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Interventions to support transitions in care for children and youth with complex care needs and their families: A scoping review protocol

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3 **Title:** Interventions to support transitions in care for children and youth with complex care
4 needs and their families: A scoping review protocol
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6 **Abstract**

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9 **Introduction:** Children and youth with complex care needs (CCNs) and their families
10 experience many care transitions over their lifespan and are consequently vulnerable to the
11 discontinuity or gaps in care that can occur during these transitions. Transitional care
12 interventions, which are broadly defined as a type of intervention that aims to improve
13 continuity of care, are increasingly being developed to address transitions in care for children
14 and youth with CCNs. However, this literature has not yet been systematically examined at a
15 comprehensive level. The purpose of this scoping review is to map the range of interventions
16 that support transitions in care for children and youth with CCNs and their families during
17 two phases of their lifespan: i) up to the age of 19 years (prior to transitioning to adult care);
18 and ii) from pediatric to adult care.
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22 **Methods and analysis:** The Joanna Briggs Institute (JBI) methodology for scoping reviews
23 will be used for the proposed scoping review. Scoping reviews are a type of knowledge
24 synthesis that are useful for addressing exploratory research questions that aim to map key
25 concepts and types of evidence on a topic and can be used to organize what is known about
26 the phenomena.
27
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29 **Ethics and dissemination:** Ethics approval is not required where this study is a review of
30 published and publicly reported literature. The research team's advisory council will develop
31 a research dissemination strategy with goals, target audiences, expertise/leadership,
32 resources, and deadlines to maximize project outputs. The end-of-grant activities will be used
33 to raise awareness, promote action, and inform future research, policy, and practice on this
34 topic.
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37 **Keywords**

38 complex care needs; interventions; pediatric; children; youth; scoping review; transitions in
39 care, continuity of care
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Strengths and Limitations of the Study

- This paper describes a scoping review protocol that will map the range of interventions that support transitions in care for children and youth with complex care needs (CCNs) and their families during two phases of their lifespan: i) up to the age of 19 years (prior to transitioning to adult care); and ii) from pediatric to adult care.
- This scoping review will help us to better understand the interventions and programs that have been described in the literature, and to explore patient and health system outcomes that have been measured and described as a result of a transitional intervention.
- This review will result in information that may be used to inform decision making, practice, and future research related to transitional care for children and youth with complex care needs.
- Our team involves a range of stakeholders, including patients, families, researchers, clinicians, librarians, and decision makers, who will provide input and contribute to decision making during all phases of this review.
- The inclusion criteria include both peer-reviewed and grey literature to ensure comprehensiveness; however, studies will not be assessed for methodological quality.

Interventions to support transitions in care for children and youth with complex care needs and their families: A scoping review protocol

Introduction

Children and youth with complex care needs (CCNs) and their families experience many care transitions over their lifespan and are consequently susceptible to the discontinuity or gaps in care that can occur during these transitions. Failure to successfully transition to a new care setting has been shown to lead to higher utilization of emergency departments,¹ negative experiences of care for all those involved,²⁻⁵ poorer access to care,⁶⁻⁸ fragmentation of care,⁶⁻⁸ deterioration of health due to lack of follow-up visits,¹¹ and highly demanding health care interventions.⁹⁻¹¹ Furthermore, an unsuccessful transition from pediatric to adult services can negatively impact education and workplace achievement, which can further lead to risk-taking behaviors associated with morbidity and mortality beyond childhood and throughout the lifespan.^{12,13}

Transitional care interventions, which are broadly defined as a type of intervention that aims to improve continuity of care,¹⁴ are increasingly being implemented to respond to transition in care needs for children and youth with CCNs. However, this literature has not been systematically examined at a comprehensive level. The purpose of this scoping review is to map the range of interventions that support transitions in care for children and youth with CCNs and their families during two phases of their lifespan: i) up to the age of 19 years (prior to transitioning to adult care); and ii) from pediatric to adult care.

Background

Approximately 15% of North American children have a chronic condition that results in limitations in their daily lives,¹⁵ with this number dramatically increasing over the past 40 years.¹⁶ Advances in health care and technology have increased the lifespan and quality of life of many children with CCNs, allowing more children to live at home, be a part of their community, and live into adulthood.¹⁷ CCNs refer to “multidimensional health and social care needs in the presence of a recognized medical condition or where there is no unifying diagnosis. They are individual and contextualized, are continuing and dynamic, and are present across a range of settings, impacted by healthcare structure.”^{18(p1647)} Although these children constitute a small percentage of the pediatric population, they represent a cohort utilizing a high volume of health-related services (e.g. tertiary health care, social, educational),¹⁹ requiring a coordinated effort by their family and care team.²⁰⁻²²

Family members can play a large role throughout transitions in care because they remain a constant source of support, are actively involved in caregiving, and can act as an advocate where necessary.²³ Caring for a child or youth with CCNs can require comprehensive home care, hospitalizations, unscheduled emergency room visits, and countless appointments with specialists in and outside of primary care (e.g. family physicians, physiotherapists, psychologists).^{17,24} In addition, these children, youth, and their families experience many transitions in care (e.g. between providers, between settings, between stages of illness) over their lifespan. With this, they are consequently susceptible to gaps in care that can occur during these transitions.

To our knowledge, the literature on transitional care interventions for children and youth with CCNs has not yet been systematically examined at a comprehensive level. A

preliminary search of PROSPERO, PubMed, the Cochrane Database of Systematic Reviews and the *JBI Database of Systematic Reviews and Implementation Reports* was conducted and no current or underway systematic reviews on this topic were identified. To date, broadly relevant reviews have focused on specific illness presentations and needs (e.g. spina bifida, mental health needs),^{4,25–33} specific transitions in care (e.g. hospital to home, pediatric to adult care), or solely empirical literature.^{20,34} Generalizable findings regarding transitions in care for children and youth with CCNs and their families have been difficult to extract due to the narrow focus on specific populations; heterogeneity of the interventions and outcome measures; and limited descriptions of context. Mapping the current evidence regarding transitional care for children and youth with CCNs and their families will result in information that may be used in decision-making, practice, and future research.

Review objectives

The objectives have been divided in two areas of transition interventions for children and youth with CCNs. The first objective is to map the range of interventions that have been reported in the literature to support children 19 years of age and under with complex care needs and their families during transitions in care, prior to transitioning to adult care. For example, hospital to home, home to school, and home care to respite services. The second objective is to map the range of interventions that have been reported in the literature to support youth with complex care needs aged between 14 and 25 years of age and their families as they transition from pediatric to adult care.

Review questions

- (1) What interventions have been reported in the literature to support children 19 years of age and under with complex care needs and their families during transitions in care, prior to transitioning to adult care?
- (2) What interventions have been reported in the literature to support youth with complex care needs aged between 14 and 25 and their families as they transition from pediatric to adult care?

Methods

The proposed scoping review will be conducted in accordance with the Joanna Briggs Institute methodology for scoping reviews.³⁵ Scoping reviews are a type of knowledge synthesis that are useful for addressing exploratory research questions that aim to map key concepts and types of evidence on a topic and can be used to organize what is known about the phenomena.^{35, 36} Given the current state of the literature in this area, a scoping review is needed to better understand the range of interventions and programs that have been described in the literature, and to explore patient and health system outcomes that have been measured and described as a result of a transitional intervention. This would result in an organizing framework that could help summarize the range of research activities in the field and identify gaps and future research questions.

Prior to commencing the review, we will establish an *Advisory Council* comprised of key stakeholders, such as researchers, librarians, and patients (at least one from each participating province) to oversee project milestones. Our team has adopted the term *patient* to refer to individuals with personal experience of a health issue and informal caregivers.³⁷

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3 Given our focus on children and youth and their families, we have engaged parents who have
4 a child with CCNs as members of our research team, hereafter referred to as patients for
5 clarity.
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8 **Search strategy**

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10 The search strategy will aim to locate both published and unpublished articles. An
11 initial limited search of PubMed and CINAHL was undertaken to identify articles on the
12 topic of interest. The concepts identified in titles and abstracts of relevant articles, and the
13 index terms used to describe the articles were leveraged to develop a full search strategy in
14 each of the included databases (see Appendix I). To ensure that all relevant literature is
15 identified, the search strategy will undergo the Peer Review of Electronic Search Strategies
16 (PRESS) Guideline Statement.³⁸ Two library scientists will complete this process, with
17 A.R.H developing the initial search strategy and S.M completing the peer review process.
18 The search strategy, including all identified keywords and index terms, will be adapted for
19 each identified database. The reference list of all articles selected for inclusion in the review
20 will be screened manually for additional articles of interest.
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24 **Information sources**

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26 The databases to be searched include PubMed, CINAHL, ERIC, PscINFO, and
27 Social Work Abstracts. Sources of unpublished articles and grey literature will be retrieved
28 following the Canadian Agency for Drugs and Technologies in Health (CADTH) Grey
29 Matters tool for searching health-related grey literature.³⁹ A google search using similar
30 keywords as applied within the databases will occur to identify additional sources of grey
31 literature, such as, but not limited to, Canadian Association of Pediatric Health Centres,
32 Toronto Sick Kids, Stollery Children's Hospital, The National Guideline Clearing House and
33 Government of Canada.
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37 **Inclusion criteria**

