How Can Researchers and Research Users Initiate Integrated Knowledge Translation (IKT) Partnerships?

by

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A thesis submitted in conformity with the requirements for the degree of Master of Science
Institute of Health Policy, Management and Evaluation
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Abstract

Integrated knowledge translation (IKT) describes researcher and research user partnerships formed with the long-term goal to increase knowledge uptake. Research shows that processes for initiating IKT partnerships are still developing and initiation remains challenging. The purpose of this thesis was to explore IKT partnership initiation to understand and provide guidance on how to optimize the process. Phase 1, a meta-narrative review of the literature guided by RAMESES reporting standards, described how IKT initiation was undertaken by others. Phase 2, semi-structured interviews guided by the COREQ checklist, explored IKT initiation processes, enablers, and barriers. Six narratives describing IKT initiation were identified from the literature: IKT, action research, stakeholder engagement, knowledge transfer, team initiation and shared mental models. Twenty-two Canadian experts in IKT were interviewed. Data from the two phases were blended to create a summary of inputs, processes, influencing factors and outputs of IKT initiation. Practice and research implications were suggested.
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Chapter 1
Introduction

1 Introduction

The focus of this thesis is on the initiation phase of integrated knowledge translation (IKT) partnerships in healthcare, that is, partnerships between researchers and research users during one or more steps of the research cycle to produce knowledge or implement a method, program, or tool to increase knowledge utilization (1). This introduction offers an overview of IKT and the initiation phase of IKT partnerships. Chapter 2 includes details of the definition of IKT, how it is used in healthcare, similar approaches to IKT in the healthcare and social science fields, examples of IKT initiatives that were tried in healthcare and social sciences, and the purpose and objectives of this study. Chapter 3 describes the methods used to carry out this study. Chapter 4 describes the results of this study, and finally, Chapter 5 discusses the results in the context of existing literature, implications for practice and future research, and limitations that arose from this study.

1.1 Integrated Knowledge Translation (IKT)

1.1.1 What do we know about IKT

IKT is about partnerships between researchers and research users working together in creating knowledge for uptake of research evidence to optimize healthcare (2, 3). Research users include clinicians, managers, patients, family members, healthcare providers, and other stakeholders who may use the research (4). Researchers include individuals who are employed in a research institute or academic department where they apply research methods to produce knowledge.

One of the goals of IKT is to engage research users in the research process so that they are more likely to be aware of and use the knowledge that they were involved in generating to make evidence-based decisions (3, 5, 6). Conversely, researchers benefitted from the relationship by gaining input from research users that allowed them to produce practical knowledge (6).
In IKT, research users can be involved in any step of the research process: shaping of the research question, choosing methodology, developing data collection instruments, collecting data, interpreting the findings, and helping to disseminate results (3, 4, 7).

1.1.2 Examples of IKT

IKT initiatives can be local, or large-scale national-level operations with considerable funding. IKT initiatives can be focused on the science of IKT, that is, studying how IKT partnerships function. An example of a large-scale collaboration for IKT science is the Integrated Knowledge Translation Research Network (IKTR Network) led by Dr. Ian Graham from the Ottawa Hospital Research Institute (8). The IKTR Network is a 7-year programme of numerous projects funded by Canadian Institute of Health Research (CIHR) to use interdisciplinary research in order to explore IKT partnerships and build the science base for IKT, determine its effectiveness at increasing research use and identify best practices and appropriate conditions for conducting IKT to achieve the greatest impact on research use (3). The network includes researchers, research users, trainees, knowledge user experts from research funding agencies; charities; health services and health authorities and other organizations, and a methods resource group (3). IKT can also be focused on improving practice. An example of one such large-scale collaboration is found in the United Kingdom, where the National Institute of Health Research formed nine partnerships between academic institutions and the local health units to produce and implement research evidence through sustained interaction between academics and service providers. These partnerships are called the Collaborations for Leadership in Applied Health Research and Care (CLAHRCs) (9).

1.1.3 Beneficial impacts of IKT

Research shows that IKT can achieve numerous beneficial outcomes. IKT has been shown to impact decision-making positively (10). For example, a mixed method study generated an IKT conceptual framework for healthcare and public health researchers and research users (10). The study was conducted in two parts, the first was a systematic review of 308 articles covering the period of 1990 to 2009, to identify the key elements of the dynamic process of IKT within healthcare institutions (10). The second part was a qualitative phase that collected data about IKT projects through web-based journals, web-based interviews, and web-conferencing from 199 research users and 13 researchers. The benefits of IKT were found to
include creating capacity among various stakeholders to address current and future issues, and enhanced empowerment of research users to create and take ownership of the knowledge produced, who otherwise have historically been subjects of research or merely passive consumers of its outcomes (10).

IKT was also found to have a positive impact on health promotion (11). Molleman and Fransen summarized the history of health promotion in the Netherlands from its inception in the 1970s to present (11). They noted a gradual shift in control of health promotion initiatives from the national level to the local level (12). Due to this shift, by the 1990s, there was an increase in disparities of health promotion services in different local regions of the country (11). As a response to these disparities, the Academic Collaborative Centres (ACCs) were created. The ACCs are an example of IKT, as they are long-term partnerships between public health services and universities (11). Their purpose was to improve exchange between researchers and research users by providing opportunities for partnerships where both groups can contribute to the creation of knowledge that is relevant to practice (11).

A realist review examined 23 studies of IKT initiatives published up to 2011 (13). The authors focused on the synergies created by the initiatives and examined the beneficial outcomes of the synergy between researchers and research users (13). They found that the synergy created had a positive effect on the following: shaping the scope and direction of research, developing and implementing program and research protocols, interpreting and disseminating findings, recruitment of members on advisory boards, recruitment of community members on implementation projects, developing capacity and competence of researchers and research users to understand each other, and generated discussion on conflicting ideas (13). All of these factors enable partnerships to develop, which contributes to the success of the overall partnership.

In summary, IKT appeared to facilitate in creating a platform where various stakeholders could address current and future health care issues, and more importantly empowered knowledge users that were traditionally passive consumers of knowledge to have a say in its creation or direction (10). IKT also had the capacity to make research evidence context-sensitive to local health care needs (14), and helped in recruiting knowledge users’ input on the various steps of the research process, thus generating discussion and producing applicable knowledge (13).
IKT can lead to other numerous beneficial outcomes such as, capacity to make research evidence context-sensitive to local health care needs (14), and inclusion of knowledge users’ input on the various steps of the research process (13). However, IKT is not widely practiced due to numerous challenges such as negative attitudes about IKT (2), lack of knowledge of IKT (2), group/personal dynamics (2), lack of consensus on objectives (2), unclear roles and expectations (2), challenges with decision-making (2), and the need to prioritize time to participate (15).

1.1.4 IKT Enablers and Barriers

Several studies have identified enablers of and barriers to IKT. For example, interviews of 43 researchers and research users in the healthcare field found that IKT initiatives were preferred but not widely used in healthcare because of a lack of knowledge of or resources for IKT implementation (16). Enablers revealed by the study were high-level recognition of IKT, clear expectations of researcher and research user responsibilities, leadership for IKT, recognition of IKT activities in performance reviews as an incentive, and forums for interactions between researchers and research users (2). Barriers that were identified included differences in timing and values between researchers and research users, attitude about IKT, knowledge of IKT, willingness to take part in IKT, group and personal dynamics between researchers and research users, a lack of consensus on objectives, unclear member roles and expectations for the partnership, and issues with decision-making (2).

Although IKT calls for research users to be involved any step of the research process, there was some evidence that they may not have felt comfortable with this (17), or they may not have had the knowledge to take part in all steps of the research process (17, 18), or simply that they were not involved because of traditional cultural barriers, such as skepticism about therapy, that caused research users not to participate in research (19). A study that surveyed the researchers and research users involved in seven programs funded by the Canadian Health Services Research Foundation found that participation of research users was affected by four factors: steps of the research process, time commitment of the research users, alignment between the expertise of research users and type of research, and the quality of the pre-existing relationships between researchers and research users (20). This study suggested that research users were inconsistently involved in the various steps of the research process (20), which
suggests that there is room for improvement in IKT partnerships formation to ensure that this does not occur.

Another study that summarized the challenges faced in IKT initiatives found that developing clear expectations and setting out the purpose of the study and its goals were helpful for team organization and project management (21). A 2003 survey of 146 researchers and 204 research users involved in 21 collaborative research teams in Quebec, Canada found that, overall, both groups enjoyed the collaboration and found it useful (15). However, researchers still had to fulfill their academic duties and sometimes lacked the incentives to partner with research users (15). Similarly, research users needed to take time away from their primary responsibilities in order to be involved in research (15).

An assessment of the CLAHRCs initiative in 2013 found that knowledge uptake was dependent on pre-existing relationships, the approach to engaging different communities, the planning of the initiative, what priorities were set and how, providing additional resources for implementation, and including investment in roles and activities to bridge and broker boundaries (22). Analysis in three CLAHRCs sites in 2013 found that a sense of belonging was also important in collaboration between researchers and research users (23). Relinquishing and sharing of authority had a positive impact on sense of belonging, whereas lack of shared values, language and understanding within the teams had a negative impact on sense of belonging (23). In 2015, Rycroft-Malone et al. further analyzed the CLAHRCs sites and found that the collaboration infrastructure was an important component of knowledge uptake (24). They found that communication mechanisms (how they shared information), setting intermediate outcomes and goals, devoting time and space for meetings, closer geographical proximity to partners, and developing mutual trust and respect were all enablers of IKT (24).

An assessment of the 11 ACC sites’ sustainability was conducted using a mixed method approach between September 2013 and March 2014 (14). Nine of the 11 site coordinators responded to a survey which asked about the barriers and enablers of the collaborations (14). In addition, 21 interviews with site coordinators and other stakeholders were conducted to collect more in-depth responses (14). Some of the enablers of the ACCs were funding to build an infrastructure for knowledge production (hiring a coordinator, forming a steering committee, creating a contractual agreement and working groups), creating a professorship by special
appointment at the university involved in the partnership, and grants for PhD research projects (14). Some of the barriers that emerged were perceived pressure of the university to publish in high impact journals, difficulty to find external grants for policy-initiated projects, and limited budget availability for infrastructure (14). Overall, the study found that ACCs were beneficial for combining research evidence with local context-sensitive information to develop local public health policy (14).

In summary, the enablers of and barriers to IKT from the healthcare literature can be grouped at the organizational level, such as providing a physical space for communication and collaboration, preferably at close geographical proximity (2, 24), setting roles, goals and responsibilities (2, 21, 22) for team members, leadership for projects (2, 14), and grants for projects and incentives (14). There were also individual level barriers and enablers from both researchers and research users, such as attitude towards IKT (2, 15), lack of knowledge (17, 18), lack of incentives (15), lack of government funding (14), time commitment (2, 20), sense of belonging (23), and developing mutual trust and respect (20, 24). Overall, IKT was found to empower research users that were traditionally passive consumers of knowledge to have a say in its creation or direction (10), create capacity to make research evidence context-sensitive to local health care needs (14), and include knowledge users’ input on the various steps of the research process (13).

1.1.5 IKT initiation

Comparison of IKT-like concepts and approaches from different bodies of knowledge revealed there is an early stage of partnership formation (2, 5). Other research has also identified stages of IKT including what we refer to as IKT initiation, which appears to be critical to the subsequent function and impact of IKT partnerships.

Gagliardi et al. performed a scoping review of 13 IKT studies published from 2005 to 2014 to characterize the nature of research in IKT, and identify knowledge gaps for future IKT research (2). While all IKT initiatives were in place for at least two years and in some cases, up to eight years, barriers of IKT were relevant to initiation. For example, one study mentioned the importance of establishing a partnership early in the research process, three studies mentioned the importance of a phased approach to develop shared language and achieve early successes, and three studies mentioned the importance of developing clear goals, roles and expectations,
and providing incentives for participation (2). Initiation activities that enabled IKT included establishing the capacity to undertake IKT, such as clarifying needs and priorities of participants, the attitudes about research, the incentives for participation, the funding and space for activities, and the actions of leaders and facilitators (2).

In 2011, Kothari et al. developed indicators for IKT success from 16 qualitative interviews with researchers and research users involved with eight IKT partnerships in Ontario (25). Eight interviewees were from the Health System Linked Research Units and eight from the Ontario Ministry of Health and Long-Term Care (25). After creating a list of indicators, they conducted two-hour focus groups to validate the list with researchers and research users (25). Indicators of IKT specific to the first two years included discussion of research findings in the context of policymaking, negotiations of roles at different stages, and partnership enhancement including activities to create a team mentality, ensuring clear leadership and the engagement of team members (25). Each of the three dimensions was further divided into sub-indicators for measurement, for example, in the negotiation of the research process there were two sub-indicators that helped initiation: documenting of the responsibilities and creating the terms of reference (25).

Research on the CLAHRCs also contribute to the conceptualization of IKT initiation. A longitudinal realist evaluation was conducted over the period of 2009 to 2014 on three CLAHRCs sites to explain how and why the programs were successful (26). Four rounds of data collection were conducted including: semi-structured interviews, observations, analyzing documentation created by the CLAHRCs, and stakeholder engagement to find out the conditions, processes and outcomes that were important for IKT initiation (26). The authors grouped the process of IKT into five phases. One of the phases focused on initiation, and was described as a time when cognitive, conceptual and physical relationships were being developed (26). An important aspect of this stage was leadership for creating change, and the ability to delegate leadership to people who were most closely involved with the partnership projects (26).

Furthermore, a systematic review of literature up to June 2018 to synthesize what was learnt through evaluation of the CLAHRCs analyzed 37 published papers covering 26 different evaluations (27). The authors found five themes that emerged from data analysis of the evaluation methods: organizational form and emergent properties, the nature and role of
boundaries, the deployment of knowledge brokers and other hybrid roles to support knowledge mobilization, engagement of health care users and the general public in the form of patient and public involvement (PPI), and capacity building (27). Under the theme organizational form and emergent properties, it was noted that leaders played a key role at the very beginning of partnerships and relied on existing relationships to commence the partnership (27).

A review by Roussos et al. of 34 studies published up to 2000 covering 252 IKT-like partnerships in the public health literature, found that leadership was important throughout the process, but that at the initiation stage, leadership in facilitating and listening was crucial (28). This study also found that, at the initiation stage, there was usually excitement about an initiative and outcomes, but as time progressed, the excitement diminished (28). The authors suggested that leaders should ensure excitement remains throughout the initiation by making outcomes matter (28). The leaders could achieve this by documenting community-relevant indicators of success and by providing regular reports to community stakeholders, funding organizations, the media, and local government (28). In addition, developing a clear vision and mission by all members of the IKT initiative was found to be important in generating support and awareness for the partnership (28). It also reduced conflicting agendas and opposition, helped identify allies, and minimized time costs and distractions from appropriate action (28). Evaluation of the progress throughout the partnership was effective in communicating updates to stakeholders and kept interest relevant (28).

The terms ‘early’ and ‘well-established’ activities were also used in the literature to describe initiation and other stages of IKT (29). Time, travel expenses, competing professional demands and geographic distance influenced participation in meetings, therefore further research should identify and evaluate processes or methods other than traditional meetings that may be more conducive to partnerships between researchers and research users (29).

From reading these studies collectively, they reveal that: (1) there is an IKT initiation stage; and (2) that it appears to include the following components:

- **SETTING**: Establish virtual and physical convenient communication spaces and channels that will work through the duration of the project (2, 28, 29)
- **DOCUMENTATION**: Define team mentality by clarifying or establishing visions, mission, goals, terms of reference, rules, regulations, policies, priorities and project
timelines, as well sharing continuous evaluation or progress updates with the stakeholders (2, 25, 28)

- ROLES: Negotiate roles at different stages, identify member skills, delegate work (2, 25)
- LEADERSHIP: Ensure clear leadership and engagement of team members, sustain excitement and establish why outcomes matter (25-28)

Based on these components, a hypothetical definition of IKT initiation can be proposed as:

A period time when an issue or concern brings together researchers and research users to solve or investigate a problem. This time is used for establishing strategic planning documents, communication channels, virtual or physical meeting space, and team roles and responsibilities.

1.1.6 What do we need to know about IKT initiation?

The limitation of this definition is that it may not be applicable to the initiation stage of all IKT partnerships because of IKT members’ varying time and resources, and because of the number of individuals involved. In addition, we do not know whether a well-planned IKT initiation will have any impact on long-term knowledge production or use. It stands to reason that IKT can only take place if initiation is completed in a manner that is effective in moving the team forward from planning to the execution of tasks. Initiation provides a strong foundation to the partnership, which could lead to success if maintained throughout the duration of the project. Few studies have specifically examined IKT initiation and while the studies described above have, their characterization of IKT initiation processes and outcomes was limited. Further research was needed to thoroughly describe how to optimize IKT initiation.

This thesis conceptualizes and characterizes IKT initiation further by exploring the literature and by soliciting feedback from experts. The findings can help researchers and researcher users to optimize the formation of IKT partnerships.
Chapter 2
Background and Literature Review

2 Background

2.1.1 Healthcare quality

Considerable research shows that healthcare delivery and outcomes do not comply with evidence-based recommendations. A landmark study by McGlynn et al. published in 2004 reported that adults in the United States received just over half of recommended health care services (30). A 2013 study tried to measure the status of healthcare quality since the McGlynn study (30), by analyzing outpatient data from the Medical Expenditure Panel Survey that covered the period of 2002 to 2013 (31). These survey data came from an annual cross section of the noninstitutionalized United States civilian population (31). The authors measured 46 indicators of the quality of outpatient care delivered to adults in the United States in the areas of recommended care, inappropriate care, and patient experience (31). There were many improvements in knowledge uptake between 2002 and 2013, including rates of recommended medical treatments from 36% to 42%, use of beta-blockers for heart failure from 41% to 65%, and statins for stroke from 34% to 57% (31). However, there were also declines in recommendations for treatments of patients with concomitant diabetes and hypertension from 64% to 58%, and controller medications among patients with poorly controlled asthma from 71% to 59% (31). Moreover, there was an overall increase in cancer screening recommendations from 73% to 75%, but a decrease for breast cancer screening from 81% to 77% and a decrease for cervical cancer screening from 90% to 86% (31). This is similar to findings in Canada (32). In addition, a recent systematic review of the literature from 2006 to 2017 analyzed 12 articles on uptake of Human Papillomavirus (HPV) vaccination in Canada to determine the levels and to examine the various factors influencing vaccine uptake among the general Canadian population (33). The study found that HPV vaccination uptake could use improvement, stating to be at 55.92% (95% CI 44.87–66.65) (33). While there has been some uptake improvement, knowledge generated by research could optimize healthcare delivery, clinical outcomes, and the patient experience if applied more consistently.

Many studies analyzed the enablers of and barriers to knowledge uptake in specific healthcare areas. A systematic review of the literature up to 2011 aimed to find all the barriers
that general practitioners experienced in implementing evidence-based medicine (34). The authors synthesized data from 22 articles and found four main groups of knowledge uptake barriers (34). The first group was related to the evidence itself (34). This group included the concept that research users felt that the evidence was not strong enough to implement in practice, that the quality of the evidence was not sound, that the evidence was contradictory, and that research users did not have access to evidence (34). The second group of barriers was related to research users’ preferences, such as the influence of other colleagues’ beliefs that guidelines were not useful in practice (34). The third group of barriers was related to patients’ preferences, including the research users were not able to convince the patients to pursue a certain treatment, or patients had a strong belief about treatment that did not match the evidence recommendations (34). The fourth group of barriers was related to the research users’ settings, such as the workload of the research users did not allow them time to learn about or access evidence, and the fact that the lack of investment in evidence-based medicine by health authorities discouraged its use in practice (34). The systematic review concluded that practitioners experience different types of barriers to knowledge uptake and more research was necessary to investigate them (34).

Organizational factors also influence knowledge uptake. In a narrative review of the management literature up to 2012, the authors analyzed 75 papers and synthesized key themes related to knowledge sharing and transfer processes, which were then presented to three focus group of 50 to 80 healthcare managers in the United States (35). Participating managers said that organizational learning and absorptive capacity were important in the ability for the management team to implement knowledge in practice (35). Similarly, a Canadian study found that managers depended on organizational absorptive and learning capacity to support knowledge use (36). Organizational learning capacity was enforced by routine (36) and facilitation (37). Another Canadian study published in 2016 explored how evaluation can support the implementation of evidence in primary care using multiple methods and found that evaluation programs can improve knowledge uptake at the individual level, team level and broader organizational level (38).

Clearly numerous factors challenge knowledge use. Flottorp et al. compiled a list of factors through a systematic review and consultation with international experts (39). They combined 12 checklists that described determinants for changing healthcare professional
practice, organizational change, or changes in health system arrangements (39). The authors analyzed and summarized the 12 checklists to generate a framework of 57 determinants of knowledge use in seven domains including guideline factors, individual or health professional factors, patient factors, professional interactions, incentives and resources, capacity for organizational change, and social, political and legal factors (39).

Collectively, the aforementioned studies show that knowledge translation (KT) was far from easy, that barriers to the implementation of evidence-based knowledge were numerous and could exert profound influences on implementation success, and that researchers and research users should take these into account when planning implementation. Approaches to improving knowledge uptake are needed so that new knowledge is better translated into actionable policy and practice decisions, thus leading to improved quality of care (40, 41).

Knowledge utilization in healthcare continues to be a barrier to improving quality of care and decreasing adverse health events globally (42). The World Health Organization (WHO) recognized the need for global collaboration to find new approaches in increasing knowledge utilization in all healthcare areas (43).

KT initiatives seek to synthesize and implement knowledge to increase evidence-based knowledge utilization in healthcare. For example, the Cochrane Collaboration is an international, non-profit, and non-governmental initiative that provides tools such as knowledge syntheses, guidelines and strategies for evidence-based decision making in healthcare (44). The Cochrane Collaboration was founded in 1993 and, at the time of this writing, has expanded to include 10,000 members and 28,000 supporters in 130 countries (44). Another worldwide KT initiative is the development of a framework by the WHO, to improve health system delivery for the growing aging populations around the globe (45). This framework is related to KT because it is meant as a tool to simplify knowledge uptake by informing decision-making of practitioners, policy makers, and other stakeholders by providing them with the most current available evidence on aging populations (45). Furthermore, to promote the science and practice of KT, the journal *Implementation Science* was established in 2006 “to publish research relevant to the scientific study of methods to promote the uptake of research findings into routine healthcare in clinical, organizational or policy contexts” (46). Initiatives that encourage research uptake are also occurring at the national level in many countries by organizations that synthesize and share
knowledge in the form of evidence summaries and guidelines; for example, the National Institute for Healthcare Excellence (NICE) (47) in the United Kingdom (UK), or Agency for Healthcare Research and Policy (48) in the United States (US).

