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International Experiments with Different Models of Allocating Funds to Facilitate Integrated Care: A Scoping Review Protocol

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Title Page

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Abstract

Introduction: Integrated care is viewed widely as a potential solution to some of the major challenges faced by health and social care systems, such as those posed by service duplication, fragmentation, and poor care coordination, and associated impacts on the quality and cost of services. Fragmentation of models of allocating funds to and across sectors, programs and providers is frequently cited as a major barrier to integration and countries have experimented with different models of allocating funds to enhance care coordination among service providers and to reduce ineffective care and avoid costly adverse events. This scoping review aims to assess published international experiences of different models of allocating funds to facilitate integration and the evidence on their impacts.

Methods and Analysis: Given the potentially vast and multi-disciplinary nature of the literature on different models of allocating funds in health and social care systems, as well as the scarcity of existing knowledge syntheses, we will adopt a scoping review methodology. We will follow the framework developed by Arksey and O'Malley that entails six steps: 1) identifying the research question(s), 2) searching for relevant studies, 3) selecting studies, 4) charting the data, 5) collating, summarizing, and reporting the results, 6) and conducting consultation exercises. These steps will be conducted iteratively and reflexively, making adjustments and repetitions when appropriate to ensure the literature has been covered as comprehensively as possible. To ensure comprehensiveness of our literature review we also search a wide range of sources.

Discussion: This scoping review will allow us to: map existing knowledge and the main sources and types of evidence about different models of allocating funds to and across sectors, programs and providers to facilitate integration, to develop a conceptual framework that classifies those models, to explore different policy objectives behind adopting/developing those models, to investigate potential barriers and facilitators to implementation of diverse models of allocating funds to facilitate integration, to explore the impact and degree of success for those models, to identify additional gaps in the literature, and to draw out policy opportunities and lessons learned that can be applied to the Canadian context.

Strengths and limitations of this study:

Strengths:

- Informing future policies by identifying a wide range of models of allocating funds to facilitate integration and evidence on their impacts

- Developing a conceptual framework that classifies different models of allocating funds to facilitate integration
- Adopting an integrative approach to knowledge translation through engaging diverse knowledge users in design, analysis, and dissemination of findings

Limitations:

- No assessment of the quality of evidence or grading evidence that are part of systematic reviews not scoping reviews
- By limiting the search language to English, we may miss some potentially important and relevant findings

Introduction

There is a growing policy emphasis on the integration of care within the health sector and between the health and other sectors, mainly social care, aiming to ensure that people receive the right care, at the right time, and in the right place [1]. Integrated care (IC) is viewed widely as a potential solution to overcome some of the major challenges that health and social care systems are facing [1,2]. It is considered as an approach for addressing financial and quality issues through tackling duplication, fragmentation, and poor care coordination [3]. The World Health Organization (WHO) has shifted emphasis to IC to achieve universal health coverage and ensure high quality and cost-effective service delivery [3,4]. Some potential impacts of IC include: improved access to care; enhanced experience and satisfaction for patients, carers, and healthcare providers; reduced secondary care utilization; improved quality of life and health status; improved health outcomes; reduced unnecessary duplication of care; and improved cost-effectiveness [5-9].

IC has been used as an umbrella term for various concepts and organizational structures [10]. There is a plethora of concepts/terminologies used such as, among others, 'integrated care', 'coordinated care', 'collaborative care', 'continuity of care', 'managed care', 'disease management', and 'case management', which reflects the diversity of objectives behind adopting these concepts and a variety of disciplines that have applied this concept [7,11]. It is suggested that in defining IC, the emphasis should be placed on the needs of services users, their families and the communities to which they belong instead of structures and organizations [10]. Indeed, there is considerable supportive evidence highlighting that such a perspective should be the heart of any integrated care strategy in order to bring together potentially competing factions in a unifying narrative [12]. With this consideration, IC has been widely defined in the context of improving quality and access to care especially for people with complex, long term health problems whose needs cut across multiple providers, services, and settings [1,10].

Fragmented models of allocating funds to and across sectors, programs and providers are frequently cited as major barriers for the implementation of IC [9,13-15]. In this review, we use the terminology of 'allocating funds' by adopting the 'world health report 2000' [16] framework on health system performance, which classifies allocation of funds as a key component of health care financing. Health care financing deals with three basic functions of revenue collection, pooling of resources, and resource allocation and

purchasing. *Revenue collection* deals with how health systems raise money from different sources (e.g. households, businesses, and external sources). *Pooling* refers to the accumulation and management of revenues for the common advantage of participants [17] so members of the pool share collective health risks [18]. *Resource allocation and purchasing* refers to the methods employed to purchase services from public and private providers, a process through which revenues collected in fund pools are allocated to institutional or individual providers for delivering health services and interventions [17]. In this review, our focus is on allocation of resources/funds to and across sectors, programs and providers. We will look at the micro and meso-level of resource allocation (e.g. allocating funds to individual health care providers and hospitals) and the macro-level resource allocation in terms allocating funds to and across sectors (health care vs. social care or long-term care), service/program areas or scope of care (e.g. prevention, acute care, rehabilitation, palliative care), population groups (e.g. elder care, persons with disabilities), and health conditions (e.g. diabetes, joint replacement). We will also search for the laws, legislations and Acts that countries have enacted to facilitate integrated care through allocation of funds to and across sectors, programs and providers.

Since traditional models of allocating funds such as fee-for service do not financially incentivize integration of care [19], countries are increasingly experimenting with new forms of allocating funds (especially macro-level models) to incentivize care coordination and integration [13]. Examples include episode-based bundled payments and population-based integrated payment methods. Bundled payments are single payments to groups of providers involved in providing a defined episode of care for a particular health condition (e.g. diabetes) with the aim of strengthening an integrated approach to service delivery [20]. Example of bundled model is the Bundled Payments for Care Improvement (BPCI) Initiative in USA [21]. Under the population-based integrated payment methods, rooted in the global capitation models adopted by Health Maintenance Organizations (HMOs) in USA in 1980s and 1990s, groups of providers are funded for managing care of a defined population. Here a group of providers share accountability for costs and quality of care for a segment of population. Two prominent examples of these models include Accountable Care Act (ACA) organizations (ACOs) in USA [22], and Gesundes Kinzigtal model in Germany [23].

Countries have also enacted laws, legislations, and Acts to facilitate integrated care through pooling of resources across sectors. For example, in England the Health and Social Care Act 2012 aimed, among others, to promote a closer integration of services across sectors and the Care Act 2014 tasked local authorities with promoting the integration of care between health and health-related services, like housing, with the aim of increasing patient experience of care and improving quality of care [24]. In Germany, the 2015 Health Care Strengthening Act promotes integrated care through a number of measures such as establishment of an "innovation fund" totalling EUR 300 million annually for start-up funding of innovative integrated care programs [25]. Despite these legislations, barriers to integrated care including resources levels, differing status related to knowledge and expertise, value differences, lack of role clarity, stereotyping and competitiveness, and clash of professional cultures remain [26,27].

Unfortunately existing literature provides only limited information on synthesis of diverse models of allocating funds to facilitate integration that countries have adopted and the evidence on their impacts. In this review, we will search for these models. The review's first goal is to facilitate an analysis of the diverse models of allocating funds that countries have experimented with to enhance care coordination and integration and the evidence on their impacts. The review's second goal is to describe the context of the models, so that the contexts can be contrasted with those in Canada. Moreover, the historical basis for models of allocating funds will add 'color' to the context(s). The review's third goal is to synthesize these findings into policy opportunities and lessons learned aiming to draw out approaches and methods that can be applied to the Canadian context with a focus on Alberta Province.