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39 *Participants:* This review will consider all literature on children and youth with CCNs
40 (0-19 years) who have not yet transitioned from pediatric to adult care but are experiencing
41 transitional care interventions, as well as youth (14-25 years) who are experiencing
42 interventions to support their transition from pediatric to adult care. Families of children or
43 youth with CCNs will also be included (e.g. parents, guardians, or other members caring for a
44 child or youth). Complex care needs (CCNs) refer to “multidimensional health and social
45 care needs in the presence of a recognized medical condition or where there is no unifying
46 diagnosis.”^{18(p1647)} Children and youth with specific health conditions as well as a broader
47 pediatric population with CCNs will be included. Articles will also be included if the target
48 population is being cared for under pediatric care services. Programs or services that are
49 designed to support children and youth without CCNs, individuals residing in long-term care
50 facilities, or other age groups (e.g. 25 years and above) will not be included.
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55 *Concept:* The concept of interest for this review is transitional care interventions. For
56 the purpose of this review, *transitional care* will involve any movement of the child/youth
57 and family between care settings (home to school/childcare and vice versa), care providers
58 (primary care to specialized clinic) or services (home care to respite care; pediatric to adult
59 services). Articles that do not explicitly state their intent to support transitions in care will be
60 excluded. An *intervention* will be defined as a program or service that targets children, youth,

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3 or families with the goal of improving transitions in care for children or youth with CCNs.
4 Interventions may be delivered in person or by distance by either a trained or untrained
5 provider (e.g. lay persons).
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8 *Context:* This review will consider articles where transitional care interventions are
9 delivered anywhere in the child/youth's home community (e.g. child/youth's home,
10 school/childcare), neighboring communities (e.g. for children/youth who live in remote and
11 rural areas), or primary hospital/institution (e.g. primary care provider's office, tertiary care
12 facility). Articles describing transitional care interventions that are delivered by a range of
13 different modalities (e.g. e-health, clinic-based) will be considered for inclusion. However,
14 literature sources describing interventions that are delivered exclusively within a hospital
15 setting (such as intra-facility handover) with no community component will not be included.
16 There will be no geographic or temporal limitations placed on this review to allow for the
17 examination of any potential trends in transitional care programs across time.
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20 **Types of sources**

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23 This scoping review will consider all types of literature sources, including
24 experimental and quasi-experimental study designs, such as randomized controlled trials,
25 non-randomized controlled trials, before and after studies and interrupted time-series studies.
26 In addition, analytical observational studies including prospective and retrospective cohort
27 studies, case-control studies and analytical cross-sectional studies will be considered for
28 inclusion. This review will also consider descriptive observational study designs including
29 case series, individual case reports and descriptive cross-sectional studies. Articles using
30 qualitative research designs will also be considered, including but not limited to, designs such
31 as phenomenology, grounded theory, ethnography, qualitative description, action research
32 and feminist research. Text and descriptive papers will also be considered for inclusion in this
33 scoping review if sufficient information is provided to discern intervention characteristics.
34 Systematic, scoping, and literature reviews will not be considered for inclusion in this review;
35 however, the reference lists of relevant reviews will be hand-searched for additional articles.
36 Articles published in the English and French language will be included.
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40 **Study selection**

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43 Screening for study selection will occur in two stages: title/abstract and then full text.
44 Prior to the screening, all identified citations will be collated in Mendeley to correct citation
45 errors and remove duplicates. All citations will be uploaded into Covidence Systematic
46 Review Software⁴⁰ and any undetected duplicates will be removed.⁴⁰
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49 To ensure our inclusion and exclusion criteria are uniformly applied, the initial
50 screening will be piloted by two independent reviewers using 5-10 references from our initial
51 search followed by a consensus meeting. Upon final adjustments, the official title and
52 abstract screening will begin. Titles and abstracts will be screened by two independent
53 reviewers for assessment against the inclusion criteria for the review. For the second stage of
54 screening, all potentially relevant articles identified during the title and abstract screening
55 will be retrieved in full text to be imported into the Covidence Software.⁴⁰ The full text of
56 selected citations will be assessed in detail against the inclusion criteria by two independent
57 reviewers. The reasons for exclusion of full text articles will be recorded and reported. Any
58 disagreements that arise between the reviewers at each stage of the study selection process
59 will be resolved through discussion. If consensus cannot be achieved, a third reviewer will be
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3 consulted. The results of the search will be reported in full following the PRISMA Extension
4 for Scoping Reviews (ScR) and presented in a Preferred Reporting Items for Systematic
5 Reviews and Meta-analyses (PRISMA) flow diagram.³⁶
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8 **Data extraction**

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10 Data will be extracted from articles included in this scoping review by two
11 independent reviewers using a data extraction tool developed by the research team. Extracted
12 data will include specific details about the population, concept, context, study methods and
13 key findings relevant to each of the review objectives. A draft extraction table is provided
14 (see Appendix II). Articles will be sorted and organized under the two transitions of interest
15 as outlined in our research questions: i) transitions prior to transitioning to adult care; and ii)
16 transitions in care from pediatric to adult services. The data extraction table will be tested by
17 two reviewers with three articles to ensure all relevant information is being captured,
18 followed by a meeting to discuss any modification and revision deemed necessary.
19 Modifications will be detailed in the full scoping review report. Any disagreements that arise
20 between the reviewers will be resolved through discussion to achieve consensus. If consensus
21 cannot be achieved, a third reviewer will be consulted to make the final decision. Authors of
22 included articles will be contacted to request missing or additional data, where required.
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26 **Data presentation**

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28 The results of this review will be presented separately by review objective. For each
29 objective, a narrative summary will accompany the tabulated results and will describe how
30 the data relates to the review's overall objectives and questions. This will include the
31 following categories: article identification (e.g. author/year); article characteristics (e.g.
32 objective, population); intervention design (e.g. outcomes, focus of transition); and the results
33 (e.g. barriers and enablers). Other information that may be deemed relevant by the research
34 team will also be extracted. The data that is presented in the final report will be reflective of
35 the information collected using the data extraction tool (Appendix II). Further, all information
36 for this scoping review will be presented following the PRISMA-ScR Guidelines.³⁶ We also
37 used the PRISMA-P reporting guidelines to promote transparency and to ensure that we
38 addressed all the components that are applicable for a systematic review.⁴²
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42 **Patient and public involvement**

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44 We will engage a range of stakeholders (beyond our Advisory Council) to provide
45 input on our preliminary findings. Our research team includes a range of stakeholders who
46 will contribute to decision making during all phases of this review. The research team will
47 also engage additional stakeholders to provide input on preliminary findings. This process
48 will begin by identifying key authors from included articles and inviting them to comment on
49 our preliminary findings, either during a telephone interview or by email. Next, a consensus
50 meeting will be held with important knowledge users (e.g. patients, clinicians, government)
51 to solicit initial feedback on our findings to provide greater context and understanding of the
52 data. Feedback from our research experts and knowledge users will be incorporated into our
53 final report.
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Ethics and dissemination

Ethics approval is not required where this study is a review of published and publicly reported literature. In terms of dissemination, the research team's advisory council will develop a research dissemination strategy with goals, target audiences, expertise/leadership, resources, and deadlines to maximize project outputs. The end-of-grant activities will be used to raise awareness, promote action, and inform future research, policy, and practice on this topic. Examples of activities include presenting two conference presentations per objective [e.g. at the Canadian Association for Health Services and Policy Research (CAHSPR) conference and the North American Primary Care Research Group (NAPCRG) conference]; presenting to the Canadian Pediatric Society; sharing findings on the JBI database of systematic reviews and implementation reports, publishing one open access publication per objective (e.g. BMC Public Health journal); participate in a consensus meeting, initiated through the Advisory Council, share findings through our websites and social media channels, and policy briefs.

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7 **Authors' contributions:** All authors contributed to the project including the design,
8 preparation and editing of the scoping review protocol. SD, SB, and AR developed the initial
9 draft of the protocol and, after several iterations with significant input from the research team,
10 all team members approved the final manuscript that was submitted for publishing. In
11 consultation with the research team, an experienced librarian (ARH) developed the search
12 strategy for the scoping review and a second librarian (SM) conducted a peer review of the
13 search strategy. All authors will contribute to the data synthesis and writing of the final
14 search strategy. All authors will contribute to the data synthesis and writing of the final
15 scoping review.
16
17

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24 Centre, New Brunswick PIHCI Network, and Prince Edward Island PIHCI Network.
25
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29 **Competing interests' statement**

30 There are no competing interests with this project.
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Appendix I: Search strategy

Search Strategy for PubMed: Conducted on December 20th, 2018

#	Query	Results
#1	("health transition" OR "transition care"[All Fields] OR "transitional care"[All Fields] OR "transitional services"[All Fields] OR "transition planning"[All Fields] OR "continuity of patient care"[All Fields] OR "continuity of care"[All Fields] OR "care coordination"[All Fields] OR "transition to adult" OR "transitional program" OR "Transition to Adult Care"[Mesh] OR "transition"[title/abstract])	307658
#2	((("complex"[All Fields] OR "comprehensive"[All Fields] OR "complexity"[All Fields] OR "medically fragile"[All Fields] OR "multiple chronic"[All Fields] OR "Multiple Chronic Conditions"[Mesh]) AND ("intervention"[All Fields] OR "programs"[All Fields] OR "patient care planning"[All Fields] OR "community integration"[All Fields] OR "models of care"[All Fields] OR "disease management" OR "transition services" OR "care coordination"))	78836
#3	("adolescent"[All Fields] OR "youth"[All Fields] OR "pediatric"[All Fields] OR "adolescence" OR "juvenile" OR "youth" OR "teen" OR "teenager" OR "pubescent" OR pediatrics[mh] OR "paediatric" OR "minors" OR "boy" OR "boys" OR "girl" OR "kid" OR "kids" OR "child" OR "children" OR "schoolchildren")	3628378
#4	#1 AND #2 AND #3	854

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Appendix II: Data extraction tool

Article Identification		
Article Number	#1	#2
Author(s)		
Year of Publication		
Country of Origin		
Journal		
Article Characteristics		
Article Objective(s)		
Article Population		
Inclusion Criteria		
Design		
Setting		
Intervention Design		
Intervention Characteristics		
Theoretical Framework		
Comparators		
Outcome(s)		
Outcome Measure(s)		
Broad Focus of Transition		
Transition Description		
Results		
Barriers and Enablers Identified		
Study Participants		

Reporting checklist for protocol of a systematic review.