In Canada, KT is embedded in CIHR’s mandate to “excel, according to internationally accepted standards of scientific excellence, in the creation of new knowledge and its translation into improved health for Canadians, more effective health services and products and a strengthened Canadian health care system” (7). Efforts to improve KT in Canada included initiatives where researchers explored barriers to, and enablers of KT, and have created theoretical frameworks to identify the process and to overcome its challenges (6, 42), created core competencies for training healthcare researchers in knowledge translation (49), and created training sessions for trainees (graduate students, residents, fellows etc.) with an interest in KT (50). These efforts encouraged researchers and research users to continue their interest in implementing KT strategies over the course of their careers with the long-term goal of better healthcare delivery and to reduce the gap between what we know and what we do in healthcare practice and healthcare management (41).

KT is a relatively new concept in healthcare; it employs theories from other disciplines and KT-specific theories are emerging. A comprehensive work that developed a taxonomy of theories categorized them into five groups: process models, determinant frameworks, classic theories, implementation theories and evaluation frameworks (51). Other theories that have been used to describe the process of KT include Rogers’s diffusion of innovation (52), research development dissemination utilization network or Greenhalgh’s synthesis (53), Promoting Action on Research Implementation in Health Services (PARIHS) (54), and the Ottawa Model of Research Use (55), just to name a few (56).

A conceptual framework developed in Canada that has been used to describe the KT process is the Knowledge to Action (K2A) framework (42). The framework has a knowledge generation phase and seven action phases that can occur sequentially or simultaneously (57). The knowledge generation phase can influence the action phases at several points in the cycle (57). The action phases focus on engineering change in the health system. The first action phase is to identify problem, determine the know do gap, and identify, review and select knowledge that is required to solve the problem or gap (57). The second action phase is to analyze or process
knowledge identified in the first action phase and adapt it to the local context (57). The third action phase is to assess the barriers and facilitators to knowledge use of the new-found knowledge. The fourth action phase is to select, tailor, and implement interventions to increase knowledge uptake (57). The fifth action phase is to monitor knowledge use. The sixth phase is to evaluate outcomes, and finally, the seventh phase is to sustain knowledge use (57). Each action phase is based on several theories (57).

Theories are currently being studied as to how they can be applied to each K2A cycle step. A book by Straus et al. describing the K2A cycle has the most comprehensive list of theories, found thus far, that could be applied to the K2A cycle (42). The list included over forty theories, spanning four chapters and grouped by planned action theories (58), cognitive psychology theories (57), educational theories (59), organizational theories (60) and quality improvement theories (61). The reason for so many theories was due to the different and varied steps of the K2A framework, which has required different tasks from individuals and groups involved in the process of KT.

Straus et al. described an approach to KT that required integration of researchers and research users in partnerships (41). Similarly, CIHR recognized two types of KT: one was Integrated Knowledge Translation (IKT) and the other was ‘end of grant’ knowledge research (41). The latter involved having a plan to transfer or disseminate knowledge that resulted from already completed research produced by scientists to target users but without involving them in its creation (41); the former IKT, entailed partnerships between researchers and research users to create knowledge that would be more easily understood and applicable in practice (1).

Bowen and Graham suggested studying the challenge of knowledge uptake from two different perspectives: the first required studying the issue through a knowledge dissemination lens, that is, examining the enablers of and barriers to disseminate knowledge products to users (41). The second less-explored perspective required studying the issue though a knowledge generation lens, meaning, including knowledge users in the production of knowledge rather than delivering or disseminating a finished product (41). There was evidence that participation on the part of research users in the creation of knowledge could increase knowledge use (41). The concept of including knowledge users in the research team is currently referred to as IKT (41).
IKT is a promising, but heretofore understudied approach to solving knowledge uptake challenges. Accordingly, the proposed study will explore IKT.

2.1.2 Concepts/Approaches similar to IKT in healthcare

IKT is conceptualized differently across different literatures and is variously described as a research process, a method or an approach involving researcher and research user collaborations. For example, Gibbons’ defined Mode 2 knowledge production as the process of researchers and research users working together in a non-hierarchical relationship to produce knowledge (62). Gibbons et al. discussed a shift in knowledge production practices from the traditional way of producing knowledge in a laboratory or university to a more multi-disciplinary model, where knowledge flowed more easily across disciplinary boundaries, human resources were more mobile, and the organization of research was more open and flexible (62). Gibbons described this shift as a new social contract between science and society, where society participates in the conversation about what science should explore and has input in the future directions of research (63). In healthcare, IKT tries to capture this new social contract between researchers and society by including research users in partnerships with researchers to create applicable knowledge (5).

In the healthcare literature, there were other examples of partnerships found that are similar to IKT, but used different labels to describe the partnership between researchers and research users. Similar to IKT, the literature had examples of barriers to and enablers of creating partnerships. For example, stakeholder engagement is a method used that shared similarities with the IKT approach because it involved managers and decision-makers in creating knowledge or research that was easier to implement. A systematic review of the literature covering the period of 2003 to 2013 aimed to identifying which stakeholders were involved in rehabilitation research and to describe: (i) effective strategies to engage stakeholders meaningfully in the research process, (ii) the factors that influence engagement, and (iii) the impacts of such engagement (64). Nineteen articles were included in the review, and the authors found that identifying stakeholders and clearly defining roles and expectations early in the project effected engagement success (64). The specific barriers to stakeholder engagement mentioned were lack of time, resources, and incentives (64).
Shared mental models is an approach to interdisciplinary teamwork (65) that is similar to IKT due to its involvement of researchers and research users to provide better care. Share mental models refer to team members learning each other’s perspectives and effectively communicating with each other (65). Shared mental models can result in unilateral decision-making, where collaboration exists, but one group or individuals still makes all the decisions. In contrast, in shared decision-making, decisions are made as a group (65). Supper et al. conducted a systematic review of the literature up to 2013 to identify factors facilitating or impeding interprofessional collaboration in primary care (66). The review explored 44 articles on teams of general practitioners, pharmacists, mental health workers, midwives, physiotherapists, social workers and receptionists (66). The results revealed that the main barriers of working in interdisciplinary teams were: definition and awareness of one another's roles and competencies, shared information confidentiality and responsibility, team building and interprofessional training, long-term funding, and joint monitoring (66). In 2013, Chong et al. had similar results from their qualitative study using semi-structured interviews with 31 mental health professionals (12). They gathered data on the perceived enablers of and barriers to shared decision-making and interprofessional collaboration among a range of research users involved in the provision of healthcare services to mental health consumers (12). The individual-level enablers that benefitted shared decision-making were: motivation to implement it, having a collaborative attitude, and willingness to provide an honest discussion about the side-effects of treatment (12). System-level barriers that were identified included the work environment lacking space and resources for shared decision-making and collaboration, time restraints, lack of consumer access to a regular healthcare provider, and lack of experience of a healthcare provider to deal with mental health treatment (12). The enablers of and barriers to shared mental models and share decision-making could be used as a parallel to IKT barriers because of the similarities between the interdisciplinary approaches.

Based on the definitions and descriptions of concepts and approaches similar to IKT, the following were determined to be common characteristics that recurred in the literature:

- **COLLABORATION**: There was an element of relationship building and collaboration between researchers and research users to develop a project, program or service (2, 4).
• ITERATION: Like Gibbons’ Mode II and engaged scholarship, it involved an iterative, nonlinear process of knowledge production between researchers and research users (4, 26, 64).
• OPENNESS: Interaction between researchers and research users could occur at any step of the research process (4, 7).
• INTERDISCIPLINARY: Involved individuals with different skills and roles working as a team towards a set goal (63, 65).
• ENGAGEMENT: Different strategies and engagement techniques were used to ensure communication was fluid between researchers and research users (2, 64).
• STAGES: There was some evidence of an initiation stage and mature stage of new partnerships between researchers and research users (2, 5, 23).

2.1.3 Insights on IKT initiation from other disciplines

There were insights found regarding IKT initiation in other disciplines and literatures outside of the health services research literature, as was evident while conducting the literature review for the background of this thesis. According to the National Center for Education Statistics’ Classification of Instructional Programs, the main domains of academic disciplines are: arts, humanities, social sciences, sciences, and applied sciences (67). Below are a few examples of approaches similar to IKT from various academic disciplines in the social sciences. The examples describe partnerships themselves or how methods to form partnerships between researcher and research users contribute to initiation.

2.1.3.1 Social Sciences – Organizational psychology

The International Handbook of Organizational Teamwork (the Handbook) (68) is a work by experts all over the world that described the dynamics of teamwork and how teamwork operates transnationally and transdisciplinarily (68). The Handbook is of relevance to IKT because it describes interaction of teams composed of persons of a variety of disciplines. The Handbook summarized organizational management research based on teamwork that was relevant to initiation. The research conducted to create the Handbooks found that in order for teams to be successful, all members should understand the nature of the work that the team should perform, the environment where the work was being performed, organizational culture, organizational structure, and organizational systems (68). Per the Handbook, there were two
types of psychological determinants in teamwork, grouped as: cooperative relations (positive outcomes) and competitive relations (negative outcomes) (68). Cooperative relations included processes such as: effective communications, friendliness and helpfulness, coordination of effort, division of labor and orientation of task achievement, feelings of agreement with others, willingness to enhance others’ power, and defining conflicting interests as mutual problems to be solved (68). Competitive processes included those which had a negative result, such as: a lack of communication, a lack of friendliness and willingness to help, an inability to divide labor and tasks, disagreements with others, and conflicts between parties seeking to enhance their own power (68). Teams should focus on cooperative relations and steer clear of competitive relations (68).

Studies in organizational psychology that explored transdisciplinary teams could be useful when planning IKT partnerships because the initiation phase could be parallel to the team formation step, which included role assignments and task delegations.

2.1.3.2 Social Sciences – Educational psychology

In educational psychology, there were also challenges of KT between research and practice (69). In one study, researchers in the field of school psychology were employed by academia to conduct research on methods of school psychology and train research users (69). Research users included practitioners who worked in schools, hospitals and private practice (69). Although these roles overlapped, there were role differences, and the disconnect between the two roles was found to impede the field to reach its full potential (69, 70).

Riley-Tillman et al. summarized the history of IKT-like partnership initiation in school psychology, and outlined the barriers to achieving use of knowledge that was sought to be transferred from researchers to research users (70). After conducting a summary of intervention attempts, the authors created a framework to improve the uptake of knowledge in school psychology (69). The framework was an IKT initiative because it involved efforts of researchers and research users to create new knowledge related to the practice of school psychology and to increase implementation of new knowledge in the classroom (69). The framework had three phases: building usable knowledge, transferring usable knowledge and sustaining usable knowledge (69). The first phase, ‘building usable knowledge’, was composed of four factors: knowledge should be presented as simply as possible, so that the research users could adapt it;
critical components of the new knowledge should be identified and understood by both researchers and research users; incorporate generalization programming to allow knowledge created to be as practical as possible; and consider current practices (69).

One aspect of the three-phase model that was emphasized by the authors was that including research users in each of the framework’s three steps was crucial to the uptake of the knowledge produced (69). In the first step, ‘building usable knowledge’, it was very important that communication between the researchers and research users be frequent, in order to clarify the research question, and to ensure that the interventions created were responsive, and culturally relevant (71).

2.1.3.3 Social Sciences – Engaged Scholarship

IKT has also been referred to as engaged scholarship, a participatory method to obtaining advice and perspectives of key stakeholders in order to understand a complex social problem, with the goal of producing knowledge that is more insightful and more easily applicable in the real world (72). Van de Ven argued that research users should be engaged in every step of the research process including: problem formulation, theory building, research design, and the communication of results (72). Engaged scholarship, like IKT, was described as a non-linear process of knowledge production achieving practical solutions to social problems (72).

2.1.3.4 Social Sciences – Action research

Action research is a process developed by Kurt Lewin in the 1940s, that involved researchers and research users working together to solve issues in society (73). Lewin believed that scientific knowledge as well as practical knowledge were needed to solve intergroup relation challenges (73). Lewin developed this concept further when he stated that, if people were active in a decision that affected them, they were more likely to adopt a change (74). From Lewin’s work, other types of action research were described by other social scientists, such as participatory action research. As the name implies, participatory action research encourages members of the community to participate and act in research that affects their everyday lives (75). For example, in Ireland parents of children with disabilities were invited by researchers to be co-researchers in a project assessing services of children with disabilities (76). The parents were trained in facilitating focus groups that included other family members of
children with disabilities who participated in providing feedback on services (76). Some of the challenges of participatory action research, as compiled by Elliot were: matching research skills with community need, power dynamics, internal dynamics, the ability to accept science cooptation, and the ability to follow through with the findings of a study once it had been completed (76). Creating channels for communication and knowledge flow in the initiation stage were helpful to the overall IKT initiative (75).

Action research could contribute to our understanding of IKT initiation because it emphasized the importance of maintaining communication channels and engaging with the community of research users, thus building relationships, so that it was easier to initiate an intervention when needed.

Another relevant label employed in the action research literature was community-based participatory research. This term was used in many disciplines to describe the action research approach, which involved collaboration with researchers and research users to solve social issues, such as health disparities (77). In addition, a recent paper analyzed the convergence and divergence of the histories and traditions of community based participatory research and IKT, and reported that they shared a common aim, to foster co-creation of knowledge between researcher and research users (78).

In 2008, Cook published a systematic review of 20 studies from 1995 to 2005 on community-based participatory research to address health disparities in environmental and occupational health (79). The systematic review aimed to evaluate the extent to which research was translated into actionable items that affected community-level changes (79). They found that community partners were more likely to participate in community-based participatory research when the initiative was started by the community (79). In addition, the community-based participatory research interventions were more likely to cause community-level change in observational studies based on qualitative methods (73).

2.1.3.5 Social sciences – Knowledge Management

Another discipline whereby research could inform IKT initiation was knowledge management. According to the Classification of Instructional Programs, knowledge management is a discipline classified under the applied sciences domain, sub-domain computer science (67).
It began in the 1960s with the codifying of organizational knowledge so that it could be computerized and stored in databases and then retrieved by many individuals within an organization (80). Recently, knowledge management has developed to include not just the study of access and preservation of organizational knowledge, but also the mobilization of knowledge created by experienced individuals within the organization, and sharing that knowledge with others (80). For this reason, the research methodology applied and the knowledge produced in this discipline pertained to organizations and was often published in social sciences journals. The literature on knowledge management related to inter-organizational and intra-organizational learning theories and frameworks that described transfer of knowledge (81). Research in knowledge management that focused on how knowledge was produced, transferred and used in a multidisciplinary and multi-organization settings was relevant to the understanding of IKT.

Argote reviewed selected case studies of knowledge transfer in international organizations such as biotechnology firms, aviation organizations and fast food franchises, where attempts were made to produce researcher and research users partnerships to generate practical knowledge (81). She analyzed the enablers of and barriers to knowledge transfer in these organizations and found that being embedded in a superordinate relationships helped transfer knowledge, as did quality of the relationship between the organizations, similarity of organizational context, and geographic proximity to the organizations involved in the partnerships (81). Argote used Rogers’ diffusion of innovation theory to describe the determinants of knowledge transfer, including the use of intermediaries to speed-up the process of diffusion uptake by forming strong relationships between researchers and research users in order to facilitate the initiation stages of partnerships (52).

Another process within the knowledge management field that used similar approaches to IKT was knowledge co-production (82). In 2011, Fenwick conducted a qualitative, exploratory study based on a socio-material theoretical framework in order to try and find the processes and negotiations of co-production in a case study of community-policing in Scotland (83). Interviews with 34 senior frontline police officers from a region including urban and rural areas were analyzed. Police in rural areas relied heavily on relationships within the community to find knowledge needed for policing difficult situations (83). Furthermore, it was found that police who lived in or were ‘embedded’ in the communities they served, had better access to knowledge needed to practice policing (83). Police, as knowledge users, who were embedded in the
community were knowledge was produced, could better utilize knowledge in their work (83). Their familiarity with the context and pre-existing relationships shortened the time of the initiation stage for the professional relationship, whereas officers who were not embedded in the community took more time to become acquainted with the local context (83).

In an example in the environmental policy literature, the co-production process was used differently from in the example of community policing in the previous paragraph. It still involved building relationships between research users, concerned members of the public, and researchers. In environmental policy, boundary organizations were used as liaisons between researchers and research users (84). Hoppe et al. examined a case study of two international boundary organizations that had a role in informing research users in making evidence-based decisions (84). Some of the challenging processes that they found pertaining to the initiation stage at the macro-level were: defining roles of the participants, and coordination of activities (84). At the micro-level, they found that setting roles, unspoken rules, and expectations for project tasks was challenging (84). As in Fenwick’s example of community-policing (83), the success of boundary organizations appeared to be reliant on ‘culture’ or the pre-existing relationships of the members involved (84).

One further example within the field of knowledge management research was a case study on agricultural innovation in Ghana (85). There was a challenge in KT of the agricultural innovation research being produced by researchers compared to what farmers found practical in Ghana (85). The case study analyzed how knowledge was being created and shared between agricultural researchers and farmers in Ghana (85). The study found that both researchers and farmers (research users) could benefit from increased interaction with each other: the researchers obtained input on what was practical, and the farmers learned about innovations that would make their work easier (85). The author recommended that partnerships could be formed between the two groups, and that information communication technologies (ICTs) should be used to enhance communication channels between the stakeholders to inform one-another and to create better knowledge (85). The study found that ICTs improved the overall interaction between the researchers and research users, there was also evidence that ICTs helped reduce the time for knowledge to be transferred, and created a strong network for future project initiations (85).
Studies in knowledge management that analyzed how groups and systems share knowledge and tracked barriers in knowledge creation and dissemination could contribute to understanding of the initiation stages of IKT. Creating infrastructure for knowledge flow in IKT initiation would ensure that communication was strong throughout the initiative.

2.1.3.6 Social Sciences – Business

The business literature was searched for examples of IKT initiatives, and an example in environmental modeling was relevant to IKT and its initiation. Environmental modeling involved the re-creation of a system or process for studying its implications on governance. The purpose of modeling was to simulate the behavior of the environmental system being modeled in order to analyze, synthesize and rationalize the behavior of these systems under controlled conditions (86). Although environmental modeling originated in the mathematics and engineering disciplines, some of its literature was found in social sciences databases, when studied from a project management perspective. Managers have described how to plan and execute modeling projects using transdisciplinarity (87). Transdisciplinarity was described as a similar concept to IKT in that it involved a mutual learning between researchers and research users through partnerships between representatives from both groups, in order to produce in addition to scientific knowledge, a benefit to society by solving a societal problem (87).

Siedl conducted a review of the literature from 2009 to 2013 on the contributions of research users’ involvement in modeling projects and studies (87). The goals of the review were to list the participatory approaches used to implement transdisciplinarity and to highlight the issues with the participatory processes, the modeling community, and the transdisciplinary community in general (87).

Siedl defined a set of processes based on the level of collaborations between researchers and research users (87). He kept track of the frequency with which these processes occurred in the literature he analyzed (87). He grouped the processes according to when they occurred in the project cycle as follows: the preparation phase, the core phase, and the phase-out/follow-up phase (87). The processes important in the preparation phase were one-way communication from researchers to research users, for example consultation (to ask the research user for information about practice management) and information (to inform research user about the project and results), and two-way communication, such as cooperation (to actively involve the research user...
in the project) and collaboration (to provide equal footing to both researchers and research users) (87). The most common processes in the preparatory phase were consultation of the research users to obtain their management knowledge, and early inclusion of research users in the modeling process for problem framing (87). The preparatory phase could be used to inform IKT initiation.

### 2.2 Summary

Table 1 (page 26) provides a summary of the IKT-like partnerships found in healthcare and social sciences literatures that resulted from the background literature review for this thesis. IKT is important because evidence shows that its multi-disciplinary and inclusive methods of producing knowledge could lead to knowledge uptake. It was found to be beneficial in creating capacity among various stakeholders to address current and future issues and enhanced empowerment among groups who have historically been subjects of research, or merely passive consumers of its outcomes (10). IKT has had a positive impact on health promotion, by making it more relevant to local communities by including its members in initiatives (11). IKT has also made research evidence relevant to local health care needs (14), and provided an opportunity for gaining knowledge users’ input on the various steps of the research process (13).

Research on IKT in the healthcare literature identified the concept of IKT initiation and numerous challenges associated with IKT initiation, such as differing timing and values, attitude about IKT, knowledge of IKT, willingness to take part in IKT, group/personal dynamics, lack of consensus on objectives, unclear roles and expectations, and issues with decision-making (2). Other challenges included the inability to include research users in the research process consistently, or aligning their skills with research project tasks (20). Knowledge uptake was found to be dependent on historical regional relationships, the initiative’s approach to engaging different communities, IKT initiatives’ architectures, priorities, and the resources available for implementation, including investment in roles and activities to bridge and broker boundaries (22).

