research question	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Iteratively defining study inclusion and exclusion criteria	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Identifying Relevant Studies

The following items pertain to different search strategies that may be used to **identify relevant studies** in a scoping review methodology.

From your perspective, please rank the importance of the items below using the 7-point scale.

For example, if you believe an item is highly important then please select "Extremely", but if you think that it is not at all important then select "Not at all".

	Not at all Important (1)	Very Little Importance (2)	Little Importance (3)	Neutral (4)	Moderately Important (5)	Very Important (6)	Extremely Important (7)
4. Searching >1 database	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Scanning reference lists of relevant articles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Searching unpublished and ongoing studies (i.e. grey literature)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Consulting topic experts to identify additional studies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Manually searching select Journals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Consulting librarian/information specialist to ensure strategy is appropriate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Search String

The following items pertain to specifics of designing a **search string** used to locate relevant studies in a scoping review methodology.

From your perspective, please rank the importance of the items below using the 7-point scale.

For example, if you believe an item is highly important then please select “Extremely”, but if you think that it is not at all important then select "Not at all".

	Not at all Important (1)	Very Little Importance (2)	Little Importance (3)	Neutral (4)	Moderately Important (5)	Very Important (6)	Extremely Important (7)
10. Iteratively defining search parameters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Search string is unrestricted to publication date	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Search string is unrestricted to publication language	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Search string is unrestricted to study design	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Relevance screening, Charting and Appraising Relevant Evidence

The following items pertain to different steps that may be used to **select and collect relevant evidence** in a scoping review methodology.

From your perspective, please rank the importance of the items below using the 7-point scale.

For example, if you believe an item is highly important then please select “Extremely”, but if you think that it is not at all important then select "Not at all".

	Not at all Important (1)	Very Little Importance (2)	Little Importance (3)	Neutral (4)	Moderately Important (5)	Very Important (6)	Extremely Important (7)
14. Title and abstracts screening for relevance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Full-text screening for relevance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Formal data charting/abstraction using standardized form(s)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Formal quality assessment of included studies using standardized checklist(s)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Formal consultation exercise with relevant stakeholders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Using at least Two Independent Reviewers

The following items pertain to importance of using **at least two independent reviewers** for study selection and data collection in a scoping review methodology.

From your perspective, please rank the importance of the items below using the 7-point scale.

For example, if you believe an item is highly important then please select "Extremely", but if you think that it is not at all important then select "Not at all".

	Not at all Important (1)	Very Little Importance (2)	Little Importance (3)	Neutral (4)	Moderately Important (5)	Very Important (6)	Extremely Important (7)
19. Title and abstracts screening for relevance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. Full-text screening for relevance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. Formal data charting/abstraction using standardized form(s)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. Formal quality assessment of included studies using standardized checklist(s)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Synthesis of Evidence

The following items pertain to **different ways evidence can be synthesized** in a scoping review.

From your perspective, please rank the importance of the items below using the 7-point scale.

For example, if you believe an item is highly important then please select "Extremely", but if you think that it is not at all important then select "Not at all".

	Not at all Important (1)	Very Little Importance (2)	Little Importance (3)	Neutral (4)	Moderately Important (5)	Very Important (6)	Extremely Important (7)
23. Narrative synthesis only <i>(Hint: a structured summary and discussion of the studies' characteristics and findings or descriptive quantitative analysis)</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. Meta-analysis <i>(Hint: the statistical combination of results)</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

from two or more separate studies)

25. Qualitative analysis
(Hint: Systematic approach to coding and analyzing qualitative/descriptive data to identify common themes)

Reporting of Evidence

The following items pertain to **different ways evidence can be presented** in the reporting of a scoping review.

From your perspective, please rank the importance of the items below using the 7-point scale.

For example, if you believe an item is highly important then please select "Extremely", but if you think that it is not at all important then select "Not at all".

	Not at all Important (1)	Very Little Importance (2)	Little Importance (3)	Neutral (4)	Moderately Important (5)	Very Important (6)	Extremely Important (7)
26. Use of flow diagram to show study selection process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. Provide characteristics of included studies in table(s) or texts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. Presenting charted data in tables	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29. Presenting charted data using graphs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix C: Scoping Meeting Evaluation Questionnaire

Advancing Scoping Study Methodology
Monday June 8th -Tuesday June 9th, 2015
Li Ka Shing Knowledge Institute, Toronto, Canada

Thank you for taking the time to complete our Meeting Evaluation. We encourage you to complete this form with honesty and with confidence that the results are anonymous and confidential.

1. Which best describes your current position / stakeholder group? (please select one)

- | | |
|--|---|
| <input type="checkbox"/> Community Member (Please specify):
_____ | <input type="checkbox"/> Researcher |
| <input type="checkbox"/> Clinician (Please specify):
_____ | <input type="checkbox"/> Policy Maker |
| <input type="checkbox"/> Educator | <input type="checkbox"/> Volunteer |
| <input type="checkbox"/> Service Provider | <input type="checkbox"/> Student / Trainee (Please specify):
_____ |
| <input type="checkbox"/> Funder | <input type="checkbox"/> Other (Please specify):
_____ |

2. Where do you live? (city, country) _____

3. What type of setting do you work in? (check the one that best applies)

- Hospital
- Research Organization
- Knowledge Broker / Translation Organization
- University / Academic Institution
- Other (please specify) _____

4. What are the most important “take-home messages” that you heard at the Meeting?

- a) _____
- b) _____
- c) _____

5. Please rate on a scale of 1 to 5, how much you agree with the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a) The Meeting achieved its goal of advancing the development of methodological quality criteria for conducting and reporting scoping studies.	1	2	3	4	5
b) The Meeting achieved its objective of facilitating knowledge transfer and exchange about scoping study methodology.	1	2	3	4	5
c) I made new contacts which will be helpful in my everyday work.	1	2	3	4	5
d) The presenters were knowledgeable and communicated their ideas clearly.	1	2	3	4	5
e) It was useful to learn about scoping studies being carried out by other stakeholders.	1	2	3	4	5
f) There was adequate time allocated for informal discussion amongst Meeting participants.	1	2	3	4	5
g) My needs were accommodated (if applicable).	1	2	3	4	5
Comments?					

6. To what degree have you gained new and relevant knowledge/insight in each of the content areas listed below?

	Little to None	Limited	Somewhat	Considerable	Extensive
a) Scoping study methodology.	1	2	3	4	5
b) Knowledge Synthesis in Health Research.	1	2	3	4	5
c) Strengths and challenges of conducting scoping studies.	1	2	3	4	5
d) Methodological steps for conducting scoping studies.	1	2	3	4	5

	Little to None	Limited	Somewhat	Considerable	Extensive
e) Overcoming challenges associated with conducting scoping studies.	1	2	3	4	5
Comments?					

7. Will you be able to apply the content covered in the Meeting to your work? (circle one) Yes
No

7. a) If yes, how so?

8. Do you envision collaborating with any of the Meeting participants on scoping studies or research initiatives in the future?

9. What were some strengths of the Meeting (if any)?

10. What were some drawbacks of the Meeting (if any)?

11. Are you interested in becoming more involved in a scoping methodology collaborative? (circle one) Yes No

12. Any other comments, recommendations or reflections?

Thank You for your Feedback!