To increase the uptake of our review findings, we will engage diverse knowledge users including content experts, policy and decision makers, and community organizations in the design, analysis, and dissemination of the review. In this review, we are going to address the following objectives: 1) to map, analyze, and synthesize existing knowledge and the main sources and types of evidence about different models of allocating funds to facilitate integration, 2) to develop a conceptual framework that classifies those models, 3) to explore different policy objectives behind adopting/developing those models, 4) to investigate potential barriers and facilitators to implementation of diverse models, 5) to explore the impact and degree of success for those models where the degree of success is measured against the outcomes that health systems are trying to achieve including, among others, care integration, cost growth reduction, and maximization of patients' clinical and experience outcomes, 6) to identify additional gaps in the literature, and 7) to draw out policy opportunities and lessons learned that can be applied to the Canadian context with a focus on Alberta province.

Methods And Analysis

We chose a scoping review methodology given the limited nature of existing knowledge on different models of allocating funds to and across sectors, programs and providers to facilitate integration [28]. Scoping reviews systematically map the key concepts within a research area and the main sources and types of evidence available through a comprehensive review of the literature [28-30]. Given the vast nature of the literature on integrated care and allocation of funds (both within the health system and across health and other sectors), and thus far limited efforts to synthesize existing knowledge, we will adopt a scoping review method. The scoping review also assists in providing greater conceptual clarity about how the literature has addressed a complex and wide topic [31]. It can also help determine the value of undertaking a full systematic review on this topic because a scoping review builds on systematic review methods [32].

In this scoping review, we will follow the framework developed by Arksey and O'Malley (2005) which has been further updated by Levac and colleagues [30]. This framework entails six steps: 1) identifying the research question/s, 2) searching for relevant studies,

3) selecting studies, 4) charting the data, 5) collating, summarizing, and reporting the results, 6) and conducting consultation exercises. These steps are treated in an iterative way and we will engage with each step in a reflexive way and repeat steps, where necessary, to make sure that the literature is comprehensively covered [28,29]. To ensure comprehensiveness of our literature review we also search a wide range of sources.

Step One: Identifying the Research Question/s

As the focus of scoping reviews is on summarizing the breadth of evidence, the research questions should be broad [28]. A well-defined research question at the first step linked with a clear purpose helps later steps of the review including study selection and data extraction [30]. The overarching question that guides our review is: "what is the range of models of allocating funds to facilitate integration that have been documented in the published and grey literature?" We initially generated a list of potential research questions based on our research team experience and initial engagement with the relevant literature. We then consulted with our knowledge users, including content experts and policy and decision makers, via email to seek their views on the research questions and to refine and finalize them. This input from knowledge users and ongoing engagement with them will ensure the study's rigour, relevance, and comprehensiveness. This ongoing engagement, in turn, will lead to greater potential for the review results to be taken up by a broad range of knowledge users [33]. The following research questions will guide this review:

1. What is the range of models of allocating funds to facilitate integration that have been documented in the published and grey literature and what problems were these models trying to address?
2. What are the barriers to and facilitators of implementation for models of allocating funds to facilitate integration in the context of the problem trying to be solved?
3. What is the evidence of impact of those models of allocating funds to facilitate integration as given by authors?
4. What is the evidence on the degree of success of those models of allocating funds to facilitate integration as given by authors?

Step Two: Identifying Relevant Studies

At this step, we will identify relevant studies and will develop a search strategy, terms/concepts to use, sources to be searched, time span and language [28]. As Arksey and O'Malley's recommend that "comprehensiveness is the whole point of scoping the field" [28], we will employ a very broad search strategy. We will use a search strategy worksheet [34] and our search terms will include keywords related to (1) allocation of funds AND (2) integration of care. We will adjust search terms based on nuances of each database. Our

key concepts will include, but not be limited to (1) allocation of funds, (2) integrated care, and (3) health care (see Appendix Table 1 for our detailed search strategy and terms). We will refine our search terms and perform more sensitive literature searches throughout the review process, as necessary. We will undertake the following five activities as part of the broad search strategy: electronic database search, web search, hand search of relevant journals, citations of relevant papers, and scanning the reference lists of relevant papers.

We will employ an information scientist (or library scientist) to perform the electronic database search. Given the multidisciplinary nature of the research project we will be using diverse electronic databases including: Web of Science, PubMed, MEDLINE via Ovid; EMBASE via Ovid excluding MEDLINE; Cumulative Index to Nursing and Allied Health Literature (CINAHL); Applied Social Science Index and Abstract (ASSIA); Health Management Information Consortium (HMIC); EconLit; Sociological Abstracts; Social Science Citation Index (SSRN); and PsycINFO. Google Scholar and Google will be also searched for published and grey literature (see the full list of databases in Appendix Table 2). We conducted a preliminary search in MEDLINE, which produced 8668 records (November 20, 2017).

We will search the following websites for unpublished and grey literature: OpenGrey; Dissertations & Theses A&I via ProQuest; ISI Proceedings; Conference Proceedings Citation Index–Social Science and Humanities; Joanna Briggs and ProQuest Dissertations and Theses; PAIS Index - Public Affairs Information Service; Google Scholar; and Google. We will also search the website of key institutions and organizations such as WHO, WHO Europe, and International Foundation for Integrated Care (IFIC). The research team and knowledge users will identify other websites and sources at the review progresses.

Once these electronic searches were completed, we will perform a hand search of key journals (e.g., The International Journal of Integrated Care; Health Policy; Health and Social Care in the Community; Health Policy and Planning; Journal of Health Services Research and Policy; Health Services Research; Social Policy and Administration; BMC Health Services Research; The BMJ; Critical Social Policy; Plos One; Health Affairs; The New England Journal of Medicine; JAMA) which will be identified by the research team and content experts. We will also track citations of relevant papers. Finally, we will search the reference lists of relevant papers to find papers not identified in our initial search. We will import all retrieved searches into EndNote X8 in which the duplicate references will be identified and discarded. We anticipate a manual search for duplicates as selected electronic databases to download citations and referencing are often inconsistent in their content and formatting [33].

Step Three: Relevance Testing

We will adopt a team approach, which increases the rigour of our review [30], to determine which studies/materials to include. The team will discuss and finalize the inclusion and exclusion criteria at the beginning of the scoping review. The research team has initially decided on the following inclusion and exclusion criteria. However, given the unclear boundaries of scoping reviews at the outset, predefined inclusion and exclusion criteria are provisional and may be revised and refined following further engagement with our knowledge user partners and with emerging knowledge of the existing literature [35].