Complementary research on IKT-like concepts and approaches in the social sciences literature identified similar and additional enablers and barriers of IKT initiation including developing cooperative and competitive processes that help communication, division of labor and conflict resolution (68). In educational psychology, and engaged scholarship, it was found
that including research users in each step of the initiative was crucial to the uptake of the knowledge produced (69, 72). In action research or community-based participatory research literature it was found that community partners were more likely to participate when the initiative was started by the community (79). In knowledge co-production, boundary organizations were used as liaisons between the scientific community and policy-makers (84). At the micro-level, the authors found that setting roles, the presence of unspoken rules, and the expectations for project tasks were challenging (84). Using boundary organizations appeared to be helpful in developing and maintaining pre-existing relationships of the members involved (84). In addition, tools such as information communication technologies (ICTs) appeared to have improved communication and dissemination of knowledge (85). The IKT initiation phase was found to be important in establishing the physical and technical settings for the partnership to take place (2, 28, 29), creating strategic planning documents for guidance (2, 25, 28), establishing team member roles (2, 25), and identifying leaders that will help move the initiative forward and manage change (25, 26, 28).
### Table 1: Summary of IKT-like partnership labels found in disciplines and sub-disciplines

<table>
<thead>
<tr>
<th>Discipline/Sub-discipline</th>
<th>Label synonymous with IKT partnership</th>
<th>Enabler of partnership initiation</th>
<th>Barrier of partnership initiation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare/Health Services Research</td>
<td>IKT Mode 2 knowledge production</td>
<td>• Establishing partnerships early in the process, • Develop a shared language between researchers and research users • Developing clear goals, roles and expectations early in the process. • Discussion of research findings in the context of policymaking; • Negotiations of roles and items at different phases of the partnerships; • Partnership enhancement, including activities to create a team mentality • Ensuring clear leadership and early engagement of team members</td>
<td>• Differing needs and priorities among participants • Goals, roles, and expectations not clear • Lack of incentives to participate • Little continuity of involvement due to staff turnover • Infrequent attendance to meetings</td>
</tr>
<tr>
<td>Healthcare/Stakeholder engagement</td>
<td>Stakeholder engagement</td>
<td>• Identifying stakeholders early • Clearly defining roles and expectations early in the project effected engagement success</td>
<td>• Lack of time, resources, and incentives</td>
</tr>
<tr>
<td>Healthcare/Shared Mental Models</td>
<td>Shared mental models Share decision-making</td>
<td>• Motivation to implement SDM, • Having a collaborative attitude • Willingness to provide an honest discussion about treatment side-effect</td>
<td>• Lacked space and resources for shared decision-making and collaboration • Time restraints • Lack of consumer access to a regular healthcare provider • Lack of experience of a healthcare provider to deal with mental health treatment • Joint monitoring</td>
</tr>
<tr>
<td>Social Sciences/Organizational Psychology</td>
<td>Teamwork</td>
<td>• Cooperative relations: • Effective communications • Friendliness and helpfulness • Coordination of efforts • Division of labour • Feelings of agreement with others</td>
<td>• Competitive processes: • Lack of communication • Lack of friendliness and willingness to help • Inability to divide labour and tasks</td>
</tr>
</tbody>
</table>
| Social Sciences/Educational psychology | Knowledge use; knowledge transfer | • Willingness to enhance others’ power  
• Defining conflicting interests | • Disagreements with others  
• Conflict between parties seeking to enhance their own power |
|---------------------------------------|---------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Social Sciences/Organization psychology | Building usable knowledge | • Knowledge should be presented as simple as possible so that the practitioner can adapt it;  
• Critical components of the new knowledge should be identified and understood by both practitioners and researchers;  
• Incorporate generalization programming, allowing knowledge created to be as practical as possible;  
• Current practices should be considered  
• Including practitioners in each of the three steps is crucial to the uptake of the knowledge produced | • lack of time, resources, and incentives |
| Social Science/Sociology | Community based participatory research | • Produce knowledge that is more easily applicable in the real world | • Imbalance of power dynamics;  
• internal dynamics |
| Social Sciences/Knowledge Management | Knowledge co-production | • Matching research skills with community need;  
• The ability to accept science cooption, and the ability to follow through with the findings once the study has finished | • Not setting roles and unspoken rules, and expectations for project tasks  
• Lack of technology to share knowledge produced |
| Social Sciences/Business | Transdisciplinarity Participatory process | • Being embedded in the community  
• Defining roles of the participants, and coordination of activities  
• Relationship is mutually beneficial  
• Technologies benefit communication between researcher and research users  
• Gain access to practical knowledge  
• Facilitate group process among stakeholders  
• Develop socially robust solutions |
2.4 Purpose and Objectives

IKT stands to improve knowledge utilization, which is needed to improve healthcare delivery and outcomes. One way to enhance IKT is to ensure that strong, functional partnerships are formed. Further research is needed to examine how to optimize IKT initiation. Clearly much could be learned by systematically reviewing the social sciences literature, but primary research is also needed to thoroughly explore IKT initiation process, enablers, barriers and outcomes that may be specific to the healthcare context.

The overall aim of this research is to provide insight on how researchers or research users can optimize IKT initiation. To do so we aimed to conceptualize and characterize IKT initiation. The specific objectives were to:

1. Identify processes, enablers, barriers and outcomes of IKT initiation by conducting a meta-narrative review of studies of researcher and research user collaboration in healthcare and other disciplines.
2. Confirm and elaborate on processes, enablers, barriers, and outcomes of IKT initiation through qualitative interviews with researchers and research users involved in IKT-based research in Canada.

2.5 Implications and Relevance

This thesis stands to generate practical and theoretical knowledge regarding key factors for initiation of partnerships. Practical knowledge includes the list of processes, enablers and barriers from Phase 1, which provides perspectives from initiatives in different fields. Phase 1 inform those involved in IKT of the processes, enablers and barriers found in past reviews. The synthesis provides an overview for researchers and research users who are engaged in IKT to have multi-disciplinary perspectives on how to initiate IKT. Phase 1 also provides a list of theoretical approaches used in the reviews, if any. A theoretical approach is a set of statements or principles guided by theory and used to explain a phenomenon. In this case, a set of theories may be used to explain how to initiate partnership. Results have the potential to inform theories that are most suitable for IKT initiation, but this depends on whether the authors of the reviews reported if theory was used or not.
Phase 2 provides practical opinions and feedback on how current researchers and research users feel about the processes, enablers and barriers of initiation. Phase 2 generates more insights from researchers and research users about their experience with IKT initiation. The processes, enablers and barriers have more relevance to current stakeholders that are planning IKT. The blended findings from the two phases, may produce better understanding of IKT initiation from different disciplines from both practical and theoretical perspectives. In addition, the overall results are enriched by the feedback of individual with IKT experience in Canada. The results have the potential to support planning advice for IKT partnership, so that it facilitates co-generation and use of knowledge, which can in turn lead to improved healthcare delivery and associated outcomes.

Practice implications include the ability of researchers and research users in IKT to optimally plan for future initiatives, and to evaluate their own capacity to launch IKT initiatives by comparing their own processes and activities with those of the results of this thesis. In addition, the findings provide a better understanding of the IKT processes, enablers and barriers experienced in Canada.

This thesis raises issues that warrant further research, including being able to study IKT initiation according to the model generated here. Accumulated research can be pooled because it examined the same constructs, providing further, more definitive insights on IKT initiation. These constructs can be further studied and used for evaluation of IKT initiation if linked to successful outcomes in future studies. Similarly, interventions can be developed based on the enablers and barriers identified here to promote and support IKT initiation.
Chapter 3
Methods

3 Research design

This thesis used a multi-methods approach and compared findings from the two phases to generate comprehensive insights resulting from the blended knowledge from the two phases. Phase 1, addressed objective 1, and is a meta-narrative review of the literature on the processes, enablers of and barriers to partnership initiation in multiple disciplines. A meta-narrative review approach was selected as it is part of a larger idealist philosophy of review type and does not test theories, but rather generates theory, as knowledge is discovered when exploring a new concept (88). The new concept, in this case, is IKT initiation, particularly, its processes, enablers barriers and outcomes.

Phase 2 addressed objective 2, and included telephone interviews with researchers and research users to understand their experiences with IKT including processes, enablers and barriers of initiation. Participants were also asked about strategies, interventions, tools or resources that facilitated IKT partnership initiation, and factors/issues that challenged initiation.

The results from Phase 2 were then summarized and compared with the results from Phase 1, to obtain a broader understanding of researcher and research user partnership initiation from different perspectives. The blended findings reported what is in the literature and what individuals with practical experience thought about IKT initiation. An overview of IKT initiation and issues warranting future research was derived from the findings.

3.1 Conceptual Framework

While research in the KT field has employed classic theories (89, 90), generated KT-specific theories (89, 90), or attempted to link pragmatic philosophy to the IKT approach (10), there is currently no theory that predicts or explains relationships between IKT processes, enablers and barriers and outcomes, both generally and specific to the initiation phase. Therefore, no overarching theory was used in this thesis. However, as noted, the meta-narrative review may generate insight on factors that influence IKT initiation. A conceptual framework from Phase 1 of the thesis was created and updated from the results of Phase 2, as blended findings.
3.2 Phase 1: Meta-narrative review

Objective 1: To identify processes, enablers of and barriers to IKT initiation by conducting a meta-narrative review of studies of researcher and research user collaboration in healthcare and other disciplines.

3.2.1 Approach

There are few existing studies analyzing partnerships of multiple health disciplines from an IKT initiation perspective and no review has combined knowledge about IKT initiation from different disciplines. A review of the literature was required to find out how initiation of partnerships in various disciplines were carried out, to find any common processes, enablers and barriers. Due to the lack of empirical research on the topic of partnership initiation, a systematic review of the topic was not feasible. The meta-narrative review was first used by Greenhalgh et al. to try to explain the disparate data encountered in their review of diffusion of innovation in healthcare organizations (53). The authors noted that diffusion of innovation was conceptualized and had different names in studies from various subdisciplines within health services research (53). The authors needed an approach to understand if the different terminologies referred to the same concept of diffusion of innovation. They developed a meta-narrative review, which sought to illuminate the different paradigmatic approaches to a complex topic area by considering how the 'same' topic had been differently conceptualized, theorized and empirically studied by different groups of researchers (53). A meta-narrative review was the most appropriate type of review for describing IKT initiation, because it uses an exploratory methodology to define a concept or process that is used in multiple fields but under different terminologies (88). The rationale for using this type of review was the lack of empirical studies on the topic and the need to identify processes, enablers of and barriers to IKT initiation from multiple fields. A meta-narrative review follows the Realist And Meta-narrative Evidence Syntheses: Evolving Standards (RAMESES) publication standards as listed in Wong et al. (91) and provided in Appendix A (page 118). There was no funding used for this meta-narrative review, but a resulting paper received funding for publication by the Integrated Knowledge Translation Research(IKTR) Network. The funder, IKTR Network, had no role in any part of the meta-narrative review and there were no conflicts of interest.
The goal of a meta-narrative review is sense-making; it seeks to identify, to understand and to describe relevant research traditions or “narratives”, and to synthesize and compare them in an over-arching narrative (91). The steps of a meta-narrative review include scoping the literature, searching, selection and appraisal of documents, data extraction, and analysis and synthesis (91). It is meant to be an iterative process, whereby steps such as searching or data extraction are modified prospectively as a deeper understanding of the topic is gained. We adhered to the following six guiding principles of meta-narrative reviews: pragmatism (by exploring IKT initiation in a variety of disciplines), pluralism (by considering studies of various designs included in reviews of different types), historicity (by describing significant findings that shaped the research tradition), contestation (by comparing data from different research traditions to generate higher-order insights), reflexivity (by documenting reflective insights and decisions) and peer review (by publishing and sharing the findings) (91).

Our prior review of the literature (see Background, pages 10 to 25 and Table 1 on page 26, revealed that there were similar approaches to IKT outside of the healthcare disciplines, in the social sciences. For this reason, the social science literature, in addition to the healthcare literature, was examined for further examples where the initiation stage of partnerships was analyzed to better understand researcher and research user partnerships. To identify the IKT-oriented research traditions to be included in the meta-narrative review, we began searching in the healthcare literature focusing on IKT including a review (2), a book (41), and concept papers (5, 10, 29). From these, and from the thesis committee members’ experience with IKT, other papers were identified that described or evaluated IKT partnerships, such as the CLARHCs (9, 24) and the ACCs (11) to learn more about initiation. A search was conducted for a literature review on IKT partnerships to find similar concepts, such as university-community partnerships (92), collaborative partnerships (28), teamwork (68), and community-based participatory research (79). We used the Scopus database to analyze the research traditions that were most cited when searching IKT-like concepts and these were social sciences including business, and medicine. A closer look at social sciences results revealed that psychology and education were the disciplines featuring the most IKT-like concepts. The thesis committee met in person or over teleconference to discuss the concepts on seven occasions over the period of eight months to make a final selection of IKT-like concepts to be included in the review. Searches were adjusted and conducted in a range of databases reflecting the research traditions of the
partnerships identified: medicine, nursing, education, psychology, and organization management. Partnerships that were excluded were academic-industry partnerships based on for-profit incentives, and teams in a specific setting with pre-set repetitive tasks, such as in aviation. The databases used to search for the research traditions included MEDLINE, ABI/Inform, ERIC and PsychInfo using terms such as “Translational Medical Research” or “Community Based Participatory Research” and keyword counterparts. The results were used by MZ to establish which disciplines were likely to yield research on IKT and IKT initiation, and to further develop the search strategies and to create eligibility criteria. The results were limited to reviews to ensure that an overview of the disciplines would be captured, rather than focusing on the large number of primary studies. In addition, limiting to reviews would make the study feasible given the lack of resources to screen thousands of primary studies.

Disciplines identified in the aforementioned review of social sciences literature where research was conducted on partnership formation included: psychology (organizational and educational psychology), sociology, knowledge management (mostly at the organizational level) and business (mostly project management).

The approach to synthesizing the data was a configuring approach, which is intended to be exploratory and to have specific methods adapted iteratively, as the research proceeds (88). The configuring approach provides flexibility in analysis of the results, which was ideal because we were unsure how much data would be generated from the findings.

3.2.2 Data collection

The objective was to identify studies in which researchers partner with research users to plan and/or conduct research. The PICO (population, intervention/issue, comparisons, outcomes) framework was used to identify studies to be included in the review (93). These were refined based on independent pilot-testing by MZ and committee members on a sample of search results.

Initial inclusion and exclusion criteria were developed in advance of searching, then refined concurrent with screening. Inclusion criteria followed the PICO (Population, Issue, Comparisons, Outcomes) framework (93). Populations referred to researchers in any field, labelled as researchers, investigators or scientists, that conducted research of any design on any clinical, management or policy topic and work in any research setting such as a university or
research institute; and research users, labelled as clinicians, technicians, managers, policy-makers, decision-makers or stakeholders, who worked in any setting that governs, plans, oversees, monitors or delivers services or products. Researchers and research users could have similar or different professional positions, specialties or domains of knowledge/expertise.

The Issue referred to IKT initiation, where IKT was defined as partnerships between researchers and research users to create and implement knowledge (1). Although the topic of interest is IKT initiation, this was established upon review of full-text articles, therefore explicit mention of IKT initiation or a related concept or process was not a criterion for screening titles and abstracts. Interaction between researchers and research users could be undertaken to establish research questions, choose methodology, develop data collection tools, collect data, interpret the findings and disseminate the results (4, 7). Interaction could be achieved in one or more ways that included but were not limited to teleconferences, various types of meetings, evidence briefs, participating in web portals, consultations, deliberative dialogue, priority-setting exercises, training sessions, applying for funding, conducting joint research, participating in committees, boards, or working groups.

With respect to Comparisons, studies described or evaluated one or more IKT partnerships and reported IKT initiation processes, enablers, barriers or impact; means of interaction between researchers and research users for IKT initiation; the conditions or processes by which IKT was initiated; or interventions designed to promote or support IKT initiation or any of its processes/activities, for example, education or training to help researchers and research users form stronger partnerships.

Outcomes of IKT initiation included processes, enablers, barriers, or any impact reported in eligible reviews including but not limited to researcher or research user awareness, acceptance, attitude, knowledge, skill, competency, participation, satisfaction, behaviour, practice, processes, or team, organizational or system/population-level impact or outcomes.

Reviews were not eligible if the description of the partnership lacked detail, such that it was unclear if research users participated in research activities; if the academic-industry partnerships driven by profit; if the publication type was anything other than a review of the types noted (94); if they were anecdotal publications that described partnership planning or development but without empirical evaluation; if they were reviews concluding that IKT
partnerships were needed without having described and evaluated them; if the reviews focused on issues of authorship among research collaborators; if they were reviews of online communities where interaction or data were collected by social media; if the research methods were not described; or if no details relevant to IKT initiation were included.

Wong et al. explained that meta-narrative reviews do not approach the literature with a pre-defined 'preferred' study design, but any preferred study design(s) should be identified from quality standards developed within a particular research tradition (91). In a previous IKT scoping review it was found that the IKT literature was not well-indexed, necessitating screening of more than 14,000 titles and abstracts (2). Therefore, to enhance feasibility of this research, we restricted the publication type to knowledge syntheses of IKT in English language. However, a search in the different disciplines identified that literature reviews were referred to with different labels. Literature reviews were included if they had used as a method to describe or interpret the nature of partnerships. Pare et al. conducted a descriptive review and developed a typology of literature reviews which was used to help identify relevant publication types (94). The following types of literature reviews were included in this meta-narrative review in addition to systematic reviews: narrative reviews, descriptive reviews, realist reviews, scoping reviews, qualitative systematic reviews, umbrella reviews, theoretical reviews, meta-narrative review and critical reviews (94).

3.2.3 Searching and Screening

Several databases were searched for reviews of IKT in health care and social sciences: MEDLINE (1946 to June 2017), EMBASE (1947 to June 2017), CINAHL (1937 to June 2017), ABI Inform Business Database (1971 to June 2017), ERIC (1966 to June 2017), PsychInfo (1806 to June 2017), and Cochrane Library (up to June 9, 2017). The search strategies were created by a librarian (MZ) according to the Peer-Review of Electronic Search Strategies guidelines (95), and adapted to each database’s thesaurus and/or indexing system. Searches were initially performed on August 11, 2016 and updated eleven times due to the iterative process of reading and discovering new synonyms referring to partnerships in the different disciplines in order to refine the search strategy. The final search was conducted on June 9, 2017, and the strategies are listed in Appendix B (page 120). Titles and abstracts were exported to EndNote X7 and duplicates were removed. To pilot test the screening process, MZ and the two members of the
thesis committee independently screened a sample of 50 titles and abstracts from the MEDLINE results. No discrepancies were identified. MZ proceeded to screen remaining titles and abstracts and, when uncertain, reviewed decisions with Dr. Gagliardi.

3.2.4 Data extraction and analysis

A data extraction form (Appendix C, page 126) was developed to collect characteristics of each review (discipline, author, year of publication, country of first author), conceptual details commonly extracted to form the basis of narratives (labels for IKT and IKT initiation, key actors, philosophical and/or research origins, conceptual or theoretical issues) (91), and details about IKT initiation that were empirically examined (processes, enablers, barriers, outcomes). To pilot test data extraction, MZ and Dr. Gagliardi independently screened 23 full-text articles and extracted data from three reviews. They compared and discussed findings; discrepancies were minor and resulted in clarification of the level of detail of information MZ was to extract. MZ extracted data from remaining reviews and tabulated data. An example of how the data extraction form was used on an article is provided in Appendix D (page 127).

Through repeated reading and analysis of quantitative and qualitative data extracted from each review, MZ prepared narratives for each research tradition that emerged across the disciplines. The two members of the thesis committee reviewed narratives on three occasions and MZ refined the narratives with their feedback. MZ synthesized narratives into a meta-narrative conceptually using three techniques: paradigm bridging to identify common features, paradigm bracketing to identify differences, and meta-theorizing to explore tensions or patterns across narratives in labels for IKT and IKT initiation, key actors, philosophical and/or research origins, and conceptual or theoretical issues. Content analysis of empirical findings extracted from each review was used to identify IKT initiation labels, processes, enablers, barriers and outcomes. Conceptual and empirical findings associated each narrative were tabulated, and summarized and compared in tabular and narrative format. The labelling of the narratives was conducted by grouping reviews that were similar in research traditions when possible, such as action research. The two members of the thesis committee independently reviewed the findings and, through discussion with MZ, arrived at the final analysis.
3.2.5 Rigour

Following the RAMESES publication standards for a meta-narrative review helped in ensuring that the process and results of this phase are understood by the audience of health services researchers. Adherence to the six guiding principles, pragmatism, pluralism, historicity, contestation, reflexivity, and peer review, is a recommendation of the RAMESES publication standards (Appendix A, page 118) (91). These principles ensure that rigour is used at each stage of the meta-narrative review process including the collection of data, analysis, and reporting the results. In addition, RAMESES ensures that detailed descriptions of scoping and searching the literature, analysis of the data, documentation of the flow diagram of assessed documents, and information about the characteristics of the documents included in the review are provided, so that replication of the study is possible (91).

3.3 Phase 2: Interviews with Researchers and Research users

Objective#2: To confirm and elaborate on processes, enablers of and barriers to IKT initiation through qualitative interviews with researchers and research users involved in IKT-based research in Canada

3.3.1 Research team and reflexivity

MZ conducted the interviews with the guidance of Dr. Gagliardi, the thesis supervisor, who has years of experience conducting qualitative research. MZ is female and is currently employed as a medical librarian at the University of Toronto. She has a Masters of Information Studies (MISt) and had limited experience with qualitative research before this thesis. For this reason, the first interview was conducted by Dr. Gagliardi while MZ listened in. The second interview was conducted by MZ while Dr. Gagliardi listened in. Feedback was provided by Dr. Gagliardi to MZ on how to improve the interview strategy and use of prompts. In addition, as part of the Masters of Science at IHPME, MZ has taken a course on mixed methods research in the summer of 2016, which covered qualitative and quantitative study designs. In November 2015, MZ completed an ethics workshop by the Office of Research Ethics, University of Toronto, offered to all graduate students, and completed the mandatory online course Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans Course on Research Ethics (TCPS 2: CORE), offered by the Government of Canada.
The interviewer was unknown to the participants. The personal characteristics of the interviewer that were reported to the participants via an information letter were that the data would be used towards a Master’s thesis. There was no external funding used to conduct these interviews, but the cost for the teleconferencing service was covered by Dr. Gagliardi’s research grants.

3.3.2 Study design and approach

The worldview that supports this thesis is constructivism, which is usually associated with qualitative approaches and entails understanding a phenomenon formed through participants’ subjective views and experiences (96). Few studies have focused on IKT or IKT initiation. Therefore, a qualitative approach, which is often used to inform theory or develop concepts, was appropriate to use to address the thesis objectives. There are several qualitative methodologies to inform theory, usually grouped into interpretive and critical (97). Interpretive methodology aims to describe and understand, whereas critical methodologies aim to emphasize change or emancipation, and the participants play a key role in the design and implementation of the study (97). For this thesis, the interpretive methodology was most appropriate, since the purpose was to describe and understand IKT initiation. This methodology traditionally includes methods such as grounded theory approach, ethnography and phenomenology (97). A different type of methodology referred to as the qualitative descriptive method or qualitative description, is appropriate to use when the study aims to interpret the data collected to describe a phenomenon and stay data-near or as close to the definitions generated by the data as possible (98). Both Merriam (99) and Caelli et al. (100) emphasized the importance of describing the methods in detail when using qualitative description. In addition, the Consolidated Criteria for Reporting Qualitative research (COREQ) (101) were used to report the methods and results of the phase. COREQ consists of a 32-item checklist, which is available in Appendix E (page 129) with the corresponding page number of where each item is discussed within the manuscript.