Moher D, Shamseer L, Clarke M, Ghersi D, Liberati A, Petticrew M, Shekelle P, Stewart LA. Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P) 2015 statement. *Syst Rev.* 2015;4(1):1.

		Reporting Item	Page Number
Title			
Identification	#1a	Identify the report as a protocol of a systematic review	p.1
Update	#1b	If the protocol is for an update of a previous systematic review, identify as such	n/a: not an update
Registration			
	#2	If registered, provide the name of the registry (such as PROSPERO) and registration number	n/a: registered with JBI database.
Authors			
Contact	#3a	Provide name, institutional affiliation, e-mail address of all protocol authors; provide physical mailing address of corresponding author	Title page & cover letter
Contribution	#3b	Describe contributions of protocol authors and identify the guarantor of the review	p.12
Amendments			
	#4	If the protocol represents an amendment of a previously completed or published protocol, identify as such and list changes; otherwise, state plan for documenting important protocol amendments	n/a
Support			
Sources	#5a	Indicate sources of financial or other support for the review	p.12
Sponsor	#5b	Provide name for the review funder and / or sponsor	p.12
Role of sponsor or funder	#5c	Describe roles of funder(s), sponsor(s), and / or institution(s), if any, in developing the protocol	p.12

1	Introduction			
2				
3	Rationale	#6	Describe the rationale for the review in the context of what is already known	p.3-4
4				
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6				
7	Objectives	#7	Provide an explicit statement of the question(s) the review will address with reference to participants, interventions, comparators, and outcomes (PICO)	p.4
8				
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12	Methods			
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15	Eligibility criteria	#8	Specify the study characteristics (such as PICO, study design, setting, time frame) and report characteristics (such as years considered, language, publication status) to be used as criteria for eligibility for the review	p.5
16				
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21	Information sources	#9	Describe all intended information sources (such as electronic databases, contact with study authors, trial registers or other grey literature sources) with planned dates of coverage	p.5
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28	Search strategy	#10	Present draft of search strategy to be used for at least one electronic database, including planned limits, such that it could be repeated	p.5
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34	Study records - data management	#11a	Describe the mechanism(s) that will be used to manage records and data throughout the review	p.6
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39	Study records - selection process	#11b	State the process that will be used for selecting studies (such as two independent reviewers) through each phase of the review (that is, screening, eligibility and inclusion in meta-analysis)	p.6
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46	Study records - data collection process	#11c	Describe planned method of extracting data from reports (such as piloting forms, done independently, in duplicate), any processes for obtaining and confirming data from investigators	p.7
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53	Data items	#12	List and define all variables for which data will be sought (such as PICO items, funding sources), any pre-planned data assumptions and simplifications	p.7
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1	Outcomes and	#13	List and define all outcomes for which data will be sought,	p.4-7
2	prioritization		including prioritization of main and additional outcomes,	
3			with rationale	
4				
5				
6	Risk of bias in	#14	Describe anticipated methods for assessing risk of bias of	n/a: no critical
7	individual		individual studies, including whether this will be done at the	appraisal in the
8	studies		outcome or study level, or both; state how this information	scoping review
9			will be used in data synthesis	
10				
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13	Data synthesis	#15a	Describe criteria under which study data will be	n/a: this review
14			quantitatively synthesised	involves a
15				qualitative synthesis.
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18	Data synthesis	#15b	If data are appropriate for quantitative synthesis, describe	n/a
19			planned summary measures, methods of handling data and	
20			methods of combining data from studies, including any	
21			planned exploration of consistency (such as I ² , Kendall's τ)	
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25	Data synthesis	#15c	Describe any proposed additional analyses (such as	n/a: no additional
26			sensitivity or subgroup analyses, meta-regression)	analyses
27				
28				
29	Data synthesis	#15d	If quantitative synthesis is not appropriate, describe the type	n/a: this review
30			of summary planned	involves a
31				qualitative synthesis.
32				
33				
34	Meta-bias(es)	#16	Specify any planned assessment of meta-bias(es) (such as	n/a
35			publication bias across studies, selective reporting within	
36			studies)	
37				
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39				
40	Confidence in	#17	Describe how the strength of the body of evidence will be	n/a: no critical
41	cumulative		assessed (such as GRADE)	appraisal in the
42	evidence			scoping review
43				
44				

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BMJ Open

Programs to support transitions in care for children and youth with complex care needs and their families: A scoping review protocol

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4 Care Needs and Their Families: A Scoping Review Protocol
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7 **Word Count:** 3140.
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3 **Title:** Programs to support transitions in care for children and youth with complex care needs
4 and their families: A scoping review protocol
5

6
7 **Abstract**
8

9 **Introduction:** Children and youth with complex care needs (CCNs) and their families
10 experience many care transitions over their lifespan and are consequently vulnerable to the
11 discontinuity or gaps in care that can occur during these transitions. Transitional care
12 programs, broadly defined as one or more intervention(s) or service(s) that aim to improve
13 continuity of care, are increasingly being developed to address transitions in care for children
14 and youth with CCNs. However, this literature has not yet been systematically examined at a
15 comprehensive level. The purpose of this scoping review is to map the range of programs that
16 support transitions in care for children and youth with CCNs and their families during two
17 phases of their lifespan: i) up to the age of 19 years (prior to transitioning to adult care); and
18 ii) from pediatric to adult care.
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21 **Methods and analysis:** The Joanna Briggs Institute (JBI) methodology for scoping reviews
22 will be used for the proposed scoping review. Scoping reviews are a type of knowledge
23 synthesis that are useful for addressing exploratory research questions that aim to map key
24 concepts and types of evidence on a topic and can be used to organize what is known about
25 the phenomena. A preliminary search of PubMed was conducted in December 2018.
26
27

28 **Ethics and dissemination:** Ethics approval is not required where this study is a review of
29 published and publicly reported literature. The research team's advisory council will develop
30 a research dissemination strategy with goals, target audiences, expertise/leadership,
31 resources, and deadlines to maximize project outputs. The end-of-grant activities will be used
32 to raise awareness, promote action, and inform future research, policy, and practice on this
33 topic.
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38 **Keywords**
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40 complex care needs; interventions; pediatric; children; youth; scoping review; transitions in
41 care, continuity of care
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Strengths and Limitations of the Study

- This paper describes a scoping review protocol that will map the range of programs that support transitions in care for children and youth with complex care needs (CCNs) and their families during two phases of their lifespan: i) up to the age of 19 years (prior to transitioning to adult care); and ii) from pediatric to adult care.
- This scoping review will help us to better understand the programs that have been described in the literature, and to explore patient and health system outcomes that have been measured and described as a result of transitional interventions.
- This review will result in information that may be used to inform decision making, practice, and future research related to transitional care for children and youth with complex care needs.
- Our team involves a range of stakeholders, including patients, families, researchers, clinicians, librarians, and decision makers, who will provide input and contribute to decision making during all phases of this review.
- The inclusion criteria include both peer-reviewed and grey literature to ensure comprehensiveness; however, studies will not be assessed for methodological quality.

Programs to support transitions in care for children and youth with complex care needs and their families: A scoping review protocol

Introduction

Children and youth with complex care needs (CCNs) and their families experience many care transitions over their lifespan and are consequently susceptible to lack of coordination between services or gaps in care that can occur during these transitions. Failure to successfully transition to a new care setting has been shown to lead to higher utilization of emergency departments,¹ negative experiences of care for all those involved,²⁻⁵ poorer access to care,^{1,3-5} fragmentation of care,^{1,6-8} deterioration of health due to lack of follow-up visits,¹ and highly demanding health care interventions.⁹⁻¹¹ Furthermore, an unsuccessful transition from pediatric to adult services can negatively impact education and workplace achievement, which can further lead to risk-taking behaviors associated with morbidity and mortality beyond childhood and throughout the lifespan.^{1,12,13}

Transitional care programs, which include one or more intervention(s) or service(s) that target children, youth, or families with the goal of improving transitions in care for children or youth with CCNs¹⁴ are continually being implemented to respond to transitional care needs for children and youth with CCNs. However, this literature has not been examined at a comprehensive level specific to the purpose of this scoping review, which is to map the range of programs that support transitions in care for children and youth with CCNs and their families during two phases of their lifespan: i) up to the age of 19 years (prior to transitioning to adult care); and ii) from pediatric to adult care.

Background

Approximately 15% of North American children have a chronic condition that results in limitations in their daily lives,¹⁵ with this number dramatically increasing over the past 40 years.¹⁶ Advances in health care and technology have increased the lifespan and quality of life of many children with CCNs, allowing more children to live at home, be a part of their community, and live into adulthood.¹⁷ CCNs refer to “multidimensional health and social care needs in the presence of a recognized medical condition or where there is no unifying diagnosis. They are individual and contextualized, are continuing and dynamic, and are present across a range of settings, impacted by health care structure.”^{18(p1647)} Although these children constitute a small percentage of the pediatric population, they represent a cohort utilizing a high volume of health-related services (e.g. tertiary health care, social, educational),¹⁹ requiring a coordinated effort by their family and care team.²⁰⁻²²

Family members can play a large role throughout transitions in care because they remain a constant source of support, are actively involved in caregiving, and can act as an advocate where necessary.²³ Caring for a child or youth with CCNs can require comprehensive home care, hospitalizations, unscheduled emergency room visits, and countless appointments with specialists in and outside of primary care (e.g. family physicians, physiotherapists, psychologists).^{17,24} In addition, these children, youth, and their families experience many transitions in care (e.g. between providers, between settings, between stages of illness) over their lifespan. With this, they are consequently susceptible to gaps in care that can occur during these transitions.