Initial Inclusion Criteria:

- Papers that discuss models of allocating funds to facilitate integrated care
- Published or unpublished primary studies (quantitative, qualitative or mixed-methods studies), theses/dissertations, conference papers, theoretical discussions and grey literature

Initial Exclusion Criteria:

- Papers published before 2000
- Papers not published in English
- Book reviews
- Commentary, opinion pieces, editorial papers, and descriptive papers that provide no relevant empirical evidence

Studies and materials will be included through a two-step process. First, all abstracts and executive summaries will be scanned by two independent reviewers. Then, the same reviewers will retrieve all potentially relevant full papers and materials for inclusion consideration. Following Levac *et al* [30] recommendation our reviewers will meet at the start, middle, and end of the abstract review process in order to discuss any challenges or ambiguities related to study selection and to refine, where necessary, the search strategy. A scanning tool will be developed, in consultation with our knowledge user partners, to determine the relevance of papers to integrated care funding models and also to code the type of data retrieved (e.g. reviews, theoretical discussion, empirical data, government documents, policy brief, web content, conference paper). Two graduate students, who have received training in the scoping review process, will be recruited to screen the titles, abstracts/summaries or executive summaries that are yielded from the search strategy for study selection. Records will be classified by these reviewers as 'potentially relevant' or 'exclude'. When the relevance of a publication is in doubt, they will retrieve the full text. To make sure the selection process in non-biased, two members of the research team will independently review one percent of the abstracts/summaries and compare their results with the graduate students' results. Our research questions may require some refinement

at this stage to ensure the review is feasible and relevant without compromising the comprehensiveness of the search.

In the second step, the graduate student reviewers will independently retrieve and review all full texts coded as 'potentially relevant' as part of considering them for inclusion. If there are disagreements between the two reviewers on inclusion, the other team members will be consulted to make the final decision. The research team will organize monthly meetings/teleconferences during this stage to discuss findings, progress, challenges and uncertainties related to study selection.

Step Four: Charting the Data

We will extract contextual or process oriented data from the included studies using a narrative descriptive synthesizing approach [28,30]. We will use a deductively generated coding tree and import the data into NVivo 10 for data analysis. Our research team will collectively develop the data-charting form (or extraction form), using Microsoft Excel sheets, to determine which variables to extract that best help answer our research questions. The data-charting/extraction form will be derived from our research questions and also from the best relevant papers. The charting will be treated as an iterative process in which we will constantly update the data-charting form as the analysis proceeds [30], similar to the process used in inductive coding in qualitative data analysis. The two graduate students with two members of the research team will independently extract data from the first five studies, using a data-charting form, to check if their data extraction approach is consistent with the research questions and objectives. The graduate students will then independently continue extracting. To ensure accuracy and completeness the research lead will double check the extracted data. The data extracted will include: countries/locations, author/s or institution/s or organization/s, publication title, publication year, research question or study purpose or policy goal/s, type of funding models, barriers/facilitators to implementation of models, and evidence of success/impact, if available. As the research team becomes more familiar with the literature, this list of extracted data will be modified.

Step Five: Collating, Summarizing, and Reporting the Results

This step generally constitutes the most extensive phase of a scoping review. After extracting all data we will establish a working group to meaningfully interpret the data. With the research questions in mind, the two graduate students will quantify the extracted data and produce a descriptive summary of the included materials (e.g. for journal papers we will extract overall number of studies included, types of study design, year of publication, countries/locations where studies were conducted, and type of integrated funding models).

The analytical synthesis of extracted data is critical in scoping reviews as these reviews are not a short summary of journal papers and grey literature. We will conduct a constant comparative analysis using NVivo10 in order to organize our data into overarching categories. Constant comparison analysis allows comparisons to be made across concepts, similarities, differences, and gaps to be identified, and a conceptual framework to emerge. During the synthesis phase, we will systematically combine the extracted data and will develop a taxonomy of models of allocating funds to facilitate integration. A conceptual framework will be developed with the following key elements which will be the starting point for our coding nodes too: the funding models; barriers and facilitators; and policy success/impact. At this phase, we will solicit the views of our knowledge users via email, teleconference, or web-conference to allow their feedback and inputs in reviewing the findings, before we can provide policy recommendations [28].

Step Six: Consultation

Consultation enhances the methodological rigour of the review as well as validity of the study outcome and should be a compulsory stage in scoping reviews [30]. In our scoping review, we will engage knowledge users at all steps of the review by which we will move beyond knowledge translation towards an iterative integrated knowledge translation [36]. We will seek knowledge users' input for a number of reasons, among others, to further refine the review questions; to tailor our review findings to the knowledge users' needs; to add a higher level of meaning, content and expertise to our review preliminary findings; and to make our review findings more applicable. Our knowledge users will be engaged in the first steps of the review via email and teleconference. A workshop will be held with knowledge users to have their inputs/feedbacks for developing the comprehensive conceptual framework that classifies integrated funding models.

Ethics and Dissemination

The aim of this scoping review is to synthesize the existing literature on diverse models of allocating funds to and across sectors, providers and programs that countries have experimented with to enhance care coordination and integration and the evidence on their impacts, to enhance understanding about these models and to extrapolate policy recommendations that may be particularly relevant to the Canadian context with a focus on Alberta Province. We anticipate this knowledge synthesis will provide a number of key outputs, most importantly: 1) a conceptual framework that classifies models of allocating funds to facilitate integration, 2) potential barriers and facilitators for implementing those models.

Upon completion of the review, we will disseminate the results via diverse means (see Appendix Table 3 for full list of dissemination tools for different target audiences). We will present the findings at academic conferences and publish a research report as well as

two academic peer-reviewed papers. The comprehensive conceptual framework that classifies models of allocating funds to facilitate integration will be made freely available online as an evidence repository. We will further publish a series of policy brief, developed in collaboration with our knowledge user partners about how to promote and better implement a funding model that facilitates care integration through use of findings of this review. Other means to disseminate our review results include blogs that intersect academic and popular internet dissemination; a webinar in collaboration with our knowledge users; a short (4-5 minute) YouTube (or series of YouTube videos) discussing policy implications of the findings; and media interviews to disseminate findings and support their uptake. An integrated knowledge translation strategy will be pursued as our knowledge users are closely engaged throughout the entire research cycle, and directly contribute to the policy relevant publications of the project.

Research Plan and Timeline

Appendix Table 4 outlines the timeline of project activities by quarter over the period of the year in which we will conduct the scoping review. Quarters 1 and 2 will be focused on the search of the literature and the construction of the scoping review. The third quarter will focus on the analysis of the literature, and the final quarter will concentrate on producing the deliverables for the study (journal articles, written reports, policy briefs, conference presentations, webinar organizing, media interviews, and YouTube video preparation). Our allocation of time and staff support suggests that there is sufficient time to carry out the study.

Conclusion

There is a growing policy emphasis on the integration of care, both within the health sector and also between the health and social care sectors aiming to ensure that people get the right care, at the right time, and in the right place. Fragmented models of allocating funds to and across sectors, programs and providers are frequently cited as major barriers for the implementation of integrated care. Countries are increasingly experimenting with new models of allocating funds to incentivize care integration. Existing literature provides only limited information on synthesis of diverse methods countries have adopted and the evidence on their impacts. This review aims to address this gap in the literature by synthesizing diverse models of allocating funds to facilitate integration. The results of this review will assist policy and decision makers to derive policy lessons and identify policy opportunities that can be applied to improving integrated care. One of the key findings of our review will be identification of successful models and potential barriers and facilitators to implementation of these models which will provide a guide to policy makers in shaping future evidence-based policies in care coordination and integration.

Contributors: AKM conceived the review approach and wrote the first draft of the manuscript. PGF, EN, and JS critically reviewed and revised the manuscript. All authors read and approved the final version of the manuscript.

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Data sharing: As this is a scoping review protocol, no additional data is available.