3.3.3 Sampling and sample size

Many qualitative studies employ purposive sampling, a technique used to recruit information-rich individuals who can answer the study questions (96). This approach includes recruiting individuals who are most knowledgeable and experienced with the phenomenon in question, and are willing to commit time to participate (96). In this case, this was an appropriate
technique because the IKT approach is rather new and it was important to obtain insights from individuals who have some experience in executing it. This technique includes different strategies of recruitment, one of which was referred to as ‘Criterion-i’, whose objective is to recruit individuals who meet predetermined criteria (102). The criteria for researchers and research users are provided below.

3.3.3.1 Researchers

1) Appointed to an academic position in an institution where they conduct research in the field of health services and policy research

2) In the last 5 years, they have participated in a partnership with one or more research users to create knowledge, implement a program or project, evaluate a program or project for effectiveness on patient care

3) The goal of the project was to co-generate knowledge as a means of increasing knowledge use, with the long-term goal to improve patient quality of care

4) They were actively involved in the team processes of the collaboration by attending meetings about planning, conducting, creating, disseminating research or evaluating the process

3.3.3.2 Research Users

1) Hold a position of a health care manager, provider, or policy-maker in the field of health services and policy research

2) In the last 5 years, they have participated in a partnership with one or more researchers to create knowledge, implement a program or project, evaluate a program or project for effectiveness on patient care

3) The goal of the project was to co-generate knowledge as a means of increasing knowledge use, with the long-term goal to improve patient quality of care

4) They were actively involved in the team processes of the collaboration by attending meetings about planning, conducting, creating, disseminating research or evaluating the process

Individuals were identified primarily in two ways:

1) Dr. Gagliardi is a collaborator on a CIHR Foundation Grant led by Dr. Ian Graham that is investigating IKT. As part of that effort Dr. Graham has assembled numerous researchers
and research users that have been involved in IKT. The names and contacts of the individuals in this group are listed on the IKTR Network website (8). This source was used to collect names and contacts for recruitment.

2) The CIHR has a Funded Research Database that lists decisions by grant (103). The names and contacts of the recipients of the Partnerships for Health System Improvement (PHSI) grant in the 3 years prior to the search (2014-2017) were collected for recruitment. To receive the PHSI grant, applicants had to include a mandatory researcher and research user collaboration, which was ideal for this study.

There are no set guidelines for sample size in qualitative studies (104). For semi-structured interviews where the data per case will be small, some suggested sample sizes are 20-30 (105) or 30-60 (104). However, most sources suggest that instead of focusing on sample size, reaching saturation is more important (104). Therefore, the number of interviews required to reach saturation emerged during the study.

Snowball sampling was used as a technique to acquire more participants until retrospective consensus on IKT initiation processes, enablers and barriers occurred. Snowball sampling occurs when the researchers ‘identify cases of interest from sampling people who know people that generally have similar characteristics who, in turn know people, also with similar characteristics’ (102). The minimum target was 10 researchers and 10 research users of various professions (e.g. managers, clinicians, and policy makers). We planned to continue beyond this number if thematic saturation was not achieved after snowball sampling, but this was not necessary.

3.3.3.3 Thematic saturation of interviews

Saturation can be described as occurring when no new data, no new themes, no new coding emerge, and the ability to replicate the study is reached (106). Saturation on a new topic, such as IKT initiation, may be hard to identify, because the respondents may have differing opinions on the enablers of and barriers to IKT initiation based on their experiences. The interviews were conducted until thematic saturation occurred (107). The answers provided by the participants about strategies, tools and intervention was not used to establish thematic saturation because it was open-ended and subjective to the participant’s experience and preferences. Thematic saturation of the processes, enablers and barriers was achieved at the 22 included
interviews, that is, when no new answers were found in the transcripts by MZ. This was confirmed by analyzing the transcripts.

### 3.3.4 Data Collection – Interviews

There are many ways described to collect qualitative data such as interviews, focus groups, observations, self-study, ethnography, etc. (99). In this project, interviews were the most appropriate method because conversations provide input on experiences in IKT initiation. This approach was important because the definition of IKT is still developing, and obtaining insight from the researchers and researcher users’ perception on the topic was useful in developing what IKT means to them, thus further developing the definition of IKT in the literature.

Interviews can be: structured, semi-structured and unstructured (105). Structured interviews do not permit any freedom to ask many follow-up questions outside of the interview guide. Due to the underexplored nature of the topic, IKT initiation, it was important that the participants could be asked follow-up questions or allow participants to ask follow-up questions to clarify concepts and terms. However, unstructured interviews would provide too much freedom and as a result it might be hard to focus the discussion back to the original questions. Semi-structured interviews were used in this thesis because they provided the right balance of answering the questions about processes, enablers of and barriers to IKT initiation and at the same time provided some freedom for the participants to interact and provide more data. Semi-structured interviews of researchers and research users were conducted to answer research Objective 2. Telephone interviews provided the ideal method to record interviews from participants who were located across Canada. A teleconferencing service was used to audio record the interviews. A toll-free telephone number and participant code were provided to the participants so that no cost would be inferred on their participation.

Once individuals were identified, MZ sent them an information letter and consent form explaining the study (Appendix F, page 131-132), and proof of protocol approval from the University of Toronto’s Research Ethics Board (Appendix G, page 134). The consent form let participants know in writing that their interview would be recorded by the interviewer, transcribed, anonymized and analyzed. The interview guide was not provided to the participants.
Questions included: Please briefly describe the objective of the research that you were involved in and your role; How was partnership initiated? What activities or types of interaction took place during initiation? What factors enabled partnership initiation? What factors were barriers of partnership initiation? and what strategies or interventions or tools would support partnership initiation?

The questions were derived based on the findings of the literature review (Chapter 2, pages 15-27) and based on critical incident technique (108) and are provided in Appendix H (page 135-136). Critical incident technique was created in 1954 as a qualitative data collection tool described as “a set of procedures for collecting direct observations of human behavior in such a way as to facilitate their potential usefulness in solving practical problems” (108). It has five basic steps: identifying the general aim of the study, planning, collecting the data, analyzing the data, and interpreting and reporting results (109). The planning stage requires one to describe the critical incident of interest, which for this thesis was the initiation stages of a researcher and research user partnerships in which the participant was involved. The observers also must be identified, and in this thesis, they were researchers and research users who have been involved in partnership initiations in the past five years. The thesis committee helped refine the interview guide. We selected this method because it would provide us with the flexibility to focus on the initiation phase of projects as the critical incidence and to create questions that targeted the activities that took place during initiation.

Sixty-four individuals were invited by email for telephone interviews, which were conducted from February 1 to May 8, 2018. These included individual recipients of the Partnership for Health Systems Innovation (PHSI) grant from CIHR and members of the IKTR Network website. An initial email to 53 individuals was sent on Friday, January 15, 2018. A follow up email was send on March 2, 2018 and a final reminder on March 11, 2018. Another 11 people were recruited via snowball sampling as interviews were conducted and with the help of Dr. Gagliardi. A total of 23 individuals responded and were scheduled for telephone interviews. One of the participants did not actually meet the criteria of 5-year experience in being involved in researcher and research user partnerships (R08), and hence this transcript was excluded from the analysis. A total of 22 out of 64 individuals were included in the analysis. Two individuals responded that they were not interested because they did not feel the study was relevant to their
work, one person responded that they were not interested in taking part because of time and priority constraints. Thirty-eight individuals did not respond to the emails.

The interviews took place at MZ’s workplace during designated breaks in a closed office. Personal telephone was used to conduct the interviews. Other than the first two interviews were both MZ and Dr. Gagliardi were listening in on the conversations, there was no other person present during the remainder of the 21 interviews other than the participant and MZ. There were no repeat interviews during this study.

3.3.5 Data Analysis – Interviews

Qualitative description was used to analyze the results of the telephone interviews (98). Unique themes were identified using constant comparison (110). Audio files were downloaded from the teleconferencing company’s website and were transcribed by a professional transcriptionist. Transcripts were anonymized by MZ using alphanumeric codes as described in Table 5 (page 76-81). The identities were kept by MZ in a safe locked cabinet away from access to the public. One transcript was read and coded by the two members of the committee and MZ. Two additional transcripts were read by MZ and Dr. Gagliardi independently, then discussed with the thesis committee over email on three occasions. MZ read the remainder of the transcripts and used Microsoft Word to code each transcript with themes. Themes were compiled by MZ in MS Word and reviewed by the thesis committee on several occasions. The themes emerged as analysis took place; they were not established in advanced. Interview participants did not provide feedback on the findings. No field notes were used for this analysis. The transcripts were not returned to participants for comment or correction.

This analysis revealed which processes, enablers or barriers from the literature were deemed important by the researchers and research users based on their experience. Any noted differences in preferences between the two groups and between the responses and the existing literature were recorded in the results section of this thesis. Answers also revealed practical examples of strategies employed to overcome barriers or encourage enablers of IKT initiation. The output from Phase 2 is a summary of the interview question responses from Canadian researchers and research users on IKT initiation processes, enablers and barriers.
3.3.5.1 Rigour

Several strategies were employed to ensure rigour. First, using interviews as a data collection method was itself an attempt to apply triangulation to data collected in Phase 1 (111). In Phase 1, the meta-narrative review, the processes, barriers, enablers and outcomes of IKT initiation were compiled in a framework. The processes, enablers and barriers from the results of Phase 1 were used to develop prompts for the interview guide used for Phase 2. The interviews themselves were a type of triangulation to expand and elaborate on the results of Phase 1.

Multiple coding was also used to ensure rigour (111). The first transcript was coded by three individuals independently, including both members of the thesis committee, as well as MZ. Another two transcripts were anonymized and coded by theme individually by Dr. Gagliardi and MZ to ensure consistency in coding. The resulting codebook with exemplary quotes was reviewed by the thesis committee.

Finally, the use of COREQ, the 32-item criteria for reporting qualitative studies was used to ensure reliability and rigour of Phase 2 (101).

3.4 Blending results from the two phases

The results from Phase 1 and Phase 2 were blended by identifying similarities and differences between the two findings. In this case, the results of Phase 1 were a list of processes, enablers, barriers and outcomes of partnership initiation from the literature. The results of Phase 2, the interviews, were compared with those from the Phase 1, the meta-narrative review, to identify similarities or differences between IKT experiences reported in the literature and those of Canadian experts. Comparing entailed analyzing the findings and noting any differences and similarities in language used to describe the processes, facilitators and barriers of initiation. In addition, blending the results of the two phases broadened knowledge about IKT partnership initiation by expanding on published knowledge based on Canadian experiences.

The processes, enablers, barriers and outcomes found in Phase 1 were compared to the themes that arose from the data analysis of Phase 2. Overlapping processes, enablers and barriers were noted. In addition, any unique processes, enablers and barriers that arose from either Phase 1 or Phase 2 were highlighted in the resulting conceptual framework. The conceptual framework resulting from the meta-narrative results was enriched with the input from Canadian experts in
the field of IKT partnerships and provides a more in-depth understanding of partnership initiation.
Chapter 4

Results

In this section, the results of Phase 1, the meta-narrative review, and Phase 2, the telephone interviews, are presented.

4 Phase 1: Meta-narrative review

The results of the meta-narrative review are summarized below as required by the RAMESES guidelines.

4.1 Meta-narrative review search results

A total of 7,779 unique records remained following removal of duplicates in search results from different databases. Screening of titles and abstracts excluded 7,656 records. Screening of 122 full-text reviews excluded another 105 items for the following reasons: no description of initiation (n=36), no or little conceptual or empirical detail about IKT (n=36), review methods were not systematic (n=16), item was not a review (n=15) or the item pertained to online communities (n=2). A total of 17 reviews were eligible for inclusion. A PRISMA flowchart is available in Appendix I (page 137). A full set of data extracted from each included review is available in Appendix J (page 138-155) (2, 13, 69, 112-125).

4.2 Meta-narrative review characteristics of included reviews

Review characteristics were summarized in Table 2 (page 48). The reviews were published between 1998 and 2017. Nine of the 17 reviews were published in last five years prior to the search (2012 to 2017) (2, 13, 112-118). Reviews included primary studies published from 1968 to 2015. Reviews were conducted in the United States (n=7) (69, 114, 115, 117, 121, 123, 125), Canada (n=5) (2, 13, 112, 113, 119), the United Kingdom (n=3) (116, 120, 124), Australia (n=1) (122), and Uganda (n=1) (118). The types of reviews were systematic (n=6) (115-117, 119, 120, 124), theoretical (n=4) (112, 121-123), narrative (n=2) (69, 125) and critical (n=2) (113, 114), followed by one each of descriptive (118), realist (13) and scoping (2). Ten reviews emerged from the healthcare literature in the sub-disciplines of medicine (115), nursing (117), public health (113, 118, 119, 125) and health services research (2, 13, 114, 124).
Seven reviews emerged from the social sciences literature, in the sub-disciplines of psychology (112, 121), knowledge management (116, 122), information systems (120), education (69) and organizational management (123).
<table>
<thead>
<tr>
<th>Study</th>
<th>Type of Review</th>
<th>Time Span of included studies</th>
<th>Discipline</th>
<th>Field of study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tremblay (112) 2017 Canada</td>
<td>Theoretical</td>
<td>up to 2015</td>
<td>Social Sciences</td>
<td>Psychology</td>
</tr>
<tr>
<td>Gagliardi (2) 2016 Canada</td>
<td>Scoping</td>
<td>2005-2014</td>
<td>Healthcare</td>
<td>Health Services Research</td>
</tr>
<tr>
<td>Concannon (115) 2014 United States</td>
<td>Systematic</td>
<td>2002-2013</td>
<td>Healthcare</td>
<td>Medicine</td>
</tr>
<tr>
<td>Filieri (116) 2014 United Kingdom</td>
<td>Systematic</td>
<td>1992-2012</td>
<td>Social Sciences</td>
<td>Knowledge Management</td>
</tr>
<tr>
<td>Orem (118) 2012 Uganda</td>
<td>Descriptive</td>
<td>2000-2010</td>
<td>Healthcare</td>
<td>Public Health</td>
</tr>
<tr>
<td>Chiasson (120) 2009 United Kingdom</td>
<td>Systematic</td>
<td>1982-2005</td>
<td>Social Sciences</td>
<td>Information Systems</td>
</tr>
<tr>
<td>Suarez-Balcazar (121) 2005 United States</td>
<td>Theoretical</td>
<td>1977-2004</td>
<td>Social Sciences</td>
<td>Psychology</td>
</tr>
<tr>
<td>Guzman (122) 2005 Australia</td>
<td>Theoretical</td>
<td>1979-2003</td>
<td>Social Sciences</td>
<td>Knowledge Management</td>
</tr>
<tr>
<td>Riley-Tillman (69) 2005 United States</td>
<td>Narrative</td>
<td>1977-2005</td>
<td>Social Sciences</td>
<td>Education</td>
</tr>
<tr>
<td>Druskat (123) 2002 United States</td>
<td>Theoretical</td>
<td>1986-1996</td>
<td>Social Sciences</td>
<td>Organizational Management</td>
</tr>
</tbody>
</table>
4.3 Narrative labels

In the background section literature review (pages 10 to 24), the types of partnerships were classified into the disciplines healthcare and social sciences and their respective sub-disciplines, as shown in Table 1 (page 26). However, when the full-text screening was completed, there were narratives that overlapped the two disciplines, for example, an action research narrative was found in both healthcare and social sciences literatures. For this reason, it was necessary to reassign labels to describe research traditions rather than disciplines and sub-disciplines. Following the meta-narrative guiding principle of reflexivity, which calls to document reflective insights, the following methodology was behind the labelling. Staying as close the literature as possible, the language selected for the labels used to describe the types of partnerships was derived from the language that the authors of the reviews used. For example, IKT was used to group the two articles that identified the partnership as integrated knowledge translation (2) or knowledge translation partnership (118). Any review that mentioned participatory research approach or community-based participatory research or action research was grouped under the narrative Action Research. Action Research is the underlying approach of forming these participatory research partnerships, and hence the reviews could be grouped under the same research tradition (125). In the social sciences reviews, one review use the label of structural social capital to describe the action of knowledge transfer between groups (116) and another used inter and intra-organizational knowledge transfer (122). Since they both described methods of knowledge transfer between groups, the broader term Knowledge Transfer was used to label the narrative, despite the fact that we recognize Knowledge Transfer refers to one-way dissemination of knowledge rather than IKT. Table 3 (page 51-52) shows a breakdown of how the labels for the narratives were derived.

Due to this principle of staying as close to the authors’ language as possible, there were several reviews that were classified on their own and could not be grouped together with others, such as team initiation (119), the label used by the authors to describe the initiation stage of public-private partnerships, and shared metal models, the label used by the authors to describe the partnership approach (123). Table 3 (page 51-52) lists some of the data that were extracted from the reviews, including the IKT partnership labels and IKT initiation labels used by the
authors of the reviews. In addition, the column labelled ‘Narrative’ describes the label assigned by MZ to represent the research traditions described in this thesis.
<table>
<thead>
<tr>
<th>Study</th>
<th>Narrative</th>
<th>Labels</th>
<th>Key Actors</th>
<th>Origins (discipline/field of study)</th>
<th>Concepts or theories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tremblay (112) 2017 Canada</td>
<td>Action research</td>
<td>Community-based participatory research</td>
<td>Partnership First stage Researchers Community organization, coalition of organizations</td>
<td>Social Sciences/Psychology</td>
<td>Social Movement Theory</td>
</tr>
<tr>
<td>Gagliardi (2) 2016 Canada</td>
<td>Integrated knowledge translation</td>
<td>Integrated knowledge translation</td>
<td>Formation stage Researchers Organization or system-level decision-makers including clinician managers, health facility managers, and policy-makers</td>
<td>Healthcare/Health Services Research</td>
<td>Not reported</td>
</tr>
<tr>
<td>Salsberg (113) 2015 Canada</td>
<td>Action research</td>
<td>Participatory research</td>
<td>Fostering a partnership Researchers Stakeholders, community members, end-users</td>
<td>Healthcare/Public Health</td>
<td>Not reported</td>
</tr>
<tr>
<td>Esmail (114) 2015 United States</td>
<td>Stakeholder engagement</td>
<td>Stakeholder engagement research</td>
<td>Early stage Researchers Patients, public</td>
<td>Healthcare/Health Services Research</td>
<td>Not reported</td>
</tr>
<tr>
<td>Concannon (115) 2014 United States</td>
<td>Stakeholder engagement</td>
<td>Stakeholder engagement research</td>
<td>Early stage Researchers Individual or group who is responsible for or affected by health and healthcare-related decisions</td>
<td>Healthcare/Medicine</td>
<td>Not reported</td>
</tr>
<tr>
<td>Filieri (116) 2014 United Kingdom</td>
<td>Knowledge transfer</td>
<td>Structural social capital</td>
<td>Development stage, fuzzy front end Researchers Business managers, business partners, customers, suppliers, universities, competing firms</td>
<td>Social Sciences/Knowledge Management</td>
<td>Social Capital Theory</td>
</tr>
<tr>
<td>Andrews (117) 2012 United States</td>
<td>Action research</td>
<td>Community based participatory research</td>
<td>Partnership development Academic partners Community partners</td>
<td>Healthcare/Nursing</td>
<td>Not reported</td>
</tr>
<tr>
<td>Jagosh (13) 2012 Canada</td>
<td>Action research</td>
<td>Participatory research</td>
<td>Early stage Researchers People affected by issues under study and/or decision makers who apply research funding</td>
<td>Healthcare/Health Services Research</td>
<td>Not reported</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Year</td>
<td>Country</td>
<td>Type of Research</td>
<td>Stage</td>
<td>Participants</td>
</tr>
<tr>
<td>-----------</td>
<td>------</td>
<td>---------</td>
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<td>--------------</td>
</tr>
<tr>
<td>Orem</td>
<td>2012</td>
<td>Uganda</td>
<td>Integrated Knowledge Translation</td>
<td>Pre-research stage</td>
<td>Researchers</td>
</tr>
<tr>
<td>De-Pinho Campos</td>
<td>2011</td>
<td>Canada</td>
<td>Team initiation</td>
<td>Development stage</td>
<td>Researchers</td>
</tr>
<tr>
<td>Chiasson</td>
<td>2009</td>
<td>United Kingdom</td>
<td>Action research</td>
<td>Outset of activities</td>
<td>Researchers</td>
</tr>
<tr>
<td>Suarez-Balcazar</td>
<td>2005</td>
<td>United States</td>
<td>Action research</td>
<td>Gaining entry into the community</td>
<td>Researchers, academics</td>
</tr>
<tr>
<td>Guzman</td>
<td>2005</td>
<td>Australia</td>
<td>Knowledge transfer</td>
<td>'Soft issues' before developmental stage</td>
<td>Organization or team members</td>
</tr>
<tr>
<td>Riley-Tillman</td>
<td>2005</td>
<td>United States</td>
<td>Action research</td>
<td>Building usable knowledge</td>
<td>Researchers</td>
</tr>
<tr>
<td>Druskat</td>
<td>2002</td>
<td>United States</td>
<td>Shared mental models</td>
<td>Early stage</td>
<td>Team members</td>
</tr>
<tr>
<td>Waterman</td>
<td>2001</td>
<td>United Kingdom</td>
<td>Action research</td>
<td>Problem identification or planning phase</td>
<td>Researchers</td>
</tr>
<tr>
<td>Israel</td>
<td>1998</td>
<td>United States</td>
<td>Action research</td>
<td>Development of partnership</td>
<td>Researchers</td>
</tr>
</tbody>
</table>
4.3.1 Narrative: Integrated knowledge translation (IKT)

Two reviews referred to knowledge co-production as either IKT (2) or KT partnerships (118), thus focusing on the researcher-research user entity. In this literature, IKT initiation was referred to as formation stage (2) or pre-research stage (118). The key actors were referred to as researchers (2, 118) and researcher users were referred to as policy makers (118) or organization or system-level decision-makers including clinician managers, health facility managers, and policy-makers (2). There was no theory reported in the two reviews that supports IKT. Gibbon’s Mode 2 knowledge production was mentioned by one review as the origin (2). The other review reported more recent literature as the origin of KT literature, but does not mention Mode 2 knowledge production (118). One reported criticism of Mode 2 knowledge from the reviews was that it was not always successful (118).