A preliminary search of PROSPERO, PubMed, the Cochrane Database of Systematic Reviews and the Joanna Briggs Institute (JBI) Database of Systematic Reviews and

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3 Implementation Reports was conducted and revealed that the topic of transitional care
4 programs (e.g. from hospital to community, home care to respite care, or from pediatric to
5 adult care) for children (0-19 years), youth (up to 25 years) and their families is a growing
6 field. However, we found no evidence of systematic reviews or protocols that map the range
7 of transitional care programs for children/youth with complex care needs and their families
8 with the same objectives as this review. Recent reviews focus specifically on the barriers,
9 needs, facilitators, and/or outcomes of transitional care interventions.²⁵⁻³¹ Furthermore, other
10 reviews are tailored to specific illness presentations and needs (e.g. spina bifida, mental
11 health needs),^{4,32-39} specific transitions in care (e.g. hospital to home), or solely on
12 quantitative or empirical literature (e.g., exclude qualitative studies and/or grey literature
13).^{20,26,30} For example, Watson et al. targeted three specific health conditions (e.g. cerebral
14 palsy, autism spectrum disorders and diabetes) for their scoping review.⁴⁰ Generalizable
15 findings regarding transitional care programs for children and youth with CCNs and their
16 families have been difficult to extract due to their narrow focus on specific populations;
17 heterogeneity of the interventions and outcome measures; and limited descriptions of
18 transitional care programs. This field is quickly expanding with new evidence becoming
19 available each year. Mapping the current evidence regarding transitional care programs for
20 children and youth with CCNs and their families will result in information that may be used
21 in decision-making, practice, and future research.
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25

26 **Review objectives**

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28 The objectives have been divided in two areas of transition programs for children and youth
29 with CCNs. The first objective is to map the range of programs that have been reported in the
30 literature to support children 19 years of age and under with complex care needs and their
31 families during transitions in care, prior to transitioning to adult care. For example, hospital
32 to home, home to school, and home care to respite services. The second objective is to map
33 the range of programs that have been reported in the literature to support youth with complex
34 care needs aged between 14 and 25 years of age and their families as they transition from
35 pediatric to adult health care.
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39 **Review questions**

- 40
41 (1) What programs have been reported in the literature to support children 19 years of age
42 and under with complex care needs and their families during transitions in care, prior to
43 transitioning to adult care?
44
45 (2) What programs have been reported in the literature to support youth with complex care
46 needs aged between 14 and 25 and their families as they transition from pediatric to adult
47 health care?
48
49

50 **Methods**

51
52 The proposed scoping review will be conducted in accordance with the JBI
53 methodology for scoping reviews.^{41,42} Scoping reviews are a type of knowledge synthesis that
54 are useful for addressing exploratory research questions that aim to map key concepts and
55 types of evidence on a topic and can be used to organize what is known about the
56 phenomena.⁴¹⁻⁴³ Given the current state of the literature in this area, a scoping review is
57 needed to better understand the range of transitional care programs that have been described
58 in the literature, and to explore patient and health system outcomes that have been measured
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3 and described as a result of transitional interventions. This would result in an organizing
4 framework that could help summarize the range of research activities in the field and identify
5 gaps and future research questions.
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8 Briefly, the steps within the JBI scoping review framework are: (1) defining and
9 aligning the objective/s and question/s (2) developing and aligning the inclusion criteria with
10 the objective/s and question/s (3) describing the planned approach to evidence searching,
11 selection, extraction, and charting (4) searching for the evidence (5) selecting the evidence
12 (5) extracting the evidence (6) charting the evidence (7) summarizing the evidence in relation
13 to the objective/s and question/s, and (8) consultation of information scientists, librarians
14 and/or experts throughout.⁴² Peters et al. state that scoping reviews begin by developing an a-
15 prior protocol, and have a broad scope related to their inclusion criteria which correspond
16 with the target population, concept, and context (PCC).⁴² This information is presented
17 below.
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20
21 Prior to commencing the review, we will establish an *Advisory Council* comprised of
22 key stakeholders, such as researchers, librarians, and patients (at least one from each
23 participating province) to oversee project milestones. Our team has adopted the term *patient*
24 to refer to individuals with personal experience of a health issue and informal caregivers.⁴⁴
25 Given our focus on children and youth and their families, we have engaged parents who have
26 a child with CCNs as members of our research team, hereafter referred to as patients for
27 clarity.
28
29

30 **Search strategy**

31
32 The search strategy will aim to locate both published and unpublished articles. An
33 initial limited search of PubMed and CINAHL was undertaken in December 2018 to identify
34 articles on the topic of interest. The concepts identified in titles and abstracts of relevant
35 articles, and the index terms used to describe the articles were leveraged to develop a full
36 search strategy in each of the included databases (see Appendix I). To ensure that all relevant
37 literature is identified, the search strategy will undergo the Peer Review of Electronic Search
38 Strategies (PRESS) Guideline Statement.⁴⁵ Two library scientists will complete this process,
39 with A.R.H developing the initial search strategy and S.M completing the peer review
40 process. The search strategy, including all identified keywords and index terms, will be
41 adapted for each identified database. The reference list of all articles selected for inclusion in
42 the review will be screened manually for additional articles of interest.
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46 **Information sources**

47
48 The databases to be searched include PubMed, CINAHL, ERIC, PyscINFO, and
49 Social Work Abstracts. Sources of unpublished articles and grey literature will also be
50 retrieved. The Canadian Agency for Drugs and Technologies in Health (CADTH) Grey
51 Matters tool for searching health-related grey literature will be used to guide this search.⁴⁶
52 This tool includes a variety of both Canadian and international sources to be searched, such
53 as the World Health Organization, US National Institutes of Health, the Canadian Medical
54 Association, and the National Institute for Health and Care Excellence, to name a few. A
55 google search using similar keywords as applied within the databases will occur to identify
56 additional sources of grey literature.
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Inclusion criteria

Participants: This review will consider all literature on children and youth with CCNs (0-19 years) who have experienced transitions in care prior to transitioning from pediatric to adult care, as well as youth (14-25 years) who are engaged in transition programs to support their transition from pediatric to adult care. Families of children or youth with CCNs will also be included (e.g. parents, guardians, or other members caring for a child or youth). Complex care needs (CCNs) refer to “multidimensional health and social care needs in the presence of a recognized medical condition or where there is no unifying diagnosis.”^{18(p1647)} Children and youth with specific health conditions as well as a broader pediatric population with CCNs will be included. Articles will also be included if the target population is being cared for under pediatric care services. Programs or services that are designed to support children and youth without CCNs, individuals residing in long-term care facilities, or other age groups (e.g. 25 years and above) will not be included.

Concept: The concept of interest for this review is transitional care programs. For the purpose of this review, *transitional care* will involve any movement of the child/youth and family between care settings (home to school/childcare and vice versa), care providers (primary care to specialized clinic) or services (home care to respite care; pediatric to adult services). Articles that do not explicitly state their intent to support transitions in care will be excluded. A *program* will be defined as one or more interventions or services that target children, youth, or their families with the goal of improving transitions in care for children or youth with CCNs. Programs may be delivered in person or by distance by either a trained or untrained provider (e.g. lay persons).

Context: This review will consider articles where transitional care programs are delivered anywhere in the child/youth’s home community (e.g. child/youth’s home, school/childcare), neighboring communities (e.g. for children/youth who live in remote and rural areas), or primary hospital/institution (e.g. primary care provider’s office, tertiary care facility). Articles describing transitional care interventions that are delivered by a range of different modalities (e.g. e-health, clinic-based) will be considered for inclusion. However, literature sources describing programs that are delivered exclusively within a hospital setting (such as intra-facility handover) with no community component will not be included. There will be no geographic or temporal limitations placed on this review to allow for the examination of any potential trends in transitional care programs across time.