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Appendix

Manuscript Title: International Experiments with Different Models of Allocating Funds to Facilitate Integrated Care: A Scoping Review Protocol

Manuscript Type: Scoping Review Protocol

Table 1: Search Strategy and Terms

Search Question	**Different Models of Allocating Funds to Facilitate Integrated Care**
Key Concepts	Resource Allocation, Funding, Policies, Acts, Integrated Care, Health Care, Social Care
Search Strategy for Medline [will be adapted for other databases]	("resource allocation" OR allocate* OR "allocating fund*"). ti,ab,kw. AND (fund* OR financ* OR pay* OR reimburs* OR purchas*). ti,ab,kw. AND (policy OR policies OR strateg* OR mechanism* OR instrument* OR "policy objective*" OR "policy action*" OR "policy instrument*" OR model). ti,ab,kw. (Act OR legislation OR law* OR bill OR rul* OR enact* OR statute). ti,ab,kw. AND ("integrated care*" OR integrat* OR coordinat* OR "care integration" OR "care coordination" OR "integration of care" OR "case management" OR "disease management" OR "collaborative care" OR "continuity of care" OR "managed care" OR "disease management"). ti,ab,kw. AND ("health sector" OR healthcare OR "health care" OR "health system" OR "social care" OR "social system" OR "social welfare"). ti,ab,kw.
Limit to:	English language and full text and "review papers" and yr="2000 -Current"
Initial Search Results in Medline Ovid (search conducted on 20th November, 2017)	8668

Search Terms

	Concept 1	AND	Concept 2	AND	Concept 3	AND	Concept 4
	"resource allocation"		policy		"integrated care*"		"health sector"
	allocate*		policies		integrat*		healthcare
	"allocating fund*").		strateg*		coordinat*		"health care"
OR	fund*		mechanism*		"care integration"		"health system"

OR	financ*		instrument*		"care coordination"		"social care"
OR	pay*		"policy objective*"		"integration of care"		"social system"
OR	reimburs*		"policy action*"		"case management"		"social welfare"
OR	Purchas*		"policy instrument*"		"disease management"		
OR			model		"collaborative care"		
OR			Act		"continuity of care"		
OR			legislation		"managed care"		
OR			law*		"disease management"		
OR			bill				
OR			rul*				
OR			enact*				
OR			statute				

Table 2: Search Sources

Databases	Conference Abstracts	Grey Literature
Applied Social Sciences Index and Abstracts (ASSIA) via ProQuest	Conference Proceedings Citation Index- Science (CPCI-S) via Web of Science	Dissertations & Theses A&I via ProQuest
EMBASE via Ovid SP [Excluding MEDLINE]	Conference Proceedings Citation Index- Social Science & Humanities (CPCI-SSH) via Web of Science	ISI Proceedings
International Bibliography of the Social Sciences via ProQuest		Joanna Briggs Institute EBP Database
McMaster Health Forum - Health System Evidence		Google
MEDLINE via Ovid		Google Scholar
PubMed [Excluding MEDLINE]		OpenGrey
Health Management Information Consortium (HMIC)		PAIS Index - Public Affairs Information Service
Science Citation Index Expanded (SCI-EXPANDED) via Web of Science		Website of WHO, WHO Europe, International Foundation for Integrated Care (IFIC)
EconLit		
Social Science Citation Index (SSRN)		
Social Sciences Citation Index (SSCI) via Web of Science		
Social Services Abstracts via ProQuest		
Sociological Abstracts via ProQuest		
Informit Health Collection		
International Bibliography of Social Sciences		
Cumulative Index to Nursing and Allied Health Literature (CINAHL)		
PsycINFO		

Table 3: Dissemination of Findings

Intended Audience	Dissemination Tools/Means
Federal and provincial governments	Synthesis report, conceptual framework of models of allocating funds to facilitate integrated care, policy briefs, blogs, YouTube videos, webinar
Policy makers in other countries	Conceptual framework and policy briefs available online for free as an evidence repository, blogs, YouTube videos, webinar
Research community	Peer-reviewed articles and conference presentations, blogs, YouTube videos, webinar
General public	Media engagement through publication of newspapers and magazine articles, and press releases (e.g. media interviews), YouTube videos

Table 4: Research Project Timeline

Research Activities	Prior to Project Start Date	Q1	Q2	Q3	Q4
Consultation with the knowledge users (KUs) on the research questions and research proposal	X				
Consulting KUs to refine the research questions	X	X			
Confirming search strategy with information scientist		X			
Conducting search in multiple search sources		X	X		
Identifying relevant studies		X	X		
Relevance testing by identifying inclusion and exclusion criteria			X		
Entry of Data into NVivo10			X		
Cross-check exercise to ensure consistency of literature review by team members			X		
Extracting data from included studies (charting the data)			X		
Data analysis, synthesis, consultation with KUs through holding workshop with KUs				X	
Develop conceptual framework to classify informal network policies with input from KUs				X	
Drafting review findings report					X
Drafting policy briefs					X
Submission to peer-reviewed journals					X
Presenting findings at relevant conferences					X

BMJ Open

International Experiments with Different Models of Allocating Funds to Facilitate Integrated Care: A Scoping Review Protocol

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Manuscript ID	bmjopen-2017-021374.R1
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Title Page

Title: International Experiments with Different Models of Allocating Funds to Facilitate Integrated Care: A Scoping Review Protocol

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International Experiments with Different Models of Allocating Funds to Facilitate Integrated Care: A Scoping Review Protocol

Abstract

Introduction: Integrated care is viewed widely as a potential solution to some of the major challenges faced by health and social care systems, such as those posed by service duplication, fragmentation, and poor care coordination, and associated impacts on the quality and cost of services. Fragmented models of allocating funds to and across sectors, programs and providers is frequently cited as a major barrier to integration and countries have experimented with different models of allocating funds to enhance care coordination among service providers and to reduce ineffective care and avoid costly adverse events. This scoping review aims to assess published international experiences of different models of allocating funds to facilitate integration and the evidence on their impacts.

Methods and Analysis: We will adopt a scoping review methodology due to the potentially vast and multi-disciplinary nature of the literature on different models of allocating funds in health and social care systems, as well as the scarcity of existing knowledge syntheses. The framework developed by Arksey and O'Malley will be followed that entails six steps: 1) identifying the research question(s), 2) searching for relevant studies, 3) selecting studies, 4) charting the data, 5) collating, summarizing, and reporting the results, 6) and conducting consultation exercises. These steps will be conducted iteratively and reflexively, making adjustments and repetitions when appropriate to make sure the literature has been covered as comprehensively as possible. To ensure comprehensiveness of our literature review we also search a wide range of sources.

Ethics and Dissemination: An integrated knowledge translation (iKT) strategy will be pursued by engaging our knowledge users through all stages of the review. We will organize two workshops or policy roundtables/policy dialogues in Alberta and British Columbia with participation of diverse knowledge users to discuss and interpret the findings of our review and to draw out policy opportunities and lessons that can be applied to the context of these two provinces.

Strengths and limitations of this study:

1. This review will employ a broad search strategy that includes both peer-reviewed literature and grey literature.
2. This review will adopt an integrative approach to knowledge translation through engaging diverse knowledge users in design, analysis, and dissemination of findings.

3. The quality of evidence or grading evidence, that are part of systematic reviews, will not be assessed in this review as in other scoping reviews.
4. By limiting the search language to English, we may miss some potentially important and relevant findings.
5. The scope of this review is very broad. As an example, integrated care per se has been used as an umbrella term for various concepts and organizational structures. This may lead to uncovering an extensive literature that could appear unmanageable.