Processes of IKT initiation reported in both the IKT and the KT partnership reviews were: set priorities, establish resources and plan to conduct joint research (2, 118). One review reported the following processes: define and describe the problem or research question, mobilize knowledge and change agents, and build organizational structures aligned with strategies and external context (118). The other review reported the following processes: create common goals with common outcomes, objectives, memorandum of understanding, agreement, and establish operating norms, establish communication methods such as evidence briefs, web portals, social media, new tools and technologies, training and learning, jointly apply for funding, and form committees, boards and working groups (2).

Enablers of IKT initiation reported in both reviews were: support from individuals such as facilitators, champions, boundary spanners or an advisory board, develop clear and agreed upon goals, roles, expectations, and vision, and have a supportive policy framework or network that encourages researchers and research users to create and implement knowledge (2, 118). One review reported the following IKT initiation enablers: build a sense of ownership of research output, have policymakers with a research background and researchers skilled in policy-making on the team (118). The other review reported the following IKT initiation enablers: commitment to partnership, attitude towards listening, learning, adapting, and training, create a multitude and varied opportunities for interaction, use a phased approach to develop shared language, have
dedicated funding for the partnership, use pre-existing relationships between researcher and research users (2).

Barriers to IKT initiation reported in one review were as follows: lack of time for learning and training, developing relationships, building trust, and sustaining intervention, lack of skill in understanding of IKT processes, attitudes of researchers or the value of research, unclear goals, roles and expectations, lack of incentives to participate, lack of funding or infrastructure for IKT, little continuity of involvement due to staff turnover or infrequent attendance, and geographic distance limiting interaction (2).

There were no empirical outcomes linked to IKT initiation in the IKT reviews. Outcomes that were reported as being hypothetically linked to IKT initiation were: early engagement of research users increased research users’ understanding of the research, which resulted in an increased understanding of the value of research, easier dissemination and implementation and interpretation of findings, increased trust and respect among researchers and research users, thus minimizing fear and anxiety of research results, build an agenda for the project, build strength and resources within the community, facilitate collaborative partnerships in all phases of the research project, and enhance mutual understanding of process including language, work style, needs and constraints (2).

4.3.2 Narrative: Action research

Nine of 17 reviews employed various terms synonymous with an action research approach to describe a collaborative or a participatory approach to knowledge co-production, thus focusing on the process rather than on the researcher-research user entity as was seen in IKT or KT partnership literature. These terms included action research (120, 124), participatory research (13, 113), community-based participatory research (112, 117), community based research (125), community based organization (121), and participatory action theory (69). In this literature, IKT initiation was referred to as first stage (112), fostering a partnership (113), program implementation (117), early stage (13), outset of activities (120), gaining entry into the community (121), building usable knowledge (69), problem identification or planning phase (124) or development of partnership (125). The key actors labels were researchers (13, 69, 112, 113, 120, 121, 124, 125), academics (121) or academic partners (117). The key actors labels for research users were community organization (112), coalition of organizations (112),
stakeholders (113, 120), community members (113, 121, 125), end-users (113), community partners (117), people affected by issues under study and/or decision makers who apply research findings (13), decision makers (120), school psychology practitioners who work in schools, hospitals and private practice (69), managers, patients, nurses, occupational therapists, students, practitioners, educational staff (124), and organizational representatives (125). One review mentioned Social Movement Theory (112) as guiding the review, and another mentioned Critical Theory (125). One review mentioned the origins of action research as first described by Kurt Lewin, and then further developed by Jacob Moreno, Lawrence Stenhouse, and John Elliott as a method of using science to solve social problems (124). Criticisms of action research reported in the reviews include that the process was unscientific (124), that it was hard to keep rigour and community preferences (124), that results could be biased due to lack of researcher independence (120, 124), and that research was subjective to context and not generalizable (120, 124). Another review listed the criticism as action research not being well-described, and that it lacked specific procedures for developing partnerships and/or involved poorly defined constructs (69).

Processes of IKT initiation reported in the action research reviews were: create common goals and objectives with common outcomes was an important process that could be accomplished by developing a memorandum of understanding, an agreement, developing operating norms (13, 69, 112, 113, 120, 121, 124, 125), define and describe the problem or research question (112, 113, 120, 121, 124, 125), set priorities and/or expectations by conducting a needs assessment or other method (117, 121, 124, 125), identify stakeholders and opportunities to build internal and external partnerships (112, 117, 121), conduct training and learning exercises (113, 121, 125), and plan to conduct joint research (69, 120, 125). Other IKT initiation processes that were reported were to establish pre-existing resources that can be used or acquired for the project (112, 125), to consider how to manage inequalities of power (124, 125), to establish communication methods for the project (113, 121), to jointly apply for funding (124, 125), and to build organizational structures aligned with both strategy and external context (121).

Enablers of IKT initiation reported in action research reviews were: building a sense of ownership of research or its output (69, 113, 124, 125), commitment to partnership (13, 121, 124, 125), formal training and development for team members related to the project (120, 125), attitude towards listening, learning, adapting and training (69, 113), time for team meetings (113,
120, 121), support from individuals such as enablers, champions, boundary spanners or an advisory board (117, 125), clear and agreed upon goals, roles, expectations, and vision (69, 112, 113, 121, 124, 125), dedicated funding to the partnership (112, 121, 125), pre-existing relationship between researchers and research users (13, 125), a supportive policy framework or network that encourages researchers and research users to create and implement knowledge (117, 125), hire from the community or encourage the researchers’ involvement in the target community in a significant way such as volunteering, dedicating time to learn about the community, join community events, read reports and other publications (112, 113, 121, 125), a phased approach to develop shared language (125), and positive personality of the action researcher (124).

Barriers to IKT initiation reported in the action research literature were: lack of time for tasks including learning and training, developing relationships, building trust and sustaining interventions (112, 117, 120, 121, 124, 125), lack of understanding or differences in interpretations of institutional review board (IRB) policies between researchers and research users (117, 120), maintaining a balance between academic rigor and community preferences (117, 121, 124, 125), lack of stakeholder engagement (117, 120, 124), differing needs and priorities (117, 124, 125), negative attitude towards researchers or value of research for the community (121, 124, 125), unclear goals, roles and expectations (121, 124, 125), lack of funding or infrastructure for IKT (117, 120, 121, 125), little continuity of involvement due to staff turnover or infrequent attendance (117, 121), community resistance (13, 125), issues of power (120, 121, 124, 125), lack of data on initiation of partnerships (117, 120, 124), conflict of interest (121), lack of skill in understanding IKT processes (117), and negative personality of the action researcher (124).

There were no empirical outcomes explicitly linked to IKT initiation in the action research narratives. Outcomes that were reported as being hypothetically linked to IKT initiation were: early engagement of research users increased research users’ understanding of the research, which results in an increased understanding of the value, easier dissemination, implementation and interpretation of findings (69, 112, 120, 121, 124), increased trust and respect among researchers and research users, minimized fear and anxiety of research results (13, 117, 120, 121, 125), empowerment of the research user (13, 117, 121, 124, 125), development of the research question (112, 120, 121, 124), a clear understanding of the expectations of different
partners (121), enhanced mutual understanding of processes such as language, work style, needs and constraints (120, 124), strengthened relationship, trust and goodwill (13, 120, 121), built an agenda for the project (112, 121, 124), built strength and resources within the community to facilitate collaborative partnerships in all phases of the research project (13, 112, 121, 124, 125), and increase of compliance with and accountability of research results (113, 117, 124, 125).

4.3.3 Narrative: Stakeholder engagement

Two reviews used stakeholder engagement as labels for IKT partnerships (114, 115). IKT initiation was referred to as early stage by both reviews (114, 115). The key actors were referred to as researchers (114, 115), and for research users they used the labels patients and public (114), or an individual or group who was responsible for or affected by health and healthcare-related decisions (115). There were no reported theories guiding the reviews. Stakeholder engagement originates from Corporate Social Responsibility (CSR) (115). There were no criticisms reported in the reviews.

The processes of IKT initiation reported in the two stakeholder engagement narrative were: define or describe the problem or research question (114, 115), set priorities and/or expectations by conducting a needs assessment or other method (114), create common goals with common outcomes, objectives, memorandum of understanding, agreement, and operating norms (114), conduct training and learning activities (115).

Enablers of IKT initiation reported in one review were: a sense of ownership of research or output, and a supportive policy framework or network structures/ties for researchers and research user to create knowledge and implement research results (114). Enablers reported in the other review were positive attitude towards listening, learning, adapting and training and support from facilitators, champions, boundary spanners or an advisory board (115).

Barriers to IKT initiation reported in the stakeholder engagement reviews were: lack of reporting of partnership initiation (114, 115). In addition one review reported the following barriers: lack of time for learning and training, developing relationships, building trust and sustaining interventions, lack of understanding or differing interpretations of the institutional review board (IRB) and federal regulations, lack of stakeholder engagement, differing needs and
priorities, geographic distance imposes limits on interaction, issues of power, and conflict of interest (115).

There were no empirical outcomes linked to IKT initiation in the stakeholder engagement narrative. Outcomes that were reported as being hypothetically linked to IKT initiation were: early engagement of research users increased research users’ understanding of the research, which results in an increased understanding of the value, easier dissemination and implementation and interpretation of findings, increase compliance and accountability (114, 115), empowerment of research users (114), develop a clear understanding of the expectations of different partners (114), and strengthen relationship, trust and goodwill (115).

4.3.4 Narrative: Knowledge transfer

Two reviews were about knowledge transfer as a result of organizational networks and ties, focusing on the building of social networks or social capital (116, 122). Both reviews analyzed the properties of the network ties that allowed knowledge transfer to occur (116). The initiation and sustainment of these ties was relevant to IKT initiation. The labels used for IKT partnerships were structural social capital (116) and inter- and intra-organizational knowledge transfer (122). The IKT initiation stage was referred to as developmental stage by both reviews (116, 122). They both described initiation as having a set of activities before the developmental stage, which they referred to as ‘fuzzy-front end’ activities (116) or ‘soft issues’ activities (122). One review referred to key actors as researchers (122) and business managers, business partners, customers, suppliers, universities, or competing firms (116). The other review referred to both researchers and research users as organization or team members (122). One of the reviews reported social capital theory as guiding the review (116). Social capital theory described how individuals and entities transfer knowledge (116), defined as “the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit” (116). The other review did not report any theory, but reported different organization level processes to transfer tacit and formal knowledge, and used the change management literature to outline how relationships were initiated and sustained (122). In the first review, the origins of knowledge transfer were not discussed in detail (122). The other review provided a more in-depth summary of the organizational behaviour literature from 1992 to 2012, articulating the impact of intra- and inter-
firm organizational ties on knowledge transfer (116). Criticisms of knowledge transfer reported were that it had many different definitions and that simply increasing the number of ties between organizations did not necessarily result in effective knowledge transfer, but it required a more complex process of building relationships (116).

Processes in IKT initiation reported in one knowledge transfer review were: set priorities and/or expectations by conducting a needs assessment or other method, establish pre-existing resources that could be used or acquired for the project, consider inequalities in power, establish processes to convert and assimilate tacit knowledge to formal knowledge, mobilize knowledge/change agents who coordinated processes to create and diffuse knowledge, and build organizational structures aligned with both strategy and external context (122). A process reported in the other review was establish communication methods (116).

Enablers of IKT initiation reported in the knowledge transfer reviews were: support from facilitators, champions, boundary spanners, or advisory boards (122), clear and agreed upon goals, roles, and expectations, and a supportive policy framework or network structures/ties for researchers and research users to create knowledge and implement research results (116).

There were no empirical barriers reported. In addition, there were no empirical outcomes linked to IKT initiation in the knowledge transfer reviews. Outcomes that were reported as being hypothetically linked to IKT initiation were: that early engagement of research users increased research users’ understanding of the research, which resulted in an increased understanding of the value, easier dissemination, implementation and interpretation of findings (116), increased trust and respect among researchers and research users, thus minimized fear and anxiety of research results (122), and agenda building (122).

4.3.5 Narrative: Team initiation

One review used the project management life cycle to describe team initiation (119), focusing on, and using the label of public-private partnerships (119). The initiation stage was referred to as developmental stage (119). The key actors were referred to as researchers, and for research users they used labels such as government, hospitals, pharmaceutical and biotechnology companies, and non-governmental organizations, foundations, experts, and investors (119). There was no theory reported as guiding the review. Although project management is used in
many fields, it originated in the 1950s in engineering, as a method to organize and perform projects more efficiently. There were no details provided about the origins or criticism of the project management cycle within the review (119).

Processes of IKT initiation reported in the team initiation review were: define or describe the problem or research question, set priorities and/or expectations by conducting a needs assessment or other method, identify stakeholders and opportunities to build internal and external partnerships, create common goals to common outcomes, objectives, memorandum of understanding, agreement, and operating norms, establish processes to convert and assimilate tacit knowledge to formal knowledge, develop risk and benefit analysis of the partnership, consider inequalities of power, and build organizational structures aligned with both strategy and external context (119).

Enablers of IKT initiation reported in the team initiation review were: build a sense of ownership of research or output, commitment to partnership, formal training and development and the acquisition of team members’ knowledge, support from facilitators, champions, boundary spanners, or advisory boards, and clear and agreed upon goals, roles, and expectations (119).

Barriers to IKT initiation reported in the team initiation review were: lack of stakeholder engagement, differing needs and priorities, unclear goals, roles and expectations, lack of funding or infrastructure of IKT, and issues of power (119).

There were no empirical outcomes linked to IKT initiation in the team initiation review. Outcomes that were reported as being hypothetically linked to IKT initiation were: increased compliance and accountability, and obtained a clear understanding of the expectations of different partners (119).

4.3.6 Narrative: Shared mental models

One review used shared mental models to describe IKT-like partnerships (123). IKT initiation was referred to as early stage (123). They referred to researchers and research users as team members (123). Cognitive theory was mentioned as guiding shared mental model development (123). Shared mental models were described as “socially constructed cognitive structures that represents shared knowledge or beliefs about an environment and its expected
behavior” (123). A well-constructed shared mental model could result in better team performance (123). The initiation of constructing a shared mental model was relevant to IKT initiation because it described how team members with different skill sets and tasks work together to accomplish a goal. The review reports the origins of term ‘mental model’ as referring to a symbolic representation of a system and the expected behaviour (123). Theorists used the concept of shared mental models to describe how causal connections and ‘working’ models were collectively constructed by the members of the team in order to calculate potential outcomes or predict future team decision (123). There were different types of mental models, and the review focused on team mental models, which were linked to team performance (123). Criticisms of shared mental models were not reported.

Processes of IKT initiation reported in the shared mental models review were: identify stakeholders and opportunities to build internal and external partnerships, establish communication methods, and conduct training and learning activities (123).

Enablers of IKT initiation reported in the shared mental models review were: a sense of ownership of the research and output, commitment to the partnership, formal training and development and the acquisition of team members’ knowledge and skills, and attitude towards listening, learning, adapting and training, time for meetings for information sharing by using all-day conferences or other methods, and a supportive policy framework or network structure/ties for researchers and research users to create knowledge and implement research results (123).

Barriers to IKT initiation reported in the shared mental models review were: lack of time for learning and training, developing relationships, building trust, and sustaining intervention, performance feedback and rewards awarded to an individual when they should be awarded to a group, and unclear goals, roles, and expectations (123).

There were no empirical or hypothetical outcomes linked to IKT initiation in the shared mental models review.

4.3.7 Summary

Conceptual issues including labels for IKT and IKT initiation, actors, the origin (discipline, philosophy, research) and concepts or theories underlying IKT corresponding to narratives are summarized and compared in Table 3 (page 51-52). Distinct narrative labels that
were selected to represent the partnership or approach to researcher and research user collaborations included Integrated knowledge translation, Action research, Stakeholder engagement, Knowledge transfer, Team initiation, and Shared mental models. These specific labels were derived from the literature itself. Empirical details about IKT initiation processes, enablers, barriers and outcomes that were evaluated and reported in each review corresponding to narratives are provided in Appendix K (page 156-160). These empirical details are summarized in Table 4 (page 66) and described below as common factors across narratives and unique to each narrative.

4.3.8 Processes of initiation across narratives

There was a total of 15 processes that emerged when the data of the narratives were combined into a meta-narrative (Table 4, page 66). The most common initiation stage processes that were similar across the different narratives were: identify stakeholders and opportunities to build partnerships found in the narratives of team initiation, action research and shared mental models (112, 117, 119, 121, 123). Define or describe the issue or research question was found in team initiation, stakeholder engagement, IKT, and action research (112-115, 118-121, 124, 125). Create project management documentation such as common goals, outcomes, objectives, memorandum of agreement and/or operating norms was found in team initiation, stakeholder engagement, IKT, and action research (2, 13, 69, 112-114, 119-121, 124, 125). Set priorities and expectations was found in team initiation, stakeholder engagement, IKT, action research and knowledge transfer (2, 112, 114, 117-119, 121, 122, 124). Establish what skills are available that can be useful for the partnership was found in team initiation, IKT, action research and knowledge transfer (2, 112, 118, 119, 122, 125). Establish and use communication methods (such as evidence briefs, web portals, social media, new tools and technologies) was found in IKT, action research, shared mental models and knowledge transfer (2, 113, 116, 121, 123). Plan to offer training and learning exercises was found in stakeholder engagement, IKT, action research and shared mental models (2, 69, 113, 115, 121, 123). Consider inequalities of power was found in team initiation, action research and knowledge transfer (119, 122, 124, 125). Finally build organizational structures aligned with both strategy and external context of the partnership was found in team initiation, IKT, action research and knowledge transfer (118, 119, 121, 122).
4.3.9 Processes of initiation stage unique to narratives

As is shown in Figure 1 (page 70), there were only three unique processes of the initiation stage reported. Team initiation reported developing risk and benefit analysis of the partnership (119), IKT reported creating committees, boards and working groups (2), and knowledge transfer reported including conversion and assimilation activities to transfer knowledge (122).

4.3.10 Enablers of initiation across narratives

There were 15 enablers that emerged once the data from the narratives were combined into a meta-narrative (Table 4, page 66). The most common enablers of initiation that were similar across narratives are summarized in Figure 1 (page 70) and listed here. Build a sense of ownership of the research produced was found in team initiation, stakeholder engagement, IKT, action research, and shared mental models (69, 113, 114, 118, 119, 123-125). In addition, develop clear and agreed upon goals, roles, expectations and vision for the partnership was found in team initiation, IKT, action research and knowledge transfer (2, 69, 112, 113, 118, 119, 121, 122, 124, 125). In contrast, support from individuals referred to as key stakeholders or referred to as facilitators, champions, boundary spanners, and advisory boards was found in team initiation, stakeholder engagement, IKT, action research and knowledge transfer (2, 115, 117-119, 122, 125). Commitment to partnership was reported in team initiation, IKT, action research and shared mental models (2, 13, 119, 121, 123-125). Formal training, development, and acquisition of team members’ knowledge and skills was reported in team initiation, action research and shared mental models (119, 120, 123, 125). Creating an organizational structure or policy framework that supports researcher and researcher user knowledge creation and implementation was reported in stakeholder engagement, IKT, action research, shared mental models and knowledge transfer (2, 114, 116-118, 123, 125).

4.3.11 Enablers of initiation unique to narratives

There were few enablers that were unique to narratives. IKT reported the enablers of allowing for multiple and varied opportunities for interaction (2); planning for a phased approach to develop shared language (2); having policymakers with research background and researchers with policymaking background (118). Action research reported the enabler to include or seek out research users from the community for inclusion in the partnership (112, 113, 121, 125).
4.3.12 Barriers to initiation across narratives

There were 19 barriers that emerged once the data of the narratives was combined into a meta-narrative (Table 4, page 66). Some of the most common are listed in Figure 1 (page 70) and listed here. A lack of time for learning and training, develop partnership, build trust and sustain the intervention was reported in stakeholder management, IKT, action research and shared mental models (2, 112, 115, 117, 120, 121, 123-125). Lack of understanding and/or differing interpretations of the institutional and federal regulations by IRB administration was found in stakeholder management and action research (115, 117, 120). Lack of stakeholder engagement was reported in team initiation, stakeholder engagement and action research (115, 117, 119, 120, 124). Different needs and priorities among researchers and research users was found in team initiation, stakeholder engagement and action research (115, 117, 119, 124, 125). Unclear goals, roles and expectations was found in team initiation, IKT, action research and shared mental models (2, 119, 121, 123-125). Lack of incentives to participate was found in IKT and action research (2, 121). Lack of funding or infrastructure for partnership team initiation (2, 117, 119-121, 125), and lack of continuity due to staff turnover or infrequent meeting attendance (2, 117, 121) were found in IKT and action research. Barriers related to partners’ personalities such as attitudes about researchers or the value of research were reported in IKT and action research (2, 121, 124, 125), and issues of power reported in team initiation, stakeholder engagement and action research (115, 119-121, 124, 125). Conflict of interest was reported as a barrier in stakeholder engagement and action research (115, 121).

4.3.13 Barriers to initiation unique to narratives

The personality of the action research was mentioned as a potential barrier by one action research review (124). There were no specific barriers related to the initiation stage that could be drawn from the knowledge transfer reviews (116, 122). This could be due to the lack of reporting detail on initiation of partnerships (114, 115, 117, 120, 124). The shared mental models review reported that performance feedback and rewards awarded to an individual when they should be awarded to a group can be a barrier in the beginning of partnerships (123).