Types of sources

This scoping review will consider all types of literature sources, including experimental and quasi-experimental study designs, such as randomized controlled trials, non-randomized controlled trials, before and after studies and interrupted time-series studies. In addition, analytical observational studies including prospective and retrospective cohort studies, case-control studies and analytical cross-sectional studies will be considered for inclusion. This review will also consider descriptive observational study designs including case series, individual case reports and descriptive cross-sectional studies. Articles using qualitative research designs will also be considered, including but not limited to, designs such as phenomenology, grounded theory, ethnography, qualitative description, action research and feminist research. Text and descriptive papers will also be considered for inclusion in this scoping review if sufficient information is provided to discern program characteristics. Systematic, scoping, and literature reviews will not be considered for inclusion in this review;

1
2
3 however, the reference lists of relevant reviews will be hand-searched for additional articles.
4 Articles published in the English and French language will be included.
5
6

7 **Study selection**

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9 Screening for study selection will occur in two stages: title/abstract and then full text.
10 Prior to the screening, all identified citations will be collated in Mendeley to correct citation
11 errors and remove duplicates. All citations will be uploaded into Covidence Systematic
12 Review Software and any undetected duplicates will be removed.^{47,48}
13
14

15 To ensure our inclusion and exclusion criteria are uniformly applied, the initial
16 screening will be piloted by two independent reviewers using 5-10 references from our initial
17 search followed by a consensus meeting. Upon final adjustments, the official title and
18 abstract screening will begin. Titles and abstracts will be screened by two independent
19 reviewers for assessment against the inclusion criteria for the review. For the second stage of
20 screening, all potentially relevant articles identified during the title and abstract screening
21 will be retrieved in full text to be imported into the Covidence Software.⁴⁷ The full text of
22 selected citations will be assessed in detail against the inclusion criteria by two independent
23 reviewers. The reasons for exclusion of full text articles will be recorded and reported. Any
24 disagreements that arise between the reviewers at each stage of the study selection process
25 will be resolved through discussion. If consensus cannot be achieved, a third reviewer will be
26 consulted. The results of the search will be reported in full following the PRISMA Extension
27 for Scoping Reviews (ScR) and presented in a Preferred Reporting Items for Systematic
28 Reviews and Meta-analyses (PRISMA) flow diagram.^{43,49}
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30
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32 **Data extraction**

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34 Data will be extracted from articles included in this scoping review by two
35 independent reviewers using a data extraction tool developed by the research team. Extracted
36 data will include specific details about the population, concept, context, study methods and
37 key findings relevant to each of the review objectives. A draft extraction table is provided
38 (see Appendix II). Articles will be sorted and organized under the two transitions of interest
39 as outlined in our research questions: i) transitions prior to transitioning to adult care; and ii)
40 transitions in care from pediatric to adult services. The data extraction table will be tested by
41 two reviewers with three articles to ensure all relevant information is being captured,
42 followed by a meeting to discuss any modification and revision deemed necessary.
43 Modifications will be detailed in the full scoping review report. Any disagreements that arise
44 between the reviewers will be resolved through discussion to achieve consensus. If consensus
45 cannot be achieved, a third reviewer will be consulted to make the final decision. Authors of
46 included articles will be contacted to request missing or additional data, where required.
47
48
49

50 **Data presentation**

51
52 The results of this review will be presented separately by review objective. For each
53 objective, a narrative summary will accompany the tabulated results and will describe how
54 the data relates to the review's overall objectives and questions. This will include the
55 following categories: article identification (e.g. author/year); article characteristics (e.g.
56 objective, population); program design (e.g. outcomes, focus of transition); and the results
57 (e.g. barriers and enablers). Other information that may be deemed relevant by the research
58 team will also be extracted. The data that is presented in the final report will be reflective of
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1
2
3 the information collected using the data extraction tool (Appendix II). Further, all information
4 for this scoping review will be presented following the PRISMA-ScR Guidelines.⁴³ We also
5 used the PRISMA-P reporting guidelines to promote transparency and to ensure that we
6 addressed all the components that are applicable for a systematic review.⁴⁹
7
8

9 **Patient and public involvement**

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11 We will engage a range of stakeholders (beyond our Advisory Council) to provide
12 input on our preliminary findings. Our research team includes a range of stakeholders who
13 will contribute to decision making during all phases of this review. The research team will
14 also engage additional stakeholders to provide input on preliminary findings. This process
15 will begin by identifying key authors from included articles and inviting them to comment on
16 our preliminary findings, either during a telephone interview or by email. Next, a consensus
17 meeting will be held with important knowledge users (e.g. patients, clinicians, government)
18 to solicit initial feedback on our findings to provide greater context and understanding of the
19 data. Feedback from our research experts and knowledge users will be incorporated into our
20 final report.
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23 **Ethics and dissemination**

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25 Ethics approval is not required where this study is a review of published and publicly
26 reported literature. In terms of dissemination, the research team's advisory council will
27 develop a research dissemination strategy with goals, target audiences, expertise/leadership,
28 resources, and deadlines to maximize project outputs. The end-of-grant activities will be used
29 to raise awareness, promote action, and inform future research, policy, and practice on this
30 topic. Examples of activities include presenting two conference presentations per objective
31 [e.g. at the Canadian Association for Health Services and Policy Research (CAHSPR)
32 conference and the North American Primary Care Research Group (NAPCRG) conference];
33 presenting to the Canadian Pediatric Society; sharing findings on the JBI database of
34 systematic reviews and implementation reports, publishing one open access publication per
35 objective (e.g. BMC Public Health journal); participate in a consensus meeting, initiated
36 through the Advisory Council, share findings through our websites and social media
37 channels, and policy briefs.
38
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41
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44
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52
53

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3 **Authors' contributions:** All authors (SD, JC, SB, AL, ED, RA, AER, SM, ARH, and KB)
4 contributed to the project including the design, preparation and editing of the scoping review
5 protocol. SD, SB, and AER developed the initial draft of the protocol and, after several
6 iterations with significant input from authors JC, AL, ED, RA, ARH, SM, and KB, all team
7 members approved the final manuscript that was submitted for publishing. In consultation
8 with the research team, an experienced librarian (ARH) developed the search strategy for the
9 scoping review and a second librarian (SM) conducted a peer review of the search strategy.
10 All authors will contribute to the data synthesis and writing of the final scoping review.
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14

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21 Centre, New Brunswick PIHCI Network, and Prince Edward Island PIHCI Network.
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23
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25 **Competing interests statement**

26 There are no competing interests with this project.
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Appendix I: Search strategy

Search Strategy for PubMed: Conducted on December 20th, 2018

#	Query	Results
#1	("health transition" OR "transition care"[All Fields] OR "transitional care"[All Fields] OR "transitional services"[All Fields] OR "transition planning"[All Fields] OR "continuity of patient care"[All Fields] OR "continuity of care"[All Fields] OR "care coordination"[All Fields] OR "transition to adult" OR "transitional program" OR "Transition to Adult Care"[Mesh] OR "transition"[title/abstract])	307658
#2	((("complex"[All Fields] OR "comprehensive"[All Fields] OR "complexity"[All Fields] OR "medically fragile"[All Fields] OR "multiple chronic"[All Fields] OR "Multiple Chronic Conditions"[Mesh]) AND ("intervention"[All Fields] OR "programs"[All Fields] OR "patient care planning"[All Fields] OR "community integration"[All Fields] OR "models of care"[All Fields] OR "disease management" OR "transition services" OR "care coordination"))	78836
#3	("adolescent"[All Fields] OR "youth"[All Fields] OR "pediatric"[All Fields] OR "adolescence" OR "juvenile" OR "youth" OR "teen" OR "teenager" OR "pubescent" OR pediatrics[mh] OR "paediatric" OR "minors" OR "boy" OR "boys" OR "girl" OR "kid" OR "kids" OR "child" OR "children" OR "schoolchildren")	3628378
#4	#1 AND #2 AND #3	854

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3 **Appendix II: Data extraction tool**
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Article Identification		
Article Number	#1	#2
Author(s)		
Year of Publication		
Country of Origin		
Journal		
Article Characteristics		
Article Objective(s)		
Article Population		
Inclusion Criteria		
Design		
Setting		
Program Design		
Program Characteristics		
Theoretical Framework		
Comparators		
Outcome(s)		
Outcome Measure(s)		
Broad Focus of Transition		
Transition Description		
Results		
Barriers and Enablers Identified		
Study Participants		

Reporting checklist for protocol of a systematic review.

Moher D, Shamseer L, Clarke M, Ghersi D, Liberati A, Petticrew M, Shekelle P, Stewart LA. Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P) 2015 statement. Syst Rev. 2015;4(1):1.

		Reporting Item	Page Number
Title			
Identification	#1a	Identify the report as a protocol of a systematic review	p.1
Update	#1b	If the protocol is for an update of a previous systematic review, identify as such	n/a: not an update
Registration			
	#2	If registered, provide the name of the registry (such as PROSPERO) and registration number	n/a: registered with JBI database.
Authors			
Contact	#3a	Provide name, institutional affiliation, e-mail address of all protocol authors; provide physical mailing address of corresponding author	Title page & cover letter
Contribution	#3b	Describe contributions of protocol authors and identify the guarantor of the review	p.13
Amendments			