Introduction

There is a growing policy emphasis on the integration of care within the health sector and between the health and other sectors, mainly social care, aiming to ensure that people receive the right care, at the right time, and in the right place [1]. Integrated care (IC) is viewed widely as a potential solution to overcome some of the major challenges that health and social care systems are facing [1,2]. It is considered as an approach for addressing financial and quality issues through tackling duplication, fragmentation, and poor care coordination [3]. The World Health Organization (WHO) has shifted emphasis to IC to achieve universal health coverage and ensure high quality and cost-effective service delivery [3,4]. Some potential impacts of IC include: improved access to care; enhanced experience and satisfaction for patients, carers, and healthcare providers; reduced secondary care utilization; improved quality of life and health status; improved health outcomes; reduced unnecessary duplication of care; and improved cost-effectiveness [5-9].

IC has been used as an umbrella term for various concepts and organizational structures [10]. There is a plethora of concepts/terminologies used such as, among others, 'integrated care', 'coordinated care', 'collaborative care', 'continuity of care', 'managed care', 'disease management', and 'case management', which reflects the diversity of objectives behind adopting these concepts and a variety of disciplines that have applied this concept [7,11]. It is suggested that in defining IC, the emphasis should be placed on the needs of services users, their families and the communities to which they belong instead of structures and organizations [10]. Indeed, there is considerable supportive evidence highlighting that such a perspective should be the heart of any integrated care strategy in order to bring together potentially competing factions in a unifying narrative [12]. With this consideration, IC has been widely defined in the context of improving quality and access to care especially for people with complex, long term health problems whose needs cut across multiple providers, services, and settings [1,10,13].

Fragmented models of allocating funds to and across sectors, programs and providers are frequently cited as major barriers for the implementation of IC [9,14-16]. In this review, we use the terminology of 'allocating funds' by adopting the 'world health report 2000' [17] framework on health system performance, which classifies allocation of funds as a key component of health care financing. Health care financing deals with three basic functions of revenue collection, pooling of resources, and resource allocation and purchasing. *Revenue collection* deals with how health systems raise money from different sources (e.g. households, businesses, and external sources). *Pooling* refers to the accumulation and management of revenues for the common advantage of participants [18]

so members of the pool share collective health risks [19]. *Resource allocation and purchasing* refers to the methods employed to purchase services from public and private providers, a process through which revenues collected in fund pools are allocated to institutional or individual providers for delivering health services and interventions [18]. In this review, our focus is on allocation of resources/funds to and across sectors, programs and providers. We will look at the micro and meso-level of resource allocation (e.g. allocating funds to individual health care providers and hospitals) and the macro-level resource allocation in terms allocating funds to and across sectors (health care vs. social care or long-term care), service/program areas or scope of care (e.g. prevention, acute care, rehabilitation, palliative care), population groups (e.g. elder care, persons with disabilities), and health conditions (e.g. diabetes, joint replacement). We will also search for the laws, legislations and Acts that countries have enacted to facilitate integrated care through allocation of funds to and across sectors, programs and providers.

Since traditional models of allocating funds such as fee-for service do not financially incentivize integration of care [20], countries are increasingly experimenting with new forms of allocating funds (especially macro-level models) to incentivize care coordination and integration [14]. Examples include episode-based bundled payments and population-based integrated payment methods. Bundled payments are single payments to groups of providers involved in providing a defined episode of care for a particular health condition (e.g. diabetes) with the aim of strengthening an integrated approach to service delivery [21]. Example of bundled model is the Bundled Payments for Care Improvement (BPCI) Initiative in USA [22]. Under the population-based integrated payment methods, rooted in the global capitation models adopted by Health Maintenance Organizations (HMOs) in USA in 1980s and 1990s, groups of providers are funded for managing care of a defined population. Here a group of providers share accountability for costs and quality of care for a segment of population. Two prominent examples of these models include Accountable Care Act (ACA) organizations (ACOs) in USA [23], and Gesundes Kinzigtal model in Germany [24].

Countries have also enacted laws, legislations, and Acts to facilitate integrated care through pooling of resources across sectors. For example, in England the Health and Social Care Act 2012 aimed, among others, to promote a closer integration of services across sectors and the Care Act 2014 tasked local authorities with promoting the integration of care between health and health-related services, like housing, with the aim of increasing patient experience of care and improving quality of care [25]. In Germany, the 2015 Health Care Strengthening Act promotes integrated care through a number of measures such as establishment of an "innovation fund" totalling EUR 300 million annually for start-up funding of innovative integrated care programs [26]. Despite these legislations, barriers to integrated care including resources levels, differing status related to knowledge and expertise, value differences, lack of role clarity, stereotyping and competitiveness, and clash of professional cultures remain [27,28].

Unfortunately existing literature provides only limited information on synthesis of diverse models of allocating funds to facilitate integration that countries have adopted and the evidence on their impacts. In this review, we will search for these models. The

review's first goal is to facilitate an analysis of the diverse models of allocating funds that countries have experimented with to enhance care coordination and integration and the evidence on their impacts. The review's second goal is to describe the context of the models, so that the contexts can be contrasted with those in Canada. Moreover, the historical basis for models of allocating funds will add 'color' to the context(s). The review's third goal is to synthesize these findings into policy opportunities and lessons learned aiming to draw out approaches and methods that can be applied to the Canadian context with a focus on Alberta and British Columbia provinces.

To increase the uptake of our review findings, we will engage diverse knowledge users including content experts, policy and decision makers, and community organizations in the design, analysis, and dissemination of the review. In this review, we are going to address the following objectives: 1) to map, analyze, and synthesize existing knowledge and the main sources and types of evidence about different models of allocating funds to facilitate integration, 2) to develop a conceptual framework that classifies those models, 3) to explore different policy objectives behind adopting/developing those models, 4) to investigate potential barriers and facilitators to implementation of diverse models, 5) to explore the impact and degree of success for those models where the degree of success is measured against the outcomes that health systems are trying to achieve including, among others, care integration, cost growth reduction, and maximization of patients' clinical and experience outcomes, 6) to identify additional gaps in the literature, and 7) to draw out policy opportunities and lessons learned that can be applied to the Canadian context with a focus on Alberta and British Columbia provinces.

Methods And Analysis

Scoping reviews systematically map the key concepts within a research area and the main sources and types of evidence available through a comprehensive review of the literature [29-31]. They are different from systematic reviews in two distinctive ways: 1) a systematic review typically focuses on a well-defined question and includes specific study designs identified *a priori* while a scoping review addresses a broader topic and includes many different study designs. 2) A systematic review tends to answer a very specific and narrow research question and assesses the quality of studies for inclusion while a scoping review tends to answer to a broader research question and does not assess the quality of studies for inclusion[31]. A scoping review can inform a systematic review[32,33].

Given the vast nature of the literature on integrated care and allocation of funds (both within the health system and across health and other sectors), and thus far limited efforts to synthesize existing knowledge, we will adopt a scoping review method. The scoping review also assists in providing greater conceptual clarity about how the literature has addressed a complex and wide topic [34]. It can also help determine the value of undertaking a full systematic review on this topic[33]. We have conceived our review as a method in its own right that will lead to the publication and dissemination of research findings on models of allocating funds to facilitate integrated care. Synthesis of existing

evidence and consultation of findings with a wide range of stakeholders will allow us to draw out policy opportunities and lessons that can be applied to the Canadian context with a focus on Alberta and British Columbia provinces. Although we will identify gaps in the existing evidence that may lead to a full systematic review, we are not aiming to conduct a systematic review.