4.3.14 Hypothetical outcomes across narratives

There were 11 outcomes that were hypothetically linked to partnership initiation once the data of the narratives was combined into a meta-narrative. It is difficult to relate the initiation
stage to IKT outcomes due to the lack of reporting regarding how the two are linked. Those IKT outcomes that could be linked to the initiation phase are summarized in Figure 1 (page 70). Some of the most common outcomes are listed here. Engaging stakeholders early in the partnership increased compliance and accountability to research produced (113-115, 117, 119, 124, 125). In addition, building trust and respect among research and research users in the initiation stage decreased fear and anxiety of participating in the projects (2, 13, 117, 120-122, 125). A well-founded initiation was linked to empowering research users (13, 114, 117, 121, 124, 125). Early engagement was also linked to developing a relevant research question (112, 120, 121, 124), developed a clear understanding of the expectations of different partners (114, 119, 121), enhanced mutual understanding of process including language, work style, needs, and constraints (2, 120, 124), build agenda for project (112, 121, 122, 124), built strengths and resources within the community (13, 112, 121, 124, 125), which helps in dissemination of research.
<table>
<thead>
<tr>
<th>Narratives</th>
<th>Team initiation</th>
<th>Stakeholder engagement</th>
<th>IKT/KT partnerships</th>
<th>Action research</th>
<th>Shared mental models</th>
<th>Knowledge transfer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference Number</td>
<td>119</td>
<td>115</td>
<td>114</td>
<td>118</td>
<td>113</td>
<td>124</td>
</tr>
<tr>
<td>Processes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Defining and describing problem, research question</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Setting priorities and/or expectations; conducting needs assessment</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Identifying stakeholders and opportunities to build partnerships</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creating common goals with common outcomes, objectives, memorandum of understanding, agreement, operating norms</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Establishing pre-existing resources that could be used or acquired by the partners to build the project.</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Developing risks &amp; benefits of the partnership;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Considering inequalities in power</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Establishing communication methods such as evidence briefs, web portals, social media, new tools and technologies</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Receiving Training and learning</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Applying for funding</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning to conduct joint research</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Establishing committees, boards, or working groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creating and transferring of organizational knowledge occurs through processes of conversion (i.e. tacit to formal) and assimilation, and the transfer from individual to collective</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Mobilizing knowledge/change agents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Building organizational structures aligned with strategy and external context</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enablers</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
</tr>
<tr>
<td>Sense of ownership of research or output</td>
</tr>
<tr>
<td>Commitment to partnership</td>
</tr>
<tr>
<td>Formal training and development and the acquisition of team members’ knowledge and skills.</td>
</tr>
<tr>
<td>Positive attitude towards listening, learning, adapting, and training</td>
</tr>
<tr>
<td>Time for team meetings for information sharing by using all-day conference, etc.</td>
</tr>
<tr>
<td>Multiple and varied opportunities for interaction</td>
</tr>
<tr>
<td>Phased approach to develop shared language</td>
</tr>
<tr>
<td>Support from facilitators, champions, boundary spanners; advisory board</td>
</tr>
<tr>
<td>Clear and agreed upon goals, roles, and expectations, and vision</td>
</tr>
<tr>
<td>Dedicated funding</td>
</tr>
<tr>
<td>Pre-existing relationships between researchers and research users</td>
</tr>
<tr>
<td>Policymakers with a research background and researchers skilled in policy making</td>
</tr>
<tr>
<td>Supportive policy framework or network structure/ties for researchers and research users to create knowledge and implementing research results</td>
</tr>
<tr>
<td>Team members from the community</td>
</tr>
<tr>
<td>Positive personality of the action researcher</td>
</tr>
</tbody>
</table>

**Barriers**

- Time for learning and training, developing relationships, building trust, and sustaining intervention | x | x | x | x | x | x | x | x |
- Performance rewards awarded to individuals rather than groups | x |
- Performance feedback that mixed individual with group level feedback | x |
- No understanding and/or differing interpretations of the institutional and federal IRB regulations | x | x | x | x |
- Imbalance between rigor of academic preferred research designs and incorporating of community preferences | x | x | x | x |
- No stakeholder engagement | x | x | x | x | x | x | x | x |
<table>
<thead>
<tr>
<th></th>
<th>x</th>
<th>x</th>
<th>x</th>
<th>x</th>
<th>x</th>
<th>x</th>
</tr>
</thead>
<tbody>
<tr>
<td>different needs and priorities</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>No skill in understanding of partnership process</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Negative attitude about researchers or the value of research</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Goals, Roles, expectations were not clear</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>No incentives to participate</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>No funding or infrastructure of partnership</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Little continuity of involvement due to staff turnover</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Limited interaction due to geographic distance</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Community resistance</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Issues of power</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Conflict of interest</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Negative personality of the action researcher</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>No guidance of initiation of partnerships in literature</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
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</table>

**Outcomes**

<table>
<thead>
<tr>
<th></th>
<th>x</th>
<th>x</th>
<th>x</th>
<th>x</th>
<th>x</th>
<th>x</th>
<th>x</th>
<th>x</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empowerment of research users</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Develop research questions</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Develop a clear understanding of the expectations of different partners</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>If research users understand research they grow to value it, it is more relevant and easier to disseminate and implement, aids in the translation and interpretation of findings which increases actionability</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Enhanced mutual understanding of process including: language, work style, needs, and constraints, research</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Strengthened relationship, trust and goodwill</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Emergence of community leaders</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Agenda building;</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Builds strengths and resources within the community</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Increase trust and respect, minimize fear</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Compliance and accountability</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>
4.3.15 Conceptual Framework from the meta-narrative review

Overall, IKT was conceptualized differently across narratives; this included the conceptualization of initiation and the importance ascribed to it with respect to the success of IKT initiatives. Findings across narratives were blended in a conceptual framework of IKT initiation including processes, enablers, barriers and outcomes in Figure 1 (page 70). The conceptual framework identifies processes, enablers, barriers and outcomes common across narratives, and represents a meta-narrative of the results highlighting what was common across and what was unique to specific narratives. The processes, enablers and barriers that were found across 5 or 6 narratives are marked with an ‘*’ in Figure 1 (page 70).
Figure 1: Conceptual framework of IKT initiation derived from the meta-narrative review

**Actors**
- Researchers
- Research users (those who are affected by/would use the research)

**Processes common to Narratives**
- Identify stakeholders
- Create an inventory of available skills
- Set priorities and expectations*
- Address possible power inequalities
- Establish research questions
- Create project management documentation (i.e. operating plan)
- Establish communication channels
- Conduct/off training
- Build organizational structures conducive to partnership goals and strategies

**Processes unique to Narratives**
- Creating committees, boards, etc. (IKT)
- Identify risks and benefits of partnership (Team initiation)
- Convert tacit to formal or individual to collective knowledge (Knowledge transfer)

**Enablers common to Narratives**
- Build a sense of ownership*
- Develop clear and agreed upon goals, roles, expectations and vision for the partnership*
- Personality of researchers and research users
- Support from stakeholders
- Commitment to partnership
- Formal training of team members’ knowledge and skills
- Organizational structure or policy framework that supports researcher and researcher user collaboration

**Enablers unique to Narratives**
- Multiple and varied opportunities for interaction (IKT)
- Phased approach to develop shared language (IKT)
- Having policy makers with research background and researchers with policy-making background (IKT)
- Seek research users from the community (Action research)

**Barriers common to Narratives**
- Lack of time*
- Differing understanding/interpretations of IRB regulations
- Lack of stakeholder engagement
- Different needs/priorities among researchers and research users
- Unclear goals, roles and expectations
- Lack of incentives to participate
- Lack of continuity due to staff turnover or infrequent meeting attendance
- Attitudes about researchers or the value of research
- Issues of power
- Conflict of interest

**Barriers unique to Narratives**
- Provide rewards to individuals rather than groups (Shared mental models)
- Include both individual and group level feedback in performance reviews (Shared mental models)
- Maintain academic rigour (Action research)
- Incorporate community preferences (Action research)

**Outcomes common to Narratives**
- Increased understanding of research value*
- Easier dissemination and implementation of findings
- Increased trust and respect among researchers and research users
- Strengthened relationship and goodwill
- Reduced anxiety about research results
- Empowerment of research users
- Research based on relevant questions
- Clear understanding of the expectations of different partners
- Enhanced mutual understanding of process including language, work style, needs, and constraint
- Jointly-developed agenda
- Enhanced strengths and resources within the community
- Increased compliance and accountability

*Appeared across 5 or 6 narratives
4.4 Phase 2: Interviews with researchers and research users

4.4.1 Characteristic of participants

For each participant, a summary of key characteristics is available in Table 5 (page 76-81). Emerging themes are summarized in a code tree (Appendix L, page 161) and a complete set of data extracted for each interview question from each transcript is provided in Appendix M (pages 161-211). A total of 9 researchers (R01-R07, R09, R10) and 11 research users (U01-U11) were interviewed and included in the analysis. Two participants (C01 and C02) did not identify as either researchers or research users, but rather felt that they had a connector role between the academic and policy worlds. Initially, the connector transcripts were to be excluded from the analysis, however, upon further reflection, it was decided to include these transcripts in the analysis due to the rich content of the feedback provided on researcher and research user partnership initiation.

The job titles of the participants varied greatly, but were all at an advanced administrative, management, or academic level within their organization. Ten of the eleven research users had the label Director in their title, except for U07, who is President and Chief Executive Officer of her organization. All the researchers had an affiliation with a university and hold the title of Assistant or Associate Professor, but their cross-appointment titles varied, such as Clinician Scientist (R01), Microbiologist (R02), Health Services Researcher (R04), Scientist (R09), Associate Director (R05) and Division Head (R07). The two connectors’ job titles were Executive Director (C01) and Chief Executive Officer (C02).

One of the requirements to participate in this study was that the participants had to acknowledge that they had over 5 years’ experience in researcher and research user partnerships. Years of experience were classified as new (N), which meant 5 to 10 years of experience in partnerships; or experienced (E), which meant over 10 years. A total of 18 out of 22 (81.8%) participants had over 10 years’ experience in researcher and research user partnership initiation, whereas 3 (13.6%) had between 5 and 10 years’ experience. One participant had less than 2 years’ experience in researcher and research user partnerships (R08) and was not able to provide answers to many of the questions about partnership initiation, hence the transcript was excluded from the data analysis.
Eighteen of the participants were female (81.8%). Four participants were male (18.2%). The 4 males included one researcher out of nine (11.1%) and 3 out of eleven research users (27.3%). Both connectors were female.

The location of the interviewees was recorded. It was anticipated that the participants would have cross-Canada representation because of the original contact information of the CIHR PHSI grant recipients, and IKTR Network members include individuals across the country. The participants were from several different Canadian provinces. Seven from Ontario (31.8%), five from Manitoba (22.7%), four from Alberta (18.2%), four from British Columbia (18.2%), and one each from Quebec (4.5%) and Nova Scotia (4.5%).

The duration of the interviews ranged from 22:20 to 104:36 minutes (Table 5, page 76-81).

4.4.2 New and pre-existing partnerships

Five out of the 22 participants reported that they had to build new partnerships for the project they described (R01, R04, R06, R07, U02). Sixteen participants said that they had pre-existing partnerships for the project they described (C01, C02, R02, R03, R05, R09, R10, U01, U04, U05, U06, U07, U08, U09, U10, U11). One participant (U03) said they sometimes have new and sometime pre-existing relationships.

There were a few noticeable commonalities amongst the respondents that had to establish new relationships. For example, three of them reported that the partnership was initiated by contacting individuals with a dual role as researcher and research user (R01, R04, R07). In addition, four of them mentioned that in-person meetings were enablers to the initiation of IKT partnerships (R01, R04, R06, R07). Two of the respondents who said that they had to establish new relationships suggested a forum or repository where research users would share priorities and interests with researchers.

There were three responses that were unique to the individuals that were part of the group that dealt with pre-existing relationships. The first one was the enabler of forming the partnership early on (C01, C02, R05, R06, R09, U01, U04, U06, U07, U09). The second one was the enabler to keeping a good track record by taking part in activities such as being respectful of the research user’s time or being honest about goals (R03, R09, U04, U06, U08, U09, U10). The third unique
response to those who had pre-existing relationship was the barriers of administrative paperwork as too time consuming (R02, R05, U08). Many individuals with pre-existing relationships also reported that a pre-existing network or organizational capacity for a network was an enabler to IKT initiation (C01, C02, R02, R03, R05, U01, U08). One barrier reported by mostly individuals with pre-existing relationship was the personality of the researcher (C02, R05, U01, U07, U08, U09, U10).

4.4.3 Duration of initiation phase

The range of time that the initiation occurred as described by participants varied from six months to six years. Even the participants that had pre-existing relationships sometimes provided a range of time for partnership initiation to occur. The length of time can be classified into three categories: the first category was one year or less (C01, R02, R09, R10, U04,); the second category was over one year (R01, R03, R04, R05, R06, R07, U02, U03); and the third category included those whom did not provide a length of time to initiation, because they felt that they only dealt with pre-existing relationships (C02, U01, U05, U06, U07, U08, U09, U10, U11).

4.4.3.1 One year or less

Those who responded that the partnership initiation took one year or less included one connector (C02), three researchers (R02, R09, R10) and one research user (U04). Four of these respondents mentioned, the process of identifying potential stakeholders through pre-existing contacts, workshops, pilot projects, conferences, or environmental scans (C02, R02, R09, R10). Three of these respondents reported the enabler that research could be conducted as an extension of the partnership (C02, R02, R09). Four of these respondents mentioned the enabler of making research users feel valued and have a sense of ownership of the research output, and not make feel as a token partner (C02, R02, R09, U04). Geographic proximity was reported as an enabler in this group of respondents (C02, R09, U04).

4.4.3.2 Over one year

Eight participants responded that the partnership initiation took over one year. These included six researchers (R01, R03, R04, R05, R06, R07) and two research users (U02, U03). Six of these eight respondents also reported on the activity of clarifying roles, responsibilities and scope of project was important in initiation (R01, R03, R04, R05, R07, U03). Three of these
respondents also reported the barrier of high turnover in research user organization, which
prevents or delays initiation (R01, R04, R06). Three other respondents from this group also
reported the activity of aligning the research user organization’s goal with their idea (R01, R06,
R07), and spending time building trust by showing commitment to project (R01), reaching out to
research users for feedback (R06), and have a face-to-face component to the partnership (R07).
All six researchers in this group also reported on the importance of spending time connecting
with mentors in the field who act as boundary spanners between researchers and research users
(R01, R03, R04, R05, R06, R07). Three of these researchers also mentioned that they worked
hard to convince the research users on buy-in for the idea (R01, R03, R04). One of the barriers
mentioned by this group was the limited involvement of research users due to their competing
priorities (R01, R03, R05, R06, U03).

4.4.3.3 Did not report duration of initiation

Eight research users (U01, U05, U06, U07, U08, U09, U10, U11) and one connector
(C02) did not report a length of time for initiation to occur because they only take part in projects
with pre-existing relationships. Five of these research users also mentioned the personality of the
researchers as an enabler to the project (U01, U07, U08, U09, U10). Five of these respondents
mentioned the importance of collaboration from the very beginning of the project on-set (U01,
C02, U06, U07, U09). Six of these respondents reported funding as an enabler to partnership
initiation (C02, U01, U05, U06, U07, U08). Seven of these respondents mentioned the enablers
of making the research user feel valued and have a sense of ownership on the research output,
not make them feel as a token partner (C02, U06, U07, U08, U09, U10, U11). In this group,
having a good track record by being respectful of research user’s time was another enabler (U06,
U08, U09, U10). A barrier mentioned by this group is misaligned goals and expectations or
applying for a grant without clearly defining the type of participation required by the research
users (U05, U06, U08, U09, U10).

4.4.4 Objectives of the projects

The objectives of the projects that were described varied, as can be seen in Table 5 (page
76-81). Each participant was unique in their description of the project’s objective or its purpose.
For the researchers group the projects varied from a clinical trial to determine the effectiveness
of a mobile app (R01), improving a specific program (R02), increase public engagement (R03)
or capacity (R09), evaluate a specific program or process (R04, R05, R06) or the implementation (R10) or uptake of a program (R07).

The research users also reported on a variety of project objectives which included a homecare focused research project (U01), creating a mobile app to assess a program (U02), creation of a handbook for a specific healthcare group in primary care (U03), evaluating impact of process (U04) or usability of a technology (U05). Others included developing a grant (U06), creating an inter-institutional memorandum of understanding to help researchers and research user (U07), create interdisciplinary teams to identify and interpret evidence (U08), and support patient engagement (U11).

The two connectors did not report the objectives of a specific project, but described their organizational objectives which included a provincial scan of how research informs decisions in terms of policy (C01) or putting funding programs together to encourage IKT approach and relationship building (C02).

4.4.5 Connectors

The two connectors had similar responses in many instances including a systematic approach to identifying stakeholders through needs assessments (C01) or actively connecting researchers and research users with similar interest before projects are conceptualized (C02). The common enablers of the two connectors were a leadership role during IKT initiation (C01, C02), having shared goals, roles and responsibilities between the partnerships; collaboration from the very beginning of the partnership and throughout (C01, C02), building a pre-defined network in advanced of project, either by identifying partners with similar priorities (C01) or finding key advocates in the system to help (C02). Both connectors also reported funding as an enabler at the very beginning of the relationship (C01, C02). In the same vein, both connectors reported misaligned goals and expectations as a barrier, either because they cause different accountabilities (C01) or sometimes one partner is just not interested (C02).
### Table 5: Characteristics of interview participants