1		#4	If the protocol represents an amendment of a	n/a
2			previously completed or published protocol, identify as	
3			such and list changes; otherwise, state plan for	
4			documenting important protocol amendments	
5				
6				
7				
8				
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10				
11	Support			
12				
13				
14	Sources	#5a	Indicate sources of financial or other support for the	p.13
15			review	
16				
17				
18				
19	Sponsor	#5b	Provide name for the review funder and / or sponsor	p.13
20				
21				
22				
23	Role of	#5c	Describe roles of funder(s), sponsor(s), and / or	p.13
24	sponsor or		institution(s), if any, in developing the protocol	
25	funder			
26				
27				
28				
29				
30	Introduction			
31				
32				
33	Rationale	#6	Describe the rationale for the review in the context of	p.4-5
34			what is already known	
35				
36				
37				
38				
39	Objectives	#7	Provide an explicit statement of the question(s) the	p.5
40			review will address with reference to participants,	
41			interventions, comparators, and outcomes (PICO)	
42				
43				
44				
45				
46	Methods			
47				
48				
49	Eligibility	#8	Specify the study characteristics (such as PICO, study	p.7
50	criteria		design, setting, time frame) and report characteristics	
51			(such as years considered, language, publication	
52			status) to be used as criteria for eligibility for the review	
53				
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1	Information	#9	Describe all intended information sources (such as	p.7
2				
3	sources		electronic databases, contact with study authors, trial	
4			registers or other grey literature sources) with planned	
5			dates of coverage	
6				
7				
8				
9				
10				
11	Search	#10	Present draft of search strategy to be used for at least	p.6, appendix I
12				
13	strategy		one electronic database, including planned limits, such	
14			that it could be repeated	
15				
16				
17				
18				
19	Study records	#11a	Describe the mechanism(s) that will be used to	p.8
20	- data		manage records and data throughout the review	
21				
22	management			
23				
24				
25				
26	Study records	#11b	State the process that will be used for selecting studies	p.8
27	- selection		(such as two independent reviewers) through each	
28			phase of the review (that is, screening, eligibility and	
29	process		inclusion in meta-analysis)	
30				
31				
32				
33				
34				
35				
36	Study records	#11c	Describe planned method of extracting data from	p.8
37	- data		reports (such as piloting forms, done independently, in	
38			duplicate), any processes for obtaining and confirming	
39	collection		data from investigators	
40				
41	process			
42				
43				
44				
45				
46	Data items	#12	List and define all variables for which data will be	p.7
47			sought (such as PICO items, funding sources), any	
48			pre-planned data assumptions and simplifications	
49				
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1	Outcomes	#13	List and define all outcomes for which data will be	p.5-8
2				
3	and		sought, including prioritization of main and additional	
4				
5	prioritization		outcomes, with rationale	
6				
7				
8				
9	Risk of bias in	#14	Describe anticipated methods for assessing risk of	n/a: no critical
10	individual		bias of individual studies, including whether this will be	appraisal in the
11				
12	studies		done at the outcome or study level, or both; state how	scoping review
13				
14			this information will be used in data synthesis	
15				
16	Data	#15a	Describe criteria under which study data will be	n/a: this review
17	synthesis		quantitatively synthesised	involves a
18				qualitative
19				synthesis.
20				
21				
22				
23				
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27				
28	Data	#15b	If data are appropriate for quantitative synthesis,	n/a
29	synthesis		describe planned summary measures, methods of	
30			handling data and methods of combining data from	
31			studies, including any planned exploration of	
32			consistency (such as I ² , Kendall's τ)	
33				
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41	Data	#15c	Describe any proposed additional analyses (such as	n/a: no additional
42	synthesis		sensitivity or subgroup analyses, meta-regression)	analyses
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46	Data	#15d	If quantitative synthesis is not appropriate, describe	n/a: this review
47	synthesis		the type of summary planned	involves a
48				qualitative
49				synthesis.
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1	Meta-bias(es) #16	Specify any planned assessment of meta-bias(es)	n/a
2		(such as publication bias across studies, selective	
3		reporting within studies)	
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8	Confidence in #17	Describe how the strength of the body of evidence will	n/a: no critical
9	cumulative	be assessed (such as GRADE)	appraisal in the
10	evidence		scoping review
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16 None The PRISMA-P checklist is distributed under the terms of the Creative Commons Attribution
 17 License CC-BY 4.0. This checklist can be completed online using <https://www.goodreports.org/>, a tool
 18 made by the [EQUATOR Network](#) in collaboration with [Penelope.ai](#)
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Programs to support transitions in care for children and youth with complex care needs and their families: A scoping review protocol

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4 Care Needs and Their Families: A Scoping Review Protocol
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3 **Title:** Programs to support transitions in care for children and youth with complex care needs
4 and their families: A scoping review protocol
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6
7 **Abstract**
8

9 **Introduction:** Children and youth with complex care needs (CCNs) and their families
10 experience many care transitions over their lifespan and are consequently vulnerable to the
11 discontinuity or gaps in care that can occur during these transitions. Transitional care
12 programs, broadly defined as one or more intervention(s) or service(s) that aim to improve
13 continuity of care, are increasingly being developed to address transitions in care for children
14 and youth with CCNs. However, this literature has not yet been systematically examined at a
15 comprehensive level. The purpose of this scoping review is to map the range of programs that
16 support transitions in care for children and youth with CCNs and their families during two
17 phases of their lifespan: i) up to the age of 19 years (not including their transition to adult
18 health care); and ii) when transitioning from pediatric to adult health care.
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21 **Methods and analysis:** The Joanna Briggs Institute (JBI) methodology for scoping reviews
22 will be used for the proposed scoping review. Scoping reviews are a type of knowledge
23 synthesis that are useful for addressing exploratory research questions that aim to map key
24 concepts and types of evidence on a topic and can be used to organize what is known about
25 the phenomena. A preliminary search of PubMed was conducted in December 2018.
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28 **Ethics and dissemination:** Ethics approval is not required where this study is a review of
29 published and publicly reported literature. The research team's advisory council will develop
30 a research dissemination strategy with goals, target audiences, expertise/leadership,
31 resources, and deadlines to maximize project outputs. The end-of-grant activities will be used
32 to raise awareness, promote action, and inform future research, policy, and practice on this
33 topic.
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39 **Keywords**

40 complex care needs; programs; pediatric; children; youth; scoping review; transitions in care,
41 continuity of care
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Strengths and Limitations of the Study

- This paper describes a scoping review protocol that will map the range of programs that support transitions in care for children and youth with complex care needs (CCNs) and their families during two phases of their lifespan: i) up to the age of 19 years (not including their transition to adult health care); and ii) when transitioning from pediatric to adult health care.
- This scoping review will help us to better understand the programs that have been described in the literature, and to explore patient and health system outcomes that have been measured and described.
- This review will result in information that may be used to inform decision making, practice, and future research related to transitional care for children and youth with complex care needs.
- Our team involves a range of stakeholders, including patients, families, researchers, clinicians, librarians, and decision makers, who will provide input and contribute to decision making during all phases of this review.
- The review includes only published literature, and studies will not be assessed for methodological quality.

Programs to support transitions in care for children and youth with complex care needs and their families: A scoping review protocol

Introduction

Children and youth with complex care needs (CCNs) and their families experience many care transitions over their lifespan and are consequently susceptible to lack of coordination between services or gaps in care that can occur during these transitions. Failure to successfully transition to a new care setting has been shown to lead to higher utilization of emergency departments,¹ negative experiences of care for all those involved,²⁻⁵ poorer access to care,^{1,3-5} fragmentation of care,^{1,6-8} deterioration of health due to lack of follow-up visits,¹ and highly demanding health care interventions.⁹⁻¹¹ Furthermore, an unsuccessful transition from pediatric to adult services can negatively impact education and workplace achievement, which can further lead to risk-taking behaviors associated with morbidity and mortality beyond childhood and throughout the lifespan.^{1,12,13}

Transitional care programs, which include one or more intervention(s) or service(s) that target children, youth, or families with the goal of improving transitions in care for children or youth with CCNs¹⁴ are continually being implemented to respond to transitional care needs for children and youth with CCNs. However, this literature has not been examined at a comprehensive level specific to the purpose of this scoping review, which is to map the range of programs that support transitions in care for children and youth with CCNs and their families during two phases of their lifespan: i) up to the age of 19 years (not including their transition to adult health care); and ii) when transitioning from pediatric to adult health care.

Background

Approximately 19% of children have special health care needs that can result in limitations in their daily lives,¹⁵ with this number dramatically increasing over the past 40 years.¹⁶ Advances in health care and technology have increased the lifespan and quality of life of many children with CCNs, allowing more children to live at home, be a part of their community, and live into adulthood.¹⁷ CCNs refer to “multidimensional health and social care needs in the presence of a recognized medical condition or where there is no unifying diagnosis. They are individual and contextualized, are continuing and dynamic, and are present across a range of settings, impacted by health care structure.”^{18(p1647)} Although these children constitute a small percentage of the pediatric population, they represent a cohort utilizing a high volume of health-related services (e.g. tertiary health care, social, educational),¹⁹ requiring a coordinated effort by their family and care team.²⁰⁻²²

Family members can play a large role throughout transitions in care because they remain a constant source of support, are actively involved in caregiving, and can act as an advocate where necessary.²³ Caring for a child or youth with CCNs can require comprehensive home care, hospitalizations, unscheduled emergency room visits, and countless appointments with specialists in and outside of primary care (e.g. family physicians, physiotherapists, psychologists).^{17,24} In addition, these children, youth, and their families experience many transitions in care (e.g. between providers, between settings, between stages of illness) over their lifespan. With this, they are consequently susceptible to gaps in care that can occur during these transitions.

A preliminary search of PROSPERO, PubMed, the Cochrane Database of Systematic Reviews and the Joanna Briggs Institute (JBI) Database of Systematic Reviews and

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3 Implementation Reports was conducted and revealed that the topic of transitional care
4 programs (e.g. from hospital to community, home care to respite care, or from pediatric to
5 adult health care) for children (0-19 years), youth (up to 25 years) and their families is a
6 growing field. However, we found no evidence of systematic reviews or protocols that map
7 the range of transitional care programs for children/youth with complex care needs and their
8 families with the same objectives as this review. Recent reviews focus specifically on the
9 barriers, needs, facilitators, and/or outcomes of transitional care interventions.²⁵⁻³⁰
10 Furthermore, other reviews are tailored to specific illness presentations and needs (e.g. spina
11 bifida, mental health needs),^{4,31-38} specific transitions in care (e.g. hospital to home), or
12 solely on quantitative or empirical literature (e.g., exclude qualitative studies).^{20,26,29} For
13 example, Watson et al. targeted three specific health conditions (e.g. cerebral palsy, autism
14 spectrum disorders and diabetes) for their scoping review.³⁹ Generalizable findings regarding
15 transitional care programs for children and youth with CCNs and their families have been
16 difficult to extract due to their narrow focus on specific populations; heterogeneity of the
17 interventions and outcome measures; and limited descriptions of transitional care programs.
18 This field is quickly expanding with new evidence becoming available each year. A broad
19 level scoping review is required to begin to make sense of this heterogeneous body of
20 literature. Mapping the current evidence regarding transitional care programs for children and
21 youth with CCNs and their families will assist with identifying gaps and create direction for
22 future systematic reviews and research.