In this scoping review, we will follow the framework developed by Arksey and O'Malley (2005) which has been further updated by Levac and colleagues [30]. This framework entails six steps: 1) identifying the research question/s, 2) searching for relevant studies, 3) selecting studies, 4) charting the data, 5) collating, summarizing, and reporting the results, 6) and conducting consultation exercises. These steps are treated in an iterative way and we will engage with each step in a reflexive way and repeat steps, where necessary, to make sure that the literature is comprehensively covered [29,31]. To ensure comprehensiveness of our literature review we also search a wide range of sources.

Step One: Identifying the Research Question/s

As the focus of scoping reviews is on summarizing the breadth of evidence, the research questions should be broad [31]. A well-defined research question at the first step linked with a clear purpose helps later steps of the review including study selection and data extraction [30]. The overarching question that guides our review is: "what is the range of models of allocating funds to facilitate integration that have been documented in the published and grey literature?" We initially generated a list of potential research questions based on our research team experience and initial engagement with the relevant literature. We then consulted with our knowledge users, including content experts and policy and decision makers, via email to seek their views on the research questions and to refine and finalize them. This input from knowledge users and ongoing engagement with them will ensure the study's rigour, relevance, and comprehensiveness. This ongoing engagement, in turn, will lead to greater potential for the review results to be taken up by a broad range of knowledge users [35]. The following research questions will guide this review:

1. What is the range of existing models of allocating funds to facilitate care integration that have been documented in the published, unpublished and grey literature and what problems were these models trying to address?
2. What is the range of policy objectives driving the development or adoption of identified models?
3. What are the barriers to and facilitators of implementation for models of allocating funds to facilitate care integration in the context of the problem trying to be solved?
4. What is the evidence of impact of identified models of allocating funds to facilitate care integration as given by authors?

5. How do funders of, and knowledge users involved in, this scoping review evaluate evidence of impact of new funding models? Or what are the outcome measures they highly value and expect to be impacted by the new funding models?
6. What is the evidence on the degree of success of identified models of allocating funds to facilitate care integration where the degree of success is measured against the outcomes that health systems are trying to achieve including, among others, care integration, cost growth reduction, and maximization of patients' clinical and experience outcomes?
7. What are the policy opportunities and lessons that Canada can learn from identified models of allocating funds to facilitate integrated care?

Step Two: Identifying Relevant Studies

At this step, we will identify relevant studies and will develop a search strategy, terms/concepts to use, sources to be searched, time span and language [31]. As Arksey and O'Malley's recommend that "comprehensiveness is the whole point of scoping the field" [31], we will employ a very broad search strategy. We will use a search strategy worksheet [36] and our search terms will include keywords related to (1) allocation of funds AND (2) integration of care. We will adjust search terms based on nuances of each database. Our key concepts will include, but not be limited to (1) allocation of funds, (2) integrated care, and (3) health care (see Appendix Table 1 for our detailed search strategy and terms). We will refine our search terms and perform more sensitive literature searches throughout the review process, as necessary. We will undertake the following five activities as part of the broad search strategy: electronic database search, web search, hand search of relevant journals, citations of relevant papers, and scanning the reference lists of relevant papers.

We will employ an information scientist (or library scientist) to perform the electronic database search. Given the multidisciplinary nature of the research project we will be using diverse electronic databases including: Web of Science, PubMed, MEDLINE via Ovid; EMBASE via Ovid excluding MEDLINE; Cumulative Index to Nursing and Allied Health Literature (CINAHL); Applied Social Science Index and Abstract (ASSIA); Health Management Information Consortium (HMIC); EconLit; Sociological Abstracts; Social Science Citation Index (SSRN); Scopus, Cochrane Library, and PsycINFO. Google Scholar and Google will be also searched for published and grey literature (see the full list of databases in Appendix Table 2). We conducted a preliminary search in MEDLINE, which produced 8668 records (November 20, 2017).

We will search the following websites for unpublished and grey literature: OpenGrey; Dissertations & Theses A&I via ProQuest; ISI Proceedings; Conference Proceedings Citation Index–Social Science and Humanities; Joanna Briggs and ProQuest Dissertations and Theses; PAIS Index - Public Affairs Information Service; Google

Scholar; and Google. We will also search the website of key institutions and organizations such as WHO, WHO Europe, International Foundation for Integrated Care (IFIC), the European Observatory on Health Systems and Policies, Agency for Healthcare Research and Quality (AHRQ), National Institute for Health and Care Excellence (NICE), National Institutes for Health (NIH), and Canadian Institutes for Health Research (CIHR). The research team and knowledge users will identify other websites and sources at the review progresses.

Once these electronic searches were completed, we will perform a hand search of key journals (e.g., The International Journal of Integrated Care; Health Policy; Health and Social Care in the Community; Health Policy and Planning; Journal of Health Services Research and Policy; Health Services Research; Social Policy and Administration; BMC Health Services Research; The BMJ; Critical Social Policy; Plos One; Health Affairs; The New England Journal of Medicine; JAMA) which will be identified by the research team and content experts. We will also track citations of relevant papers. Finally, we will search the reference lists of relevant papers to find papers not identified in our initial search. We will import all retrieved searches into EndNote X8 in which the duplicate references will be identified and discarded. We anticipate a manual search for duplicates as selected electronic databases to download citations and referencing are often inconsistent in their content and formatting [35].

Step Three: Relevance Testing

We will adopt a team approach, which increases the rigour of our review [30], to determine which studies/materials to include. The team will discuss and finalize the inclusion and exclusion criteria at the beginning of the scoping review. The research team has initially decided on the following inclusion and exclusion criteria. However, given the unclear boundaries of scoping reviews at the outset, predefined inclusion and exclusion criteria are provisional and may be revised and refined following further engagement with our knowledge user partners and with emerging knowledge of the existing literature [37].

Initial Inclusion Criteria:

- Papers that discuss models of allocating funds to facilitate integrated care
- Published or unpublished primary studies (quantitative, qualitative or mixed-methods studies), theses/dissertations, conference papers, theoretical discussions and grey literature

Initial Exclusion Criteria:

- Papers published before 2000
- Papers not published in English
- Book reviews

- Commentary, opinion pieces, editorial papers, and descriptive papers that provide no relevant empirical evidence

Studies and materials will be included through a two-step process. First, all abstracts and executive summaries will be scanned by two independent reviewers. Then, the same reviewers will retrieve all potentially relevant full papers and materials for inclusion consideration. Following Levac *et al* [30] recommendation our reviewers will meet at the start, middle, and end of the abstract review process in order to discuss any challenges or ambiguities related to study selection and to refine, where necessary, the search strategy. A scanning tool will be developed, in consultation with our knowledge user partners, to determine the relevance of papers to integrated care funding models and also to code the type of data retrieved (e.g. reviews, theoretical discussion, empirical data, government documents, policy brief, web content, conference paper). Two graduate students, who have received training in the scoping review process, will be recruited to screen the titles, abstracts/summaries or executive summaries that are yielded from the search strategy for study selection. Records will be classified by these reviewers as 'potentially relevant' or 'exclude'. When the relevance of a publication is in doubt, they will retrieve the full text. To make sure the selection process in non-biased, two members of the research team will independently review one percent of the abstracts/summaries and compare their results with the graduate students' results. Our research questions may require some refinement at this stage to ensure the review is feasible and relevant without compromising the comprehensiveness of the search.