<table>
<thead>
<tr>
<th>Participant Alpha-numeric Code</th>
<th>Job Title</th>
<th>Date of Interview</th>
<th>Participant Type</th>
<th>Years of Experience in IKT (Over 10 years or 5 to 10 years)</th>
<th>Gender</th>
<th>Province</th>
<th>Study Objective</th>
<th>IKT initiation period</th>
<th>New or Pre-existing partnership</th>
<th>Duration of Interview (minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C01</td>
<td>Executive Director</td>
<td>6-Feb-18</td>
<td>Connector</td>
<td>Over 10 years</td>
<td>Female</td>
<td>Alberta</td>
<td>We are hypothesizing that in the very early stages if the researchers and the end-users identify the questions, needs and priorities using a code developed model and the chances of optimizing or achieving the outcomes and impacts will be higher</td>
<td>Six months to year</td>
<td>Pre-existing</td>
<td>46:52</td>
</tr>
<tr>
<td>C02</td>
<td>Chief Executive Officer</td>
<td>3-Apr-18</td>
<td>Connector</td>
<td>Over 10 years</td>
<td>Female</td>
<td>Manitoba</td>
<td>We have put funding programs together that have tried to support that kind of IKT approach and that relationship building. And so we’ve changed the peer-review process in order to facilitate or encourage that to happen.</td>
<td>Not reported</td>
<td>Pre-existing</td>
<td>33:38</td>
</tr>
<tr>
<td>R01</td>
<td>Clinician Scientist and Emergency Physician</td>
<td>1-Feb-18</td>
<td>Researcher</td>
<td>5 to 10 years</td>
<td>Male</td>
<td>Ontario</td>
<td>This is a randomized control clinical trial in three sites in the U.S. and Canada aiming to determine the effectiveness of a new mobile device application.</td>
<td>2007-2013 (6 years)</td>
<td>New</td>
<td>58:48</td>
</tr>
<tr>
<td>Researcher ID</td>
<td>Position</td>
<td>Start Date</td>
<td>Years Experience</td>
<td>Gender</td>
<td>Province/Region</td>
<td>Research Description</td>
<td>Duration</td>
<td>Type of Project</td>
<td>Other Information</td>
<td></td>
</tr>
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</tr>
<tr>
<td>R02</td>
<td>Microbiologist</td>
<td>12-Feb-18</td>
<td>Over 10 years</td>
<td>Female</td>
<td>Ontario</td>
<td>Training for hand hygiene for nurses. Working with our nursing department on improving hand hygiene and we had tried a number of different things and the issue of simulation training had come up I think probably because we’ve been talking to our sim lab about how we could incorporate hand hygiene into some of the other things that they were doing.</td>
<td>6 months</td>
<td>Pre-existing</td>
<td>33:51</td>
<td></td>
</tr>
<tr>
<td>R03</td>
<td>Health Services Researcher</td>
<td>15-Feb-18</td>
<td>5 to 10 years</td>
<td>Female</td>
<td>British Columbia</td>
<td>Increase public engagement for cancer program decision-making</td>
<td>2016 to about one month ago (26 months)</td>
<td>Pre-existing</td>
<td>30:14</td>
<td></td>
</tr>
<tr>
<td>R04</td>
<td>Assistant Professor</td>
<td>16-Feb-18</td>
<td>Over 10 years</td>
<td>Female</td>
<td>Manitoba</td>
<td>Inter-regional variation in patient flow performance</td>
<td>October 2013 to June 2015 (20 months)</td>
<td>New</td>
<td>32:23</td>
<td></td>
</tr>
<tr>
<td>R05</td>
<td>Associate Professor and Associate Director</td>
<td>27-Feb-18</td>
<td>Over 10 years</td>
<td>Female</td>
<td>British Columbia</td>
<td>To evaluate the outcomes and implementation of managed alcohol programs in Canada and we focused on outcomes. the outcomes that we focused on were housing alcohol use and related harm, health services, actually and policing services as well as quality of life and we were looking at in addition to those outcomes what are, what’s effective implementation of programs.</td>
<td>2011 to 2013 (24 months); grant awarded in 2013</td>
<td>Pre-existing</td>
<td>104:46</td>
<td></td>
</tr>
<tr>
<td>ID</td>
<td>Role</td>
<td>Dates</td>
<td>Position</td>
<td>Years</td>
<td>Province</td>
<td>Details</td>
<td>Duration</td>
<td>Type</td>
<td>Time</td>
<td></td>
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<tr>
<td>R06</td>
<td>Assistant Professor</td>
<td>13-Mar-18</td>
<td>Researcher</td>
<td>Over 10 years</td>
<td>Female</td>
<td>Ontario</td>
<td>was looking at some strategies we put into place as part of a whole team. So there were five different projects on a team and we were as part of a network. And we were interested in trying to examine the integrated knowledge translation within each of those projects so, I’m looking at an overview of across five projects</td>
<td>Over a year</td>
<td>New</td>
<td>36:20</td>
</tr>
<tr>
<td>R07</td>
<td>Associate Professor and Division Head</td>
<td>14-Mar-18</td>
<td>Researcher</td>
<td>Over 10 years</td>
<td>Female</td>
<td>Alberta</td>
<td>One is what are the barriers of the facilitators and the readiness of the population to uptake this policy? The second activity was; what kinds of tools and education sort of support uptake and we were to…examining the videos that the healthcare system had created to explain what advanced care planning was?; what should be measured to know whether implementation has been successful? And the forth question is; what are the healthcare…health economic consequences of the policy limitations?</td>
<td>2011 to 2013 (24 months)</td>
<td>New</td>
<td>38:50</td>
</tr>
<tr>
<td>R09</td>
<td>Assistant Professor and Scientist</td>
<td>22-Mar-18</td>
<td>Researcher</td>
<td>Over 10 years</td>
<td>Female</td>
<td>Halifax</td>
<td>To increase the capacity of frontline staff in acute care. So frontline staff, nursing staff, allied health and so on in caring for older adults with dementia and delirium, so sort of cognitive impairment. So trying to improve their capacity to care for those people, that population who are often in acute care on inpatient units, so surgical units, medicine unit, and things like that</td>
<td>one year</td>
<td>Pre-existing</td>
<td>32:17</td>
</tr>
<tr>
<td>ID</td>
<td>Position</td>
<td>Start Date</td>
<td>Role</td>
<td>Gender</td>
<td>Region</td>
<td>Objective</td>
<td>Timeframe</td>
<td>Existing Type</td>
<td>Time</td>
<td></td>
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<tr>
<td>R10</td>
<td>Associate Professor</td>
<td>28-Mar-18</td>
<td>Researcher</td>
<td>Female</td>
<td>Quebec</td>
<td>Objective was to try to implement an intervention that would aim to improve pain management in the emergency department</td>
<td>6 to 8 months</td>
<td>Pre-existing</td>
<td>32:56</td>
<td></td>
</tr>
<tr>
<td>U01</td>
<td>Executive Director</td>
<td>13-Feb-19</td>
<td>Research User</td>
<td>Male</td>
<td>Ontario</td>
<td>We initiated on the basis of grants that were funded that had a pre-specified KT plan and then we worked really hard to connect them up to specific knowledge users; it was a homecare focused research project</td>
<td>Not reported</td>
<td>Pre-existing</td>
<td>32:40</td>
<td></td>
</tr>
<tr>
<td>U02</td>
<td>Director</td>
<td>15-Feb-18</td>
<td>Research User</td>
<td>Male</td>
<td>Manitoba</td>
<td>Mobile app to track healthcare worker activities to assess healthcare worker's program</td>
<td>2 years</td>
<td>New</td>
<td>28:53</td>
<td></td>
</tr>
<tr>
<td>U03</td>
<td>Program Director</td>
<td>8-Mar-18</td>
<td>Research User</td>
<td>Male</td>
<td>Manitoba</td>
<td>Creation of an implementation handbook introducing [healthcare professionals’]s into primary care settings and family medicine practice. We’ve multi-partner project.</td>
<td>2012 to 2016 (4 years)</td>
<td>Some new pre-existing</td>
<td>22:20</td>
<td></td>
</tr>
<tr>
<td>U04</td>
<td>Regional Director</td>
<td>15-Mar-18</td>
<td>Research User</td>
<td>Female</td>
<td>Manitoba</td>
<td>What impacts panels sizes in primary care?</td>
<td>Six months to one year</td>
<td>Pre-existing</td>
<td>42:04</td>
<td></td>
</tr>
<tr>
<td>U05</td>
<td>Director</td>
<td>29-Mar-18</td>
<td>Research User</td>
<td>Female</td>
<td>Alberta</td>
<td>Evaluating usability of a technology that can help support dementia clients living in the community. Specifically, it was a GPS locator technology</td>
<td>Not reported</td>
<td>Pre-existing</td>
<td>29:54</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Position</td>
<td>Start Date</td>
<td>Type</td>
<td>Experience</td>
<td>Gender</td>
<td>Region</td>
<td>Details</td>
<td>Time</td>
<td>Relationship</td>
<td>Duration</td>
</tr>
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<tr>
<td>U06</td>
<td>Director</td>
<td>5-Apr-18</td>
<td>Research User</td>
<td>Over 10 years</td>
<td>Female</td>
<td>British Columbia</td>
<td>We’re working with the researcher through a foundation grant to develop what that whole protocol is actually could look like and how do we actually make things work; what are our particular areas of questions and interest that we want to have the answers to that would inform how we develop programs. How do we support people that we fund the teams where we’re requiring researchers and users to come together.</td>
<td></td>
<td>Not reported</td>
<td>36:35</td>
</tr>
<tr>
<td>U07</td>
<td>President and Chief Executive Officer</td>
<td>20-Apr-18</td>
<td>Research User</td>
<td>Over 10 years</td>
<td>Female</td>
<td>British Columbia</td>
<td>We’ve tried to articulate…in a memorandum of understanding between the two organizations in how we will partner together on, first of all, where in their strategic plan and our strategic plan there is synergy and areas of common interest in terms of serving the population. And then looking at education, research and practice and how those things come together...So that’s really what the MOU itself…puts in place some formal structures to enable that relationship to be built and developed.</td>
<td></td>
<td>Not reported</td>
<td>29:45</td>
</tr>
<tr>
<td>U08</td>
<td>Assistant Professor and Director</td>
<td>30-Apr-18</td>
<td>Research User</td>
<td>Over 10 years</td>
<td>Female</td>
<td>Ontario</td>
<td>Have interdisciplinary teams of clinicians who work with my health research methodology staff to identify and interpret the evidence and come up with recommendations.</td>
<td></td>
<td>Not reported</td>
<td>29:26</td>
</tr>
<tr>
<td>Code</td>
<td>Role and Title</td>
<td>Date (MM-DD)</td>
<td>Experience</td>
<td>Gender</td>
<td>Location</td>
<td>Description</td>
<td>Knowledge translation</td>
<td>Pre-existing</td>
<td>Timestamp</td>
<td></td>
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</tr>
<tr>
<td>U09</td>
<td>Senior Director, Strategic Partnerships and Priorities</td>
<td>01-May-18</td>
<td>Over 10 years</td>
<td>Female</td>
<td>Alberta</td>
<td>We’re quite known for our evidence informed products, resources, programs, education programs, etc. So not only have we been known for generating new evidence where there hasn’t been any or stimulating where new evidence should be inspired. We also synthesize and curate best evidence into, so we support some of that knowledge translation into where there’s tools and resource or practical both clinical or policy tools for our various stakeholder</td>
<td>Not reported</td>
<td>Pre-existing</td>
<td>32:54</td>
<td></td>
</tr>
<tr>
<td>U10</td>
<td>Director, Person Centre Care</td>
<td>04-May-18</td>
<td>Over 10 years</td>
<td>Female</td>
<td>Ontario</td>
<td>So that’s for patient reported outcomes, patient reported experience measures, patient engagement, nursing, psychosocial oncology, patient education, e-tools. So we work with many partners at all levels</td>
<td>Not reported</td>
<td>Pre-existing</td>
<td>35:50</td>
<td></td>
</tr>
<tr>
<td>U11</td>
<td>Director, Patient, Caregiver and Public Engagement</td>
<td>08-May-18</td>
<td>Over 10 years</td>
<td>Female</td>
<td>Ontario</td>
<td>To support patient engagement and health system user engagement in our own programs internally. And then we also have a knowledge translation specialist on staff who takes research around patient engagement best practices and what is effective and then does work to spread that around [provincial] health system</td>
<td>Not reported</td>
<td>Pre-existing</td>
<td>23:22</td>
<td></td>
</tr>
</tbody>
</table>
4.4.6 How was IKT initiated?

Participants were asked to describe how they identified partners during the initiation phase of their project. In particular, they were asked how they decided who to contact, or who should be a stakeholder of the project. One of the participants said that he presented the idea - in his case, a mobile application - at venues where he knew both researchers and research users would be present:

“Okay, so I began by presenting the idea of the [Product Name] at meetings where there were both researchers and also knowledge users. And so, I started through the venue I believe where it was a gathering already of knowledge users and researchers and you know weaseled my way onto the agenda so that I could put the idea out there and try and attract interest” (R01).

Fourteen of the participants said that they contacted pre-existing relationships to ask if they would be interested in being involved or in supporting the initiation or refer them to another potential interested individuals (R01, R02, R03, R05, R08, R09, R10, U01, U04, U05, U06, U07, U08, U09).

Some participants mentioned more structured approaches, such as conducting environmental scans, analyzing pilot data or conducting capacity building workshops on KT topics to attract interested parties:

“We did an environmental scan of some structural and population features for background and also some people would realize that this is actually moving along” (R04);

“So from the pilot data we had been able to identify the kind of the key players that would be partnering with us both from the patients side if you will and the health professional side. So here I mean the health professionals who work in the emergency department as knowledge users” (R10);

“Or when we were sitting, we’ve been offering knowledge translation capacity building workshops for researchers and users. And there was an opportunity [that] came up to actually study those workshops because there’s nothing actually in the literature particularly that talks about how successful it is to do capacity building workshops.” (U09).
Five participants answered that they had to establish a new relationship with partners (R01, R04, R06, R07 and U02). Whereas sixteen participants said they had a pre-existing relationship (C01, C02, R02, R03, R05, R08, R09, R10, U01, U04, U05, U06, U07, U08, U09, U10). One participant said that sometimes it is a new relationship and sometimes it is pre-existing when initiating a project within her role (U03).

One of the prompts for this question was to ask participants if the partnership was initiated by the researcher or the research user. Seven of the participants said that the partnership was initiated by research users (R03, R04, R05, R09, U05, U10, C01). Four participants said that it was initiated by researchers (R06, U05, U06, and U09). Others did not provide a response to this question.

Five participants said that research happens as an extension of the partnership or their relationship with partners, it is not a direct contact (R02, R09, U06, U08, C02).

“For many of them the partnerships have been pre-existing and...the research is in some ways an extension of the partnership” (R02);

“These people are involved from the out-set of when we start a project. So there are structures, there’s governance within my program within [Provincial Organization] at large and within sort of the [disease] field in our province which allows us to identify people and bring people on to the various, the individual guideline projects that we do” (U08).

Two participants mentioned that they contacted individual with a dual role, meaning that they have a role in both academia and clinical setting, or research and policy setting.

“So I’m thinking specifically back, I used a prior connection. I had people that I knew were not only researchers but they were also had some role in the [research user] in [Province]. So he sort of wore two hats; one hat as a researcher but one hat on the sort of advisory operations arm of [Provincial service]. So I used that relationship and that person who had this kind of dual role to take me from the medical side of things to the kind of operational knowledge user side of things and through that connection he introduced me to the non-physician operational people that would eventually support the project and become knowledge users on the project” (R01).
In some responses, there was discussion about having to convince or get partner buy-in to be involved in the project and having to explain why the product or service would be beneficial to the research user’s everyday work (R01, R03, R04, R10, U04). The convincing was mostly done by the researchers towards the research users.

“There are others in the organization but then sort of you know I needed to get buy-in and approval from them and convince them that they would use knowledge from the project and the organization would benefit from that” (R01).

“So here’s the results of this work or you know whether you’re building a toolkit or a framework or you know or whatever to help them. And so it’s like well, you need to keep on working with them to help them understand what that’s about and how it’s useful to them. And sometimes that’s the hardest piece because sometimes we don’t know either, right? And it’s still a work in progress” (R03).

“Finding existing meetings to bring it forward and then you know at the end of the day the biggest argument is but my patients are special or I’m special. And at the end of the day we said everybody’s special, help us determine what we mean by special and we got buy-in” (U04).

Nine out of the 22 participants pointed out that the partnership initiation really benefitted from in person meetings (R01, R04, R06, R07, R09, U06, U07, U09, C02).

“So that face-to-face component I think [is] always essential in building the trust, the human relationship part to move work forward across the multiple sectors and with people who don’t necessarily work alongside each other very frequently” (R07);

“I found more successful is at least to have an in-person kick-off ... I feel like when you see somebody face-to-face you’re less likely to maybe ignore that email or have it fall to the bottom of the list of things ... Like even if it’s a kick-off of a new project or something, just try to do in-person, try to get, even if you have to fly to the hospital in [another City] to do it” (U10);

“So it really depends on the situation and on the previous knowledge of one another. I personally think that it’s really important” (C02).
4.4.7 What activities or types of interaction took place during initiation?

When asked was about the types of activities that took place during initiation, the responses ranged from specific team building activities to more individually based activities such as identifying partners and taking on leadership roles.

4.4.7.1 Clarifying roles and responsibilities

Clarifying roles and responsibilities were activities that were reported as occurring in the very beginning of partnerships. Activities such as meetings, establishing committees, or creating project agreements were used to clarify roles and responsibilities (R01, R03, R04, R05, R07, U03, U04, U06, U07, U10, C02);

“Research charter or a project charter to help people feel that they’re clear about what their role is in association with the project and who else they might be able to call on when they’ve got issues they need to resolve” (R07);

“And then we drafted a MOU and it went back and forth between the two, the two organizations; ultimately [it] was discussed by our Board and was discussed by the [University 3] Board. And then the presidents and the board chairs of both organizations signed that off. And then we’ve used that to guide discussions between the two universities or between the two organizations since then. It you know I might say that it was really important at the beginning” (U07).

4.4.7.2 Research activities

Research activities such as applying for grants together or writing letters of support for the project (R01, R09, U06):

“The act of actually writing the letters of support together was also a way that we kind of ensured that we were all I think on board with the questions that we were asking and the way that we were gonna get the data. So there were lots of back and forth. as far as those letters go and the protocol and the application and it was all over email but it involved a lot of comments
and edits and they were probably five or six versions and it was the iterative process that kind of
developed the project” (R01)

“And you have this relationships that you just are, to me that’s the enabler to a great extent is we
have good working relationships just in general. And when we get on a grant with them it just
makes it easier to work” (U06)

4.4.7.3 Convincing and aligning

Ten of the participants said it was not the type of activity that was important, but the
ability to demonstrate the alignment of the idea with the research user organization’s goals and
priorities (R01, R06, R07, U01, U04, U05, U06, U08, U10, C01). This theme is somewhat
similar to the convincing theme, but it is specific about alignment of research user organizational
goals. This alignment is important because the research users are accountable to only approve
projects that are strategically aligned with the goals of their organization, which are publicly
funded. Some of the quotes from this theme were:

“I think it’s really important that at what phase are you when you are initiating a project, at
what phase is this particular research project in the context of other things that have already
gone on” (R06).

“So with the work we’ve done, we’ve created steering committees where we invite the health
system leads to review the research and the project periodically and to make sure that we’re
remaining aligned with their priorities and to seek their advice on what else they need to know,
where else we might be taking [from] the findings” (R07).

“Priorities might be set by government or by leadership in the organization. And so we were
looking to you know align with that or follow that” (U05).

“understanding a place in planning and science and being able to build the skills and use these
provincially, nationally and internationally to you know increase the use of a relevant health
research evidence. So everything that comes to us along those lines are things that we can
passionately say yes too. But you have to step back and go, we can’t say yes to everything. So
what is that actually, specifically we can improve what we’re doing as a foundation within this
province?” (U06).
Some of the participants said that a role of educator was sometimes necessary to make the other partners understand and align the idea to the priorities of the research user organizations. This theme was similar to convincing, because the research user would use the alignment to convince their superiors that the project is relevant to the organization’s goals, and thus, justifying their participation. In the role of educator, it was sometimes required to ask the researcher to go back and review specific documents describing the research user organizations’ priorities and come back with improved alignment:

“If a researcher came and said, hey let’s set some priorities up, I might say, you need to start with some of the key documents like in our case there’s [Provincial Health Priority Document]. You want to see what’s important to me, you go look at those documents and then come back and talk. So that’s part of, I find that part of my role is just educating researchers who want to make an impact…how do they engage in that conversation upon initiation because you might say, I’m really interested in some topic that isn’t even on the radar and you don’t line up to the you know the platform commitments or the budget commitments” (U01).

4.4.7.4 Provide opportunities for communication

Another theme that arose in seven of the interviews was to provision of opportunities for communications, such as teleconference, email, special events or workshops (R02, R03, R04, U08, U09, U10, C01):

“So we have some teleconferences, we do meetings, we send people email updates; for the [Local Group], we have education days twice a year where we bring other speakers in but we also use it as a mechanism for presenting results that people can think about.” (R02);

“And she [PI] would host more than one meeting just to make sure that everybody felt a part of the discussion and dialogue. Email was used quite a bit too… There were some working groups established and that was of course…that we gave feedback on where we saw ourselves in what working groups we would want to contribute or participate as partners” (U09);

“A good example of a partnered initiative where we would facilitate meetings and workshops and kind of one-on-one discussions with the program managers and the researchers” (C01).
Another important activity that was mentioned by five of the participants was to identify stakeholders that should or could be involved at the initiation phase (R04, R05, U05, U07, C01). A few quotes describe the activity of identifying stakeholders as a process that depends on the context and circumstances:

“So quite often we have to think about engaging our colleagues who are more at the frontlines of the service delivery side of things. And as well, sometimes we need to pull in appropriate partners from the ministry or even could sometimes even be from another ministry that where there’s relevance as well even outside of the [Ministry of Health] in [other] sectors [where] there’s multiple ministries that might have a role” (U05);

“work so closely with our different stakeholders going you know from ministries and academics to health system or whatever, we will, we do have kind of a standard analysis and then part of that is in terms of moving forward to your point; is then using that based on kind of doing horizontal scans or looking to see who else is in the funding in the area; is other emerging areas, so and we get data from different sources” (C01).

4.4.8 What factors enabled IKT initiation?

There were several enablers that emerged in the interviews listed below.

4.4.8.1 Role of leader

Taking a leadership role in initiating the partnership was an enabler that emerged in some of the responses from researchers, research users and connectors (R01, U07, U08, C01, C02).

“So I think you need consistent leadership. Because you have a lot of turn in your leadership group that would make this hard. And there was stability at the university and there was also stability in [Regional] Health in terms of leaders who were working on this. So there wasn’t a lot of hand-off in between” (U07);

“I would say for us it would definitely, well leadership will...be...always important” (C01).
4.4.8.2 Shared goals amongst researchers and research users

Another popular enabler that arose from the interviews was the idea of shared goals amongst the researchers and the research users themselves, or their organizations (R01, R06, R07, U01, U03, C01, C02):

“But I would say there is a process and the process is that you need to understand the knowledge user and what are they gonna do with the results. What do they want from you? What are, do they need to make their life easier? And try as much as you can when you’re thinking through about how ultimately you’re getting their input it’s obviously needs to be something that they’re really interested in or they’re not gonna consider it in their own portfolio” (R06);

“Identifying the common concern and identifying what everyone’s goal truly is” (U03);

“Strategic alignment, so is really wanting to partner with partners who are trying to achieve similar outcomes” (C01).

4.4.8.3 Early partnership formation and collaboration from the onset

Early partnership formation and collaboration from the onset and throughout the partnership (R05, R06, R09, U01, U04, U06, U07, U09, C01, C02) was a common enabler that arose in 10 interviews:

“I think you really, really have to do a good job at pre-initiation as well as when you actually initiate the research” (R05);

“So you know a really forward thinking research team will try to approach bureaucrats and try to do that very early co-design but it is enormously challenging mainly because of time availability of the policy-makers” (U01);

“It would be nice if some people first start thinking about these applications...what we tend to get is like a, you know, a one, maybe two page kind of summary of what the application is gonna look like. But you know it would have been helpful if we’d been brought in sometimes even earlier...And I mean the researcher, maybe you can’t always think ahead who you want to have as part of your group. But if we could have been part of that, it would have really helped to set us up and understand much clearer what they were working for and what they were doing.
[When] there are opportunities to bring in us in earlier, I think that would be really helpful” (U06);

“... to try and establish those kinds of relationships early on does make for successful approach at least...” (C02).

4.4.8.4 Trust and commitment

Another enabler that arose in the responses was trust and commitment, achieved by being responsive, respectful of time, planning face-to-face meetings, and maintaining credibility (R01, R05, R06, R07, U04, U07, U10, U11, C02):

“I showed respect that I reached out to them, that it was, I made an effort to come and meet with them to show my interest and engaging their support because without their engagement this really would not go anywhere. And so I think that that part is really important in reaching out as much as you can” (R06);

“But a lot of this is coming down to civility. Like how civil are we being with our colleagues? How do we set out a very clear scope of what we’re actually trying to accomplish; people are so busy. People don’t even have time to read documents before meetings or anything or be prepared anymore” (U10).

4.4.8.5 A pre-defined network and organizational capacity for network

Building a network to support initiation arose as an enabler. This was expressed as a pre-defined network of interested individuals or organizational capacity to build and support that network (R02, R03, R04, R05, R06, U01, U08, C01, C02):

“I guess a piece of that [beginning a partnership] is about knowing whose gonna say yes, and not approaching the people who are gonna say no” (R02);

“It’s getting the group to gum up to speed and feel like a group that over time [will] use the project as a means to sort of create that sense of community and commitment and I guess that sense of you’re doing it together” (U08).
4.4.8.6 Shared interest, synergy and passion

Similar to the theme of having shared goals among researchers and research users, another more specific theme that emerged was having a shared interest, synergy and passion for the subject matter (R07, R09, U04, U05, U011). This was different than shared organization goals but suggested a shared personal interest in a topic in addition to the shared organizational or institutional goals:

“Yah, so I think what helped is that it was their idea. Like this is something they were very passionate about and they just needed a researcher who they could work with and who sort of you know who could bring that research lens and bring some of the rigour and they thought their work would be more credible and so on. But this was something that they’re really, really interested in and passionate about, right?... having them really like be passionate about the topic and coming to me with the question and I had to help them refine it as a research question” (R09);

“We have kind of a synergy around shared interests definitely yah when there’s sort of a number of stakeholders who are seeing a potential benefit or a you know a key gap in knowledge that there’s agreement this needs to be addressed with sometimes you know that aligns quite nicely with a researcher[‘]s existing interests and quite often it seems to come together that way” (U04).