23 24 25 26 27 **Review objectives**

28
29 The objectives have been divided into two areas of transition programs for children
30 and youth with CCNs. The first objective is to map the range of programs that have been
31 reported in the literature to support children 19 years of age and under with complex care
32 needs and their families during transitions in care, not including their transition to adult
33 health care. This would include, for example, transitions from hospital to home, home to
34 school, and home care to respite services. The second objective is to map the range of
35 programs that have been reported in the literature to support youth with complex care needs
36 and their families specific to their transition from pediatric to adult health care.

37 38 39 40 **Review questions**

- 41
42 (1) What programs have been reported in the literature to support children 19 years of age
43 and under with complex care needs and their families during transitions in care, not including
44 their transition to adult health care?
45
46 (2) What programs have been reported in the literature to support youth with complex care
47 needs and their families as they transition from pediatric to adult health care?
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50 51 **Methods**

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53 The proposed scoping review will be conducted in accordance with the JBI
54 methodology for scoping reviews.^{40,41} Scoping reviews are a type of knowledge synthesis that
55 are useful for addressing exploratory research questions that aim to map key concepts and
56 types of evidence on a topic and can be used to organize what is known about the
57 phenomena.⁴⁰⁻⁴² Given the current state of the literature in this area, a scoping review is
58 needed to better understand the range of transitional care programs that have been described
59 in the literature, and to explore patient and health system outcomes that have been measured
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3 and described. This would result in an organizing framework that could help summarize the
4 range of research activities in the field and identify gaps and future research questions.
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7 Briefly, the steps within the JBI scoping review framework are: (1) defining and
8 aligning the objective/s and question/s; (2) developing and aligning the inclusion criteria with
9 the objective/s and question/s; (3) describing the planned approach to evidence searching,
10 selection, extraction, and charting; (4) searching for the evidence; (5) selecting the evidence
11 (6) extracting the evidence; (7) charting the evidence; (8) summarizing the evidence in
12 relation to the objective/s and question/s; and (9) consultation of information scientists,
13 librarians and/or experts throughout.⁴¹ Peters et al. state that scoping reviews begin by
14 developing an a-prior protocol, and have a broad scope related to their inclusion criteria
15 which correspond with the target population, concept, and context (PCC).⁴¹ This information
16 is presented below.
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20 Prior to commencing the review, we will establish an *Advisory Council* comprised of
21 key stakeholders, such as researchers, librarians, and patients (at least one from each
22 participating province) to oversee project milestones. Our team has adopted the term *patient*
23 to refer to individuals with personal experience of a health issue and informal caregivers.⁴³
24 Given our focus on children and youth and their families, we have engaged parents who have
25 a child with CCNs as members of our research team, hereafter referred to as patients for
26 clarity.
27

28 **Search strategy**

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31 The search strategy will aim to locate published articles. An initial limited search of
32 PubMed and CINAHL was undertaken in December 2018 to identify articles on the topic of
33 interest. The concepts identified in titles and abstracts of relevant articles, and the index terms
34 used to describe the articles were leveraged to develop a full search strategy in each of the
35 included databases (see Appendix I). To ensure that all relevant literature is identified, the
36 search strategy will undergo the Peer Review of Electronic Search Strategies (PRESS)
37 Guideline Statement.⁴⁴ Two library scientists will complete this process, with A.R.H
38 developing the initial search strategy and S.M completing the peer review process. The
39 search strategy, including all identified keywords and index terms, will be adapted for each
40 identified database. The reference list of all articles selected for inclusion in the review will
41 be screened manually for additional articles of interest.
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44 **Information sources**

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47 The databases to be searched include PubMed, CINAHL, ERIC, PyscINFO, and
48 Social Work Abstracts. Given the broad and international scope of this review, we will not
49 include a search of the grey literature. This will be the focus of a future study.
50

51 **Inclusion criteria**

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54 *Participants:* This review will consider all literature on children and youth with CCNs
55 (0-19 years) who have experienced transitions in care prior to transitioning from pediatric to
56 adult health care, as well as youth who are engaged in transition programs to support their
57 transition from pediatric to adult health care. Families of children or youth with CCNs will
58 also be included (e.g. parents, guardians, or other members caring for a child or youth).
59 Complex care needs (CCNs) refer to “multidimensional health and social care needs in the
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3 presence of a recognized medical condition or where there is no unifying diagnosis.”^{18(p1647)}
4 Children and youth with specific health conditions as well as a broader pediatric population
5 with CCNs will be included. Articles will also be included if the target population is being
6 cared for under pediatric care services. Programs or services that are designed to support
7 children and youth without CCNs and individuals residing in long-term care facilities will not
8 be included.
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10
11 *Concept:* The concept of interest for this review is transitional care programs. For the
12 purpose of this review, *transitional care* will involve any movement of the child/youth and
13 family between care settings (home to school/childcare and vice versa), care providers
14 (primary care to specialized clinic) or services (home care to respite care; pediatric to adult
15 services). Articles that do not explicitly state their intent to support transitions in care will be
16 excluded. A *program* will be defined as one or more interventions or services that target
17 children, youth, or their families with the goal of improving transitions in care for children or
18 youth with CCNs. Programs may be delivered in person or by distance by either a trained or
19 untrained provider (e.g. lay persons).
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23 *Context:* This review will consider articles where transitional care programs are
24 delivered anywhere in the child/youth’s home community (e.g. child/youth’s home,
25 school/childcare), neighboring communities (e.g. for children/youth who live in remote and
26 rural areas), or primary hospital/institution (e.g. primary care provider’s office, tertiary care
27 facility). Articles describing transitional care programs that are delivered by a range of
28 different modalities (e.g. e-health, clinic-based) will be considered for inclusion. However,
29 literature sources describing programs that are delivered exclusively within a hospital setting
30 (such as intra-facility handover) with no community component will not be included. There
31 will be no geographic or temporal limitations placed on this review to allow for the
32 examination of any potential trends in transitional care programs across time.
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35 **Types of sources**

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37 This scoping review will consider all types of published literature sources, including
38 experimental and quasi-experimental study designs, such as randomized controlled trials,
39 non-randomized controlled trials, before and after studies and interrupted time-series studies.
40 In addition, analytical observational studies including prospective and retrospective cohort
41 studies, case-control studies and analytical cross-sectional studies will be considered for
42 inclusion. This review will also consider descriptive observational study designs including
43 case series, individual case reports and descriptive cross-sectional studies. Articles using
44 qualitative research designs will also be considered, including but not limited to, designs such
45 as phenomenology, grounded theory, ethnography, qualitative description, action research
46 and feminist research. Text and descriptive papers will also be considered for inclusion in this
47 scoping review if sufficient information is provided to discern program characteristics.
48 Systematic, scoping, and literature reviews will not be considered for inclusion in this review;
49 however, the reference lists of relevant reviews will be hand-searched for additional articles.
50 Articles published in the English and French language will be included.
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54 **Study selection**

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56 Screening for study selection will occur in two stages: title/abstract and then full text.
57 Prior to the screening, all identified citations will be collated in Mendeley to correct citation
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3 errors and remove duplicates. All citations will be uploaded into Covidence Systematic
4 Review Software and any undetected duplicates will be removed.^{45,46}
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7 To ensure our inclusion and exclusion criteria are uniformly applied, the initial
8 screening will be piloted by two independent reviewers using 5-10 references from our initial
9 search followed by a consensus meeting. Upon final adjustments, the official title and
10 abstract screening will begin. Titles and abstracts will be screened by two independent
11 reviewers for assessment against the inclusion criteria for the review. For the second stage of
12 screening, all potentially relevant articles identified during the title and abstract screening
13 will be retrieved in full text to be imported into the Covidence Software.⁴⁵ The full text of
14 selected citations will be assessed in detail against the inclusion criteria by two independent
15 reviewers. The reasons for exclusion of full text articles will be recorded and reported. Any
16 disagreements that arise between the reviewers at each stage of the study selection process
17 will be resolved through discussion. If consensus cannot be achieved, a third reviewer will be
18 consulted. The results of the search will be reported in full following the PRISMA Extension
19 for Scoping Reviews (ScR) and presented in a Preferred Reporting Items for Systematic
20 Reviews and Meta-analyses (PRISMA) flow diagram.^{42,47}
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24 **Data extraction**

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26 Data will be extracted from articles included in this scoping review by two
27 independent reviewers using a data extraction tool developed by the research team. Extracted
28 data will include specific details about the population, concept, context, study methods and
29 key findings relevant to each of the review objectives. A draft extraction table is provided
30 (see Appendix II). Articles will be sorted and organized under the two transitions of interest
31 as outlined in our research questions: i) transitions in care up to the age of 19 years and not
32 including transitioning to adult health care; and ii) transitions in care from pediatric to adult
33 health care services. The data extraction table will be tested by two reviewers with three
34 articles to ensure all relevant information is being captured, followed by a meeting to discuss
35 any modification and revision deemed necessary. Other information that may be deemed
36 relevant by the research team will also be extracted. Modifications will be detailed in the full
37 scoping review report. Any disagreements that arise between the reviewers will be resolved
38 through discussion to achieve consensus. If consensus cannot be achieved, a third reviewer
39 will be consulted to make the final decision. Authors of included articles will be contacted to
40 request missing or additional data, where required.
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44 **Data presentation**

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46 The results of this review will be presented separately by review objective. For each
47 objective, a narrative summary will accompany the tabulated results and will describe how
48 the data relates to the review's overall objectives and questions. This will include the
49 following categories: article identification (e.g. author/year); article characteristics (e.g.
50 objective, population); program design (e.g. outcomes, focus of transition); and the results
51 (e.g. barriers and enablers). We will use the Theory, Model and Framework Comparison and
52 Selection Tool to identify appropriate framework(s) to organize and categorize extracted
53 intervention and program descriptions.⁴⁸ The data that is presented in the final report will be
54 reflective of the information collected using the data extraction tool (Appendix II). Further,
55 all information for this scoping review will be presented following the PRISMA-ScR
56 Guidelines.⁴² We also used the PRISMA-P reporting guidelines to promote transparency and
57 to ensure that we addressed all the components that are applicable for a systematic review.⁴⁷
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Patient and public involvement

Our research team includes a range of stakeholders who will contribute to decision making during all phases of this review. We will engage a range of stakeholders (beyond our Advisory Council) to provide input on our preliminary findings. This process will begin by identifying key authors from included articles and inviting them to comment on our preliminary findings, either during a telephone interview or by email. Next, a consensus meeting will be held with important knowledge users (e.g. patients, clinicians, government) to solicit initial feedback on our findings to provide greater context and understanding of the data. Feedback from our research experts and knowledge users will be incorporated into our final report.