In the second step, the graduate student reviewers will independently retrieve and review all full texts coded as 'potentially relevant' as part of considering them for inclusion. If there are disagreements between the two reviewers on inclusion, the other team members will be consulted to make the final decision. The research team will organize monthly meetings/teleconferences during this stage to discuss findings, progress, challenges and uncertainties related to study selection.

Step Four: Charting the Data

We will extract contextual or process oriented data from the included studies using a narrative descriptive synthesizing approach [30,31]. We will use a deductively generated coding tree and import the data into NVivo 10 for data analysis. Our research team will collectively develop the data-charting form (or extraction form), using Microsoft Excel sheets, to determine which variables to extract that best help answer our research questions. The data-charting/extraction form will be derived from our research questions and also from the best relevant papers. The charting will be treated as an iterative process in which we will constantly update the data-charting form as the analysis proceeds [30], similar to the process used in inductive coding in qualitative data analysis. The two

graduate students with two members of the research team will independently extract data from the first five studies, using a data-charting form, to check if their data extraction approach is consistent with the research questions and objectives. The graduate students will then independently continue extracting. To ensure accuracy and completeness the research lead will double check the extracted data. The data extracted will include: countries/locations, author/s or institution/s or organization/s, publication title, publication year, research question or study purpose or policy goal/s, type of funding models, barriers/facilitators to implementation of models, and evidence of success/impact, if available. As the research team becomes more familiar with the literature, this list of extracted data will be modified.

Step Five: Collating, Summarizing, and Reporting the Results

This step generally constitutes the most extensive phase of a scoping review. After extracting all data we will establish a working group to meaningfully interpret the data. With the research questions in mind, the two graduate students will quantify the extracted data and produce a descriptive summary of the included materials (e.g. for journal papers we will extract overall number of studies included, types of study design, year of publication, countries/locations where studies were conducted, and type of integrated funding models).

The analytical synthesis of extracted data is critical in scoping reviews as these reviews are not a short summary of journal papers and grey literature. We will conduct a constant comparative analysis using NVivo10 in order to organize our data into overarching categories. Constant comparison analysis allows comparisons to be made across concepts, similarities, differences, and gaps to be identified, and a conceptual framework to emerge. During the synthesis phase, we will systematically combine the extracted data and will develop a taxonomy of models of allocating funds to facilitate integration. A conceptual framework will be developed with the following key elements which will be the starting point for our coding nodes too: the funding models; barriers and facilitators; and policy success/impact. At this phase, we will solicit the views of our knowledge users via email, teleconference, or web-conference to allow their feedback and inputs in reviewing the findings, before we can provide policy recommendations [31].

Step Six: Consultation

Consultation enhances the methodological rigour of the review as well as validity of the study outcome and should be a compulsory stage in scoping reviews [30]. In our scoping review, we will engage knowledge users at all steps of the review by which we will move beyond knowledge translation towards an iterative integrated knowledge translation [38]. We will seek knowledge users' input for a number of reasons, among others, to further refine the review questions; to tailor our review findings to the knowledge users' needs;

to add a higher level of meaning, content and expertise to our review preliminary findings; and to make our review findings more applicable. Our knowledge users will be engaged in the first steps of the review via email and teleconference. A workshop will be held with knowledge users to have their inputs/feedbacks for developing the comprehensive conceptual framework that classifies integrated funding models.

Patient and Public Involvement

In line with the Canadian Institutes for Health Research (CIHR) Strategy for Patient Outcome Research (SPOR) definition of patient engagement in health research, our patient engagement plan will incorporate patients as respected and active partners in the research process and we aim to engage 'patients' meaningfully in all stages of our scoping review. In our research, we have adopted the broad definition of 'patient', not just the person who receives care, but any person or group with lived experience of a health or health systems issue, including caregivers and family members.

We are working with two organizations in Alberta and British Columbia that provide our access to 'patient' groups. IMAGINE Citizens, which is an independent group of Alberta citizens who participate in patient-oriented research, is our point of access to various 'patient' groups in Alberta. British Columbia Primary Health Care Research Network (BC-PHCRN) is also our access point to 'patients' in British Columbia. In writing this scoping review protocol, we have shared our proposal, including the research questions, with IMAGINE Citizens and BC-PHCRN for their inputs and feedback and have incorporated them into the protocol. We will engage 'patients' at all steps of our review, towards an iterative integrated knowledge translation (iKT) format.

Ethics and Dissemination

The aim of this scoping review is to synthesize the existing literature on diverse models of allocating funds to and across sectors, providers and programs that countries have experimented with to enhance care coordination and integration and the evidence on their impacts, to enhance understanding about these models and to extrapolate policy recommendations that may be particularly relevant to the Canadian context with a focus on Alberta and British Columbia provinces. We anticipate this knowledge synthesis will provide a number of key outputs, most importantly: 1) a conceptual framework that classifies models of allocating funds to facilitate integration, 2) potential barriers and facilitators for implementing those models.

Upon completion of the review, we will disseminate the results via diverse means (see Appendix Table 3 for full list of dissemination tools for different target audiences). We will present the findings at academic conferences and publish a research report as well as two academic peer-reviewed papers. The comprehensive conceptual framework that classifies models of allocating funds to facilitate integration will be made freely available online as an evidence repository. We will further publish a series of policy brief, developed in collaboration with our knowledge user partners about how to promote and

better implement a funding model that facilitates care integration through use of findings of this review. Other means to disseminate our review results include blogs that intersect academic and popular internet dissemination; a webinar in collaboration with our knowledge users; a short (4-5 minute) YouTube (or series of YouTube videos) discussing policy implications of the findings; and media interviews to disseminate findings and support their uptake. An integrated knowledge translation strategy will be pursued as our knowledge users are closely engaged throughout the entire research cycle, and directly contribute to the policy relevant publications of the project.

Research Plan and Timeline

Appendix Table 4 outlines the timeline of project activities by quarter over the period of the year in which we will conduct the scoping review. Quarters 1 and 2 will be focused on the search of the literature and the construction of the scoping review. The third quarter will focus on the analysis of the literature, and the final quarter will concentrate on producing the deliverables for the study (journal articles, written reports, policy briefs, conference presentations, webinar organizing, media interviews, and YouTube video preparation). Our allocation of time and staff support suggests that there is sufficient time to carry out the study.

Contributors: AKM and PGF conceived the review approach. AKM wrote the first draft of the manuscript. PGF, EN, and JS critically reviewed and revised the manuscript. All authors read and approved the final version of the manuscript.

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Data sharing: As this is a scoping review protocol, no additional data is available.