Ethics and dissemination

Ethics approval is not required where this study is a review of published and publicly reported literature. In terms of dissemination, the research team's advisory council will develop a research dissemination strategy with goals, target audiences, expertise/leadership, resources, and deadlines to maximize project outputs. The end-of-grant activities will be used to raise awareness, promote action, and inform future research, policy, and practice on this topic. Examples of activities include presenting two conference presentations per objective [e.g. at the Canadian Association for Health Services and Policy Research (CAHSPR) conference and the North American Primary Care Research Group (NAPCRG) conference]; presenting to the Canadian Pediatric Society; sharing findings on the JBI database of systematic reviews and implementation reports, publishing one open access publication per objective (e.g. BMC Public Health journal); participate in a consensus meeting, initiated through the Advisory Council, share findings through our websites and social media channels, and policy briefs.

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3 iterations with significant input from authors JC, AL, ED, RA, ARH, SM, and KB, all team
4 members approved the final manuscript that was submitted for publishing. In consultation
5 with the research team, an experienced librarian (ARH) developed the search strategy for the
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7 All authors will contribute to the data synthesis and writing of the final scoping review.
8
9

10
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21 **Competing interests statement**

22 There are no competing interests with this project.
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Appendix I: Search strategy

Search Strategy for PubMed: Conducted on December 20th, 2018

#	Query	Results
#1	("health transition" OR "transition care"[All Fields] OR "transitional care"[All Fields] OR "transitional services"[All Fields] OR "transition planning"[All Fields] OR "continuity of patient care"[All Fields] OR "continuity of care"[All Fields] OR "care coordination"[All Fields] OR "transition to adult" OR "transitional program" OR "Transition to Adult Care"[Mesh] OR "transition"[title/abstract])	307658
#2	((("complex"[All Fields] OR "comprehensive"[All Fields] OR "complexity"[All Fields] OR "medically fragile"[All Fields] OR "multiple chronic"[All Fields] OR "Multiple Chronic Conditions"[Mesh]) AND ("intervention"[All Fields] OR "programs"[All Fields] OR "patient care planning"[All Fields] OR "community integration"[All Fields] OR "models of care"[All Fields] OR "disease management" OR "transition services" OR "care coordination"))	78836
#3	("adolescent"[All Fields] OR "youth"[All Fields] OR "pediatric"[All Fields] OR "adolescence" OR "juvenile" OR "youth" OR "teen" OR "teenager" OR "pubescent" OR pediatrics[mh] OR "paediatric" OR "minors" OR "boy" OR "boys" OR "girl" OR "kid" OR "kids" OR "child" OR "children" OR "schoolchildren")	3628378
#4	#1 AND #2 AND #3	854

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3 **Appendix II: Data extraction tool**
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Article Identification		
Article Number	#1	#2
Author(s)		
Year of Publication		
Country of Origin		
Journal		
Article Characteristics		
Article Objective(s)		
Article Population		
Inclusion Criteria		
Design		
Setting		
Program Design		
Program Characteristics		
Theoretical Framework		
Comparators		
Outcome(s)		
Outcome Measure(s)		
Broad Focus of Transition		
Transition Description		
Results		
Barriers and Enablers Identified		
Study Participants		

Reporting checklist for protocol of a systematic review.

Moher D, Shamseer L, Clarke M, Ghersi D, Liberati A, Petticrew M, Shekelle P, Stewart LA. Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P) 2015 statement. Syst Rev. 2015;4(1):1.

		Reporting Item	Page Number
Title			
Identification	#1a	Identify the report as a protocol of a systematic review	p.1
Update	#1b	If the protocol is for an update of a previous systematic review, identify as such	n/a: not an update
Registration			
	#2	If registered, provide the name of the registry (such as PROSPERO) and registration number	n/a: registered with JBI database.
Authors			
Contact	#3a	Provide name, institutional affiliation, e-mail address of all protocol authors; provide physical mailing address of corresponding author	Title page & cover letter
Contribution	#3b	Describe contributions of protocol authors and identify the guarantor of the review	p.13
Amendments			

1		#4	If the protocol represents an amendment of a	n/a
2			previously completed or published protocol, identify as	
3			such and list changes; otherwise, state plan for	
4			documenting important protocol amendments	
5				
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11	Support			
12				
13				
14	Sources	#5a	Indicate sources of financial or other support for the	p.13
15			review	
16				
17				
18				
19	Sponsor	#5b	Provide name for the review funder and / or sponsor	p.13
20				
21				
22				
23	Role of	#5c	Describe roles of funder(s), sponsor(s), and / or	p.13
24	sponsor or		institution(s), if any, in developing the protocol	
25	funder			
26				
27				
28				
29				
30	Introduction			
31				
32				
33	Rationale	#6	Describe the rationale for the review in the context of	p.4-5
34			what is already known	
35				
36				
37				
38				
39	Objectives	#7	Provide an explicit statement of the question(s) the	p.5
40			review will address with reference to participants,	
41			interventions, comparators, and outcomes (PICO)	
42				
43				
44				
45				
46	Methods			
47				
48				
49	Eligibility	#8	Specify the study characteristics (such as PICO, study	p.7
50	criteria		design, setting, time frame) and report characteristics	
51			(such as years considered, language, publication	
52			status) to be used as criteria for eligibility for the review	
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1	Information	#9	Describe all intended information sources (such as	p.7
2				
3	sources		electronic databases, contact with study authors, trial	
4			registers or other grey literature sources) with planned	
5			dates of coverage	
6				
7				
8				
9				
10				
11	Search	#10	Present draft of search strategy to be used for at least	p.6, appendix I
12				
13	strategy		one electronic database, including planned limits, such	
14			that it could be repeated	
15				
16				
17				
18				
19	Study records	#11a	Describe the mechanism(s) that will be used to	p.8
20	- data		manage records and data throughout the review	
21				
22	management			
23				
24				
25				
26	Study records	#11b	State the process that will be used for selecting studies	p.8
27	- selection		(such as two independent reviewers) through each	
28			phase of the review (that is, screening, eligibility and	
29	process		inclusion in meta-analysis)	
30				
31				
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36	Study records	#11c	Describe planned method of extracting data from	p.8
37	- data		reports (such as piloting forms, done independently, in	
38			duplicate), any processes for obtaining and confirming	
39	collection		data from investigators	
40				
41	process			
42				
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44				
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46	Data items	#12	List and define all variables for which data will be	p.7
47			sought (such as PICO items, funding sources), any	
48			pre-planned data assumptions and simplifications	
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1	Outcomes	#13	List and define all outcomes for which data will be	p.5-8
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3	and		sought, including prioritization of main and additional	
4				
5	prioritization		outcomes, with rationale	
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9	Risk of bias in	#14	Describe anticipated methods for assessing risk of	n/a: no critical
10	individual		bias of individual studies, including whether this will be	appraisal in the
11				
12	studies		done at the outcome or study level, or both; state how	scoping review
13				
14			this information will be used in data synthesis	
15				
16	Data	#15a	Describe criteria under which study data will be	n/a: this review
17	synthesis		quantitatively synthesised	involves a
18				qualitative
19				synthesis.
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28	Data	#15b	If data are appropriate for quantitative synthesis,	n/a
29	synthesis		describe planned summary measures, methods of	
30			handling data and methods of combining data from	
31			studies, including any planned exploration of	
32			consistency (such as I ² , Kendall's τ)	
33				
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41	Data	#15c	Describe any proposed additional analyses (such as	n/a: no additional
42	synthesis		sensitivity or subgroup analyses, meta-regression)	analyses
43				
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45				
46	Data	#15d	If quantitative synthesis is not appropriate, describe	n/a: this review
47	synthesis		the type of summary planned	involves a
48				qualitative
49				synthesis.
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1	Meta-bias(es) #16	Specify any planned assessment of meta-bias(es)	n/a
2		(such as publication bias across studies, selective	
3		reporting within studies)	
4			
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9	Confidence in #17	Describe how the strength of the body of evidence will	n/a: no critical
10	cumulative	be assessed (such as GRADE)	appraisal in the
11	evidence		scoping review
12			
13			
14			
15			

16 None The PRISMA-P checklist is distributed under the terms of the Creative Commons Attribution

17 License CC-BY 4.0. This checklist can be completed online using <https://www.goodreports.org/>, a tool

18 made by the [EQUATOR Network](#) in collaboration with [Penelope.ai](#)