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Appendix

Manuscript Title: International Experiments with Different Models of Allocating Funds to Facilitate Integrated Care: A Scoping Review Protocol

Manuscript Type: Scoping Review Protocol

Table 1: Search Strategy and Terms

Search Question	**Different Models of Allocating Funds to Facilitate Integrated Care**
Key Concepts	Resource Allocation, Funding, Policies, Acts, Integrated Care, Health Care, Social Care
Search Strategy for Medline [will be adapted for other databases]	("resource allocation" OR allocate* OR "allocating fund*" OR fund* OR financ* OR pay* OR reimburs* OR purchas*). ti,ab,kw. AND (policy OR policies OR strateg* OR mechanism* OR instrument* OR "policy objective*" OR "policy action*" OR "policy instrument*" OR model). ti,ab,kw. (Act OR legislation OR law* OR bill OR rul* OR enact* OR statute). ti,ab,kw. AND ("integrated care*" OR integrat* OR coordinat* OR "care integration" OR "care coordination" OR "integration of care" OR "case management" OR "disease management" OR "collaborative care" OR "continuity of care" OR "managed care" OR "disease management"). ti,ab,kw. AND ("health sector" OR healthcare OR "health care" OR "health system" OR "social care" OR "social system" OR "social welfare"). ti,ab,kw.
Limit to:	English language and full text and "review papers" and yr="2000 -Current"
Initial Search Results in Medline Ovid (search conducted on 20th November, 2017)	8668

Search Terms

	Concept 1	AND	Concept 2	AND	Concept 3	AND	Concept 4
OR	"resource allocation"		policy		"integrated care*"		"health sector"
OR	allocate*		policies		integrat*		healthcare
OR	"allocating fund*").		strateg*		coordinat*		"health care"
OR	fund*		mechanism*		"care integration"		"health system"

OR	financ*		instrument*		"care coordination"		"social care"
OR	pay*		"policy objective*"		"integration of care"		"social system"
OR	reimburs*		"policy action*"		"case management"		"social welfare"
OR	Purchas*		"policy instrument*"		"disease management"		
OR			model		"collaborative care"		
OR			Act		"continuity of care"		
OR			legislation		"managed care"		
OR			law*		"disease management"		
OR			bill				
OR			rul*				
OR			enact*				
OR			statute				

Table 2: Search Sources

Databases	Conference Abstracts	Grey Literature
Applied Social Sciences Index and Abstracts (ASSIA) via ProQuest	Conference Proceedings Citation Index- Science (CPCI-S) via Web of Science	Dissertations & Theses A&I via ProQuest
EMBASE via Ovid SP [Excluding MEDLINE]	Conference Proceedings Citation Index- Social Science & Humanities (CPCI-SSH) via Web of Science	ISI Proceedings
International Bibliography of the Social Sciences via ProQuest		Joanna Briggs Institute EBP Database
McMaster Health Forum - Health System Evidence		Google
MEDLINE via Ovid		Google Scholar
PubMed [Excluding MEDLINE]		OpenGrey
Health Management Information Consortium (HMIC)		PAIS Index - Public Affairs Information Service
Science Citation Index Expanded (SCI-EXPANDED) via Web of Science		Website of WHO, WHO Europe, International Foundation for Integrated Care (IFIC)
EconLit		European Observatory on Health Systems and Policies
Social Science Citation Index (SSRN)		Agency for Healthcare Research and Quality (AHRQ)
Social Sciences Citation Index (SSCI) via Web of Science		National Institute for Health and Care Excellence (NICE)
Social Services Abstracts via ProQuest		National Institutes for Health (NIH)
Sociological Abstracts via ProQuest		Canadian Institutes for Health Research (CIHR)
Informit Health Collection		
International Bibliography of Social Sciences		
Cumulative Index to Nursing and Allied Health Literature (CINAHL)		
PsycINFO		
Scopus		
Cochrane Library		

Table 3: Dissemination of Findings

Intended Audience	Dissemination Tools/Means
Federal and provincial governments	Synthesis report, conceptual framework of models of allocating funds to facilitate integrated care, policy briefs, blogs, YouTube videos, webinar
Policy makers in other countries	Conceptual framework and policy briefs available online for free as an evidence repository, blogs, YouTube videos, webinar
Research community	Peer-reviewed articles and conference presentations, blogs, YouTube videos, webinar
General public	Media engagement through publication of newspapers and magazine articles, and press releases (e.g. media interviews), YouTube videos

Table 4: Research Project Timeline

Research Activities	Prior to Project Start Date	Q1	Q2	Q3	Q4
Consultation with the knowledge users (KUs) on the research questions and research proposal	X				
Consulting KUs to refine the research questions	X	X			
Confirming search strategy with information scientist		X			
Conducting search in multiple search sources		X	X		
Identifying relevant studies		X	X		
Relevance testing by identifying inclusion and exclusion criteria			X		
Entry of Data into NVivo10			X		
Cross-check exercise to ensure consistency of literature review by team members			X		
Extracting data from included studies (charting the data)			X		
Data analysis, synthesis, consultation with KUs through holding workshop with KUs				X	
Develop conceptual framework to classify informal network policies with input from KUs				X	
Drafting review findings report					X
Drafting policy briefs					X
Submission to peer-reviewed journals					X
Presenting findings at relevant conferences					X

PRISMA-P (Preferred Reporting Items for Systematic review and Meta-Analysis Protocols) 2015 checklist: recommended items to address in a systematic review protocol*

Section and topic	Item No	Checklist item	(Page No.#)
ADMINISTRATIVE INFORMATION			
Title:			
Identification	1a	Identify the report as a protocol of a systematic review (scoping review)	1
Update	1b	If the protocol is for an update of a previous systematic review, identify as such	-
Registration	2	If registered, provide the name of the registry (such as PROSPERO) and registration number	-
Authors:			
Contact	3a	Provide name, institutional affiliation, e-mail address of all protocol authors; provide physical mailing address of corresponding author	1
Contributions	3b	Describe contributions of protocol authors and identify the guarantor of the review	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	-
Support:			
Sources	5a	Indicate sources of financial or other support for the review	12
Sponsor	5b	Provide name for the review funder and/or sponsor	
Role of sponsor or funder	5c	Describe roles of funder(s), sponsor(s), and/or institution(s), if any, in developing the protocol	
INTRODUCTION			
Rationale	6	Describe the rationale for the review in the context of what is already known	3-5
Objectives	7	Provide an explicit statement of the question(s) the review will address with reference to participants, interventions, comparators, and outcomes (PICO)	6-7
METHODS			
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	8-9
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	7-8 and Appendix Table 2
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	7-8 and

		repeated	Appendix Table 1
Study records:			
Data management	11a	Describe the mechanism(s) that will be used to manage records and data throughout the review	9-10
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)	9
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	9-10
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	9-10
Outcomes and prioritization	13	List and define all outcomes for which data will be sought, including prioritization of main and additional outcomes, with rationale	10
Risk of bias in individual studies	14	Describe anticipated methods for assessing risk of bias of individual studies, including whether this will be done at the outcome or study level, or both; state how this information will be used in data synthesis	NA
Data synthesis	15a	Describe criteria under which study data will be quantitatively synthesised	NA
	15b	If data are appropriate for quantitative synthesis, describe planned summary measures, methods of handling data and methods of combining data from studies, including any planned exploration of consistency (such as I^2, Kendall's τ)	NA
	15c	Describe any proposed additional analyses (such as sensitivity or subgroup analyses, meta-regression)	NA
	15d	If quantitative synthesis is not appropriate, describe the type of summary planned	10-11
Meta-bias(es)	16	Specify any planned assessment of meta-bias(es) (such as publication bias across studies, selective reporting within studies)	NA
Confidence in cumulative evidence	17	Describe how the strength of the body of evidence will be assessed (such as GRADE)	NA

*** It is strongly recommended that this checklist be read in conjunction with the PRISMA-P Explanation and Elaboration (cite when available) for important clarification on the items. Amendments to a review protocol should be tracked and dated. The copyright for PRISMA-P (including checklist) is held by the PRISMA-P Group and is distributed under a Creative Commons Attribution Licence 4.0.**

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