4.4.8.7 Funding opportunities

A common enabler that was reported by the participants were funding opportunities. The included funding opportunities to initiate the partnership and project (R01, U05, U06, U07, U08, C01, C02) and for travel at the beginning to meet partners face-to-face (R01, R02, R05, U01, C02):

“The funds to make the face-to-face visit, I had done through my university through a research initiation grant. Which specifically you know could fund things like this which was you know a flight and trip for a few days from [City] to [City] to meet people in-person and so that was an enabler for sure” (R01);

“Funding opportunity that’s well aligned” (U05);
“Just you have this relationships that you just are, to me that’s the enabler to a great extent is we have good working relationships just in general. And when we get on a grant with them it just makes it easier to work” (U06);

“So I would say that is kind of happens with the funding. So an example is that with one of our funding programs, the partnership in research and innovation for the health system, [name of program], it’s a partnered funding program between [province] and [health system organization] And we have at the beginning really co-designed the program to meet the health system need and then have facilitated meetings and workshops with researchers and where the program manager would meet with the research community and the health system every quarter” (C01).

4.4.8.8 Connectors, boundary spanners or mentors

Similar to the enabler of having a pre-defined network to initiate partnerships, another enabler mentioned by 11 participants was building or maintaining a relationship with individuals who act as connectors, boundary spanners or mentors between researchers and research users (R01, R03, R04, R05, R06, R07, R08, U01, U07, U08, C02);

“But if you have a matchmaker then there’s some trust and sort of prior history, prior knowledge of you through this person that makes the relationship much more to be successful I think. That’s right. And often these people I find who are connectors like have their hands in a lot of pots are often mentors and in my case that was certainly true. So they’re often senior members I find.” (R01);

“There’s the idea of the boundary spanner role, you know that somebody who spent time in multiple domains” (U01);

“The chair of the nursing program was a key person in this, in this process; very experienced researcher and have a lot of creditability in the practice environment. And so she was [one], [and] there were a few champions amongst the researchers that were really important” (U07).
4.4.8.9 Time

Time was reported as an enabler by many of the respondents. In specific, time to commit to the partnership and creating time-saving methods for busy research users to take part in the projects (R02, R04, R05, U04, U08, U10, U11);

“So a big piece of it is trying to organize the project so that you have minimal impact on clinical function, or organize it such that there is an actual benefit, the clinical function so that people are you know and then people do the research because there is a direct benefit or at least not much of an issue for them. You can’t go to primary clinical people and say, you know I need you to spend one day a week doing research to work on this research project for the next five years, right. It’s not gonna happen” (R02);

“You have to think broadly about how you can achieve the goal, the overall goal that you have while minimizing the impact on their time and making sure that their time is used wisely” (U08).

4.4.8.10 Value, respect and ownership, not a token

Building a sense of ownership arose as an enabler as well. This included making research users feel valued, respected, and have a sense of ownership over the research outputs (R02, R04, R05, R06, R07, R09, U04, U06, U07, U08, U09, U10, U11, C02):

“A big piece of what makes clinicians I think willing to be part of research enterprises is having their input valued and having their contribution valued. And so, there’s two part thing, right? There’s a piece about getting their input which is valuable and then there’s the piece about making sure that you are always recognizing their input and valuing it and so, and that, so that’s about being willing to provide information to them if they need it... it’s about personal relationships and about people feeling valued and about people knowing that the research group is there to help them too” (R02);

“I am feeling that partnerships are becoming token. So when we say partnerships they’d better be meaningful. If they’re not meaningful or if it’s a partnership to put on paper so you can get grant money, it doesn’t take a few of us too long to figure out that my engagement is of absolutely not important to you but was important to get the grant. So we need to really define what we mean by partnerships. Do you really want my involvement? Are you using my
involvement to get money? And what is the nature of the partnership? Is it one of consultation? Is it an equal decision-making?’ (U04);

“There’s...there is a real willingness from the researcher to engage with and openly dialogue with you know the end-users or the patients or the service providers or the policy-makers that that openness from the researcher absolutely has to be there. And if that’s there then it does allow for a lot more open dialogue and the you know the people who are engaged in the process can see value in what they’re doing and are much more willing to I think engage in an on-going fashion when that happens” (C02).

Along the same theme of respect, similar remarks were made about keeping a good track record by respecting time and being truthful about goals (R03, R09, U04, U06, U08, U09, U10):

“You know making sure that we’re very consciousness about people’s time you know for these conference calls for any asks that we have of them; if we want them to, I don’t know, review something or take a look at something or ask their opinion on something. We’re very respectful of that, of their time and their interests. So that I think is key.” (R03);

“And so I think that from the very beginning being explicitly clear on mutually beneficial objectives and then not allowing scope creep unless it’s all of the mutually understood and respected and formally added and keeping civil with you know difficult conversations in partnerships” (U10).

4.4.8.11 Shared language and culture

A shared language and culture was an enabler in some of the responses (R04, R05, R07, R10, U07);

“Being able to talk in each other’s language and I’m a bit, I probably am not as good as I used to be at being able to talk in non-research speak” (R05);

“First of all, it’s a practice driven environment even though research is an interest for lots of the practitioners and decision-makers in the health authority. The real drivers are about care and service delivery and it’s much more of a traditional organizational structure. Whereas at the
university, it’s more of a collection of faculty that you have in a university environment. And the drivers are very much they drive people to individual work. Where what we need in the health authority is more of a collective endeavour. So and then the other thing at the university is often the drivers push you towards curiosity driven research and there aren’t as many incentives to encourage a robust knowledge exchange strategies” (U07).

4.4.8.12 Research project as incentive

Using the research project as an incentive was enabler. This included presenting the partnership as a way for researcher users to stay up to date or for researchers to obtain tenure (R06, U08);

“They [Research Users] were very interested in being up to date and keeping in touch. And so particularly some in the community hospital saw this, a participation in a research project as a way of keeping up to date. So I think there was some motivation from their side that this would be one way [for] them [to] learn more about current practice and make sure that their own practice was up to date” (R06);

“[Outputs] can be published or they are published. So they’re always published on the [Provincial Organization] website of course but they’re also published in peer-reviewed journals... So I write many letters of promotion for clinicians moving to the next stage of their career and to ensure that that work and the website publications are counted as peer-reviewed publications” (U08).

4.4.8.13 Geographical proximity

Finally, geographical proximity was an enabler. This was expressed as being located close to the partners allowed for faster relationship building (R09, U04, C02):

“[Province] is really small, so we, you can always find a connection almost to sort of build the relationship even if it’s like you know your kids go to the same school or something like that. I’ve been really lucky out here because there’s a lot of informal, like everybody, I say everybody knows everybody and that sounds funny but it almost feels true” (R09).

“[City] is pretty small and depending on the question you tend to know who [to contact]. Often you know you got your key informants and it’s a bit like a web” (U04).
4.4.9 What factors were barriers to IKT initiation?

Below are the themes representing the barriers that emerged from the interviews.

4.4.9.1 High turnover of research users

One barrier mentioned was maintaining continuity in the project initiation due high turnover of individuals in research user organizations (R01, R04, R06, R09):

“When you know an organization like these, they are kind of reporting to their political master, their masters at the provincial level and you know those cycles are you know four years or shorter for our representatives in the government. And so I find sometimes they operate on like government cycles. And so sometimes when a government changes, like it did in [Province], it put a real sort of change in appetite for the project into the knowledge users” (R01);

“The other issue of course is there’s turnover, like as this project is way, way longer than I’m used too. There’s some regions where they’ve already switched over three times, [and that changes] who that individual is and they may not be as involved as the person who started there. (R04)”

4.4.9.2 One person representing a group

Another barrier was over-reliance on one person representing a research user group (R01, R04, U08):

“I felt that the partnership kind of, the partnership between me and that knowledge user organization suffered a little bit because it all of a sudden became dependant on that one link, that one person” (R01);

“But I would say that a lot of those partnerships and gathering of those folks for the different committees, I’m not convinced we have been completely representative of all of the clinic, if I focus on the clinicians specifically; representative of all the clinicians who are out there” (U08).
4.4.9.3 Enthusiasm waned over time

Another barrier was waning enthusiasm for the project over time and the challenge to keep enthusiasm after the first few meetings while still at the initiation phase (R01, R04, R05, U08):

“When you’re doing the initiation there’s a lot of hope I think and there’s a lot of things that you have to learn about each other. And so in that I would say one of the barriers is you can lose people if they don’t, if they don’t really understand that the project is about. Or if they feel like they don’t have input into the project” (R05);

“Difficult around being able to sustain their interest, their capacity to participate” (U08).

4.4.9.4 Competing priorities

Another barrier reported was research user engagement at the beginning of the partnership. Engagement was compromised by competing priorities that took away from research user engagement (R01, R02, R03, R05, R06, U01, U03, U04, U05, U08, C02);

“I was trying to engage with the group of people who had a really heavy responsibility load, they’re kind of looking after this, you know these giant [research user organization], they have really big fish to fry and this little you know [product] thing was interesting, innovative, could help them with their mission but probably represented less than one percent of you know what they had on their you know global agenda for the organization. So I feel a little bit of it was that I was competing with many, many other interests on the part of the particular knowledge users” (R01);

“There was at the same time an inter-professional collaboration project going on that was trying to utilize a lot of the resources and they had their own agenda” (U03);

“So don’t invite me to a meeting if it’s a topic I really don’t care about” (U04).

4.4.9.5 Administrative paperwork

One barrier that arose linked to the initiation phase was administrative paperwork to conduct research (R02, R10, U08):
“We’ve created these layers of necessary agreements that are now really onerous to maintain. I had in one of the great glories of life, I have an appointment at both [Hospital] and the [Larger Hospital Network]; I have data-sharing agreements with myself” (R02);

“I think I find now that I’m part of other groups but again they’re a larger network like networks where they actually have a dedicated person who can, you know they have a manager of the network. So I find that these groups are much better organized and have much more ability to document everything. You know either recording the meetings or having particular like very extensive minutes or even technical reports” (R10).

4.4.9.6 Personality of the researcher or research user

In addition, the personality of the researcher or research user were mentioned as potential barriers (R01, R05, U01, U07, U08, U09, U10):

“They [researchers] have the interpersonal skills, they know how to reach out to people, they prioritize the work with the partners; often that, you know their own expense you know of staying up late and doing extra work or you know being delayed on other things. But there are many researchers in my experience who do not have these skills” (R05);

“I’ve seen really effective professors who just are great at developing networks and those that are not and you know it feels a little inequitable that because of you know personality or you know introversion versus extroversion that you’re, you should not have that network that your colleagues do because they are more inclined to be you know meeting new people and expanding their network” (U01);

“Sometimes it doesn’t work. Sometimes you have to actually say to a particular person whose being you know disruptive or toxic in an environment, thank you very much but this isn’t working and you know. I don’t know what the best word be, to fire them?” (U08).

4.4.9.7 Lack of understanding of the research cycle or research culture

Another initiation barrier reported was the lack of understanding of the research cycle or research culture (R01, R06, R10, U01, U02, U07):
“Their [researcher users] timeline and expectation of knowledge is much shorter than the realities of clinical research... So you know they often need to make decisions quickly with kind of knowledge that’s right in front of them. And so I feel like the project like this where you’re asking them to participate in a clinical trial which might take you know a year or two to plan and another year or two to recruit enough patients and then six months after that to analyze the results and then publish data in a peer-review journal. I always get the sense that you know the knowledge users expectations and needs for knowledge is much shorter than our kind of practical limitations for clinical research. So I don’t really know you know what the solution to that is but it’s just something that I have noticed sometimes” (R01);

“And there’s the legislative framework that exists. You might have great model of care that has PSW’s doing something but maybe that doesn’t fit with you know how those health professionals are regulated and they can’t actually do that in practice outside of a research setting. So you know as that, UK science advisor said, law and economics are top dogs and if you don’t address those then you’re probably gonna have a tough time initiating relationships” (U01);

“You know people like me that don’t know anything about this [initiating partnerships] come up to researchers and go, blah, blah, blah, blah what do you think, right? And then you know the response that you get is either oh that’s really cool, I think I can help you or no” (U02).

4.4.9.8 Geographical distance

Geographical distance between the partners was reported as a barrier by two participants (R07, U07):

“Geographic disbursement. I think humans are still, we’re still wired for you know eye contact and body language and fulsome communication. So I think that working by phone or by skype link, tele link, whatever but through a computer is still challenging for all of us” (R07);

“So because we’re a smaller geographic health authority we’ve worked, we didn’t have a lot of bench strength at the time of in the organization to build a research endeavour. So we felt that what we needed to do was rather than duplicate and have research institutes within our organization; how could we work with the university that covered the same geographic areas that we did to together leverage the strengths of both organizations” (U07).
4.4.9.9 Misaligned goals, roles and expectations

A common barrier that was reported was misaligned goals, roles and expectations sometimes resulting from applying for grants without clearly defining the partnership (R05, R06, R09, R10, U03, U05, U06, U08, U09, U10):

“But it probably would have been worth to say, alright, just all on the same page here; this is what we think your role is on the study and is that something that you’re prepared to take on? Making it more explicit than what we did. And thinking right at the beginning where would be a home for this particular study” (R06);

“I think it would be very helpful though if there was a bit more upfront discussion on what expectations are. I kind of feel like sometimes we have to kind of make it up. It’s like so, here’s where we think we could help but we actually don’t necessarily know enough about your project.” (U06).

4.4.10 What strategies or interventions or tools support IKT initiation?

Participants were asked to share the types of strategies, intervention, or tools that they currently use or would like to use to support partnership initiation. In the instances when they did not use any strategies, interventions or tools for support, the participants were asked what types of strategies, interventions, or tools they would like to have available.

4.4.10.1 Shared forum or repository

The idea of a shared forum or repository where researcher users could share priorities and interest and be matched with researchers was one of the interventions mentioned that would be helpful for two of the respondents (R01, R07):

“I think a way for researchers to interact with knowledge users or to at least be able to identify who’s who within their particular fields would be useful…But if there were some kind of occasional events or databases along the lines of what I just spoke about but some way of bringing together researchers and policy-makers to talk about different knowledge gaps, knowledge needs and opportunities for working together. That might help a lot…But for there to be a shared place where the types of questions that are important or the type of innovative opportunities are available are kind of more visible…So if there was a way for policy-makers
and knowledge users to be able to kind of post or present their knowledge needs then there might be more pick up from researchers who want to try and fill that knowledge gap” (R01);

“[Network] really bringing together change agents, innovators, researchers, healthcare administrators; we in particular, topic areas for example, [specific areas] healthcare system. And so those were made a, they’re automatically a bit of a knowledge translation vehicle and a way to both seek collaboratives for a grant or people who are gonna help the success of any knowledge translation products that created to that grant. They’re the kind of people who are going to help to implement or move that forward. Not sure if that structure exists elsewhere in the country but it’s based out of similar work I think from the U.K. and Australia and other places” (R07).

4.4.10.2 Funding

Another intervention that was mentioned by two of the respondents was funding for non-research related activities for IKT partnerships, such as food or travel to make it easier to meet at lunch or in person (R07, U02):

“We’ve ended up using some of our research money for food because you cannot reward frontline clinicians with time they’re giving to your project. And if you’re bringing them together to do a piece of work in a room face-to-face we found being able to provide food, so you know muffins, coffee, nothing extravagant, pizza…[or other activities such as] data visualization” (R07);

“So I’ve been talking to the [National Specific Health Professionals Association] you know partners to buy into this. So one of the incentive is that we’ve been batting around would be you know a free conference for somebody [to get involved in project]” (U02).

4.4.10.3 Document, space or toolbox to identify interests

A third tool that was mentioned was a shared document, space, or toolbox, where researchers and research users could describe their interests, share knowledge gaps, have a ‘how to start IKT partnership information’ and a written checklist of how to start partnership at the very beginning (R01, R06, R07, R10, U02, U04, U06, U07, U09, C01). This was different than a
shared forum because it implies a written document or a how to tool rather than a shared space for interaction. Some of the quotes describing this were:

“Some people might say something like, well you know it would be great if there was some sort of clear document that you have that you would describe what your role is as a researcher and not just assume that it’s understood’ (R06);

“May be some kind of a list or documents that warns the researchers, okay whose never been involved in such a thing of what, you know what they need to pay attention too and you know intellectual property, patent, all these things. People may not think of this as they’re doing, as they’re writing the grants and stuff like that” (R10);

“Something that would be pretty amazing would be to have somebody write a document that says, so you think that you need to do research in any given area that you worked in. Here’s some of the questions that you need to ask, right? As opposed to you know you, you know an idiot’s guide to how to get research done” (U02);

“No, no one has ever sent anything on roles and responsibilities. nothing on that you know the whole idea of let’s talk first about who does what, when, how to the point of like location. How do the users get noted on publications such, none of that’s ever occurred. But…find rather interesting since the groups that we primarily work with are all heavily, at least for myself are all heavily involved in knowledge translation…not a translation scientist and practitioners and researchers. So knowing how we could be involved and potentially best practices around involving; I don’t necessarily see a lot of that actually to formally being followed through in being approached and working with them. It’s much more friendly, ad hoc you know kind of idea” (U06);

“there’s other documents out there that do talk about having those discussions up front is what are the responsibilities for each of the groups? What are the expectations? How do you handle publications? So that’s at the end but having those discussions at the beginning just helps to set-up that positive trusting relationship” (U06);
“Research that is being done on knowledge exchange, integrated knowledge exchange and what we’re learning about those processes have started to produce some models and some ways of approaching it; that first of all, give validity to the endeavour and also point to some of the things that need to be put in place to, can make integrated knowledge translation a reality... you know checklists and processes are all useful and they can help people get in off into the right direction” (U07);

"The role clarity and just understanding the roles and the different players and partners. You know we use charters a lot so improvement charters and you know a synthesis of what you know a little bit more than an abstract but a synthesis of what the intent of the research is, is usually really helpful... that shared value and also some shared understanding of what’s required from each. So it’s usually a discussion but I wouldn’t say it’s written in stone but there probably are some you know a checklist kind of a piece might be helpful so everybody’s clear who’s on first” (U09).

4.4.10.4 Other ideas

Other ideas that arose as tools or strategies were: spending time getting to know your team (R09); an IKT initiation model based on the literature (U07); funding for IKT partnerships (U05); and shared data agreements at the provincial level to cut down on administrative paperwork (U10).

4.4.11 Figure 2: Summary of interview feedback

All findings are summarized for better visualization in Figure 2 (page 105). They were grouped into the preset categories of processes, enablers and barriers, as was done with the meta-narrative review. Most of the processes and activities were gathered from Questions One, Two and Three, asking participants about their role in IKT partnerships, how partnerships were initiated and what activities took place in initiation. These were described in Figure 2 (page 105) as action words to represent an action that took place. Most of the enablers and barriers were gathered from Questions Four and Five asking specifically about these. However, some of the enablers and barriers were collected in other parts of the transcripts as participants drifted into the challenges they faced during initiation or what they suggested worked to overcome those challenges. Finally, all the suggested tools, strategies and interventions were gathered from
Question Six. These were ideas that participants had about what helped IKT initiation in their experience or what type of support they would like to see in IKT partnership initiation based on their experience.

There were two themes that were unique to the researcher group answers. These are marked with a square symbol ■ in Figure 2 (page 105). The first one was in response to question three: how was the partnership was initiated? Three researchers (R01, R04, R07) said that they contacted individuals with dual roles in the researcher and research user worlds. The second unique theme from researchers was the barrier of high turnover of staff in research user organizations (R01, R04, R06, R09). There were no themes unique to connectors.

The only answers unique to the research users were found in the strategies, tools or interventions suggested. These are marked by a triangle ▲ in Figure 2 (page 105) and included creating more funding for IKT partnerships (U05), creating a model of IKT initiation based on the literature (U05), and having shared data agreements at the provincial level to minimize time used for administrative paperwork when conducting IKT (U10).
Figure 2: Summary of interview feedback

<table>
<thead>
<tr>
<th>Processes</th>
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<tbody>
<tr>
<td>Identify stakeholders</td>
</tr>
<tr>
<td>Conduct research together as an extension of the partnership</td>
</tr>
<tr>
<td>Contact individuals with dual role of researcher and research user ■</td>
</tr>
<tr>
<td>Convince and get partner buy-in on research project</td>
</tr>
<tr>
<td>Initiate by researcher</td>
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<tr>
<td>Initiate by research user</td>
</tr>
<tr>
<td>In-person meeting</td>
</tr>
<tr>
<td>Clarify roles, responsibilities, scope of project, research question by meetings, committees, agreements</td>
</tr>
<tr>
<td>Apply for grants, write letters of support together</td>
</tr>
<tr>
<td>Align idea with research user organization’s goals; educate each other on how to align goals</td>
</tr>
<tr>
<td>Provide opportunities for communication and input</td>
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<thead>
<tr>
<th>Barriers</th>
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<tbody>
<tr>
<td>High turnover of stakeholders ■</td>
</tr>
<tr>
<td>Over-reliance on one stakeholder to represent a group</td>
</tr>
<tr>
<td>Enthusiasm wanes over time</td>
</tr>
<tr>
<td>Competing priorities</td>
</tr>
<tr>
<td>Administrative paperwork</td>
</tr>
<tr>
<td>Personality of researchers or research user</td>
</tr>
<tr>
<td>Lack of understanding of research cycle or culture</td>
</tr>
<tr>
<td>Geographic distance</td>
</tr>
<tr>
<td>Misaligned goals, roles, responsibilities</td>
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<table>
<thead>
<tr>
<th>Enablers</th>
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<tbody>
<tr>
<td>Leadership</td>
</tr>
<tr>
<td>Shared goals, roles, and responsibilities</td>
</tr>
<tr>
<td>Form partnership early and ensure collaboration lasts throughout</td>
</tr>
<tr>
<td>Trust, Commitment and Respect</td>
</tr>
<tr>
<td>Build a network well in advance and have organizational capacity to maintain network</td>
</tr>
<tr>
<td>Shared interest, synergy, and passion</td>
</tr>
<tr>
<td>Funding</td>
</tr>
<tr>
<td>Connectors, Boundary spanners, Mentors</td>
</tr>
<tr>
<td>Time (Try to minimize time for research user involvement)</td>
</tr>
<tr>
<td>Sense of ownership: make research users feel valued, respected, not a token</td>
</tr>
<tr>
<td>Share language and culture</td>
</tr>
<tr>
<td>Incentives</td>
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<tr>
<td>Geographic proximity</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Strategies, Tools, or Interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared forum, repository, space for matching research interests</td>
</tr>
<tr>
<td>Document, toolbox, or checklist of how to initiate IKT partnerships</td>
</tr>
<tr>
<td>Funding for partnerships ■</td>
</tr>
<tr>
<td>Funding for non-research related activities such as food or travel to encourage buy-in or participation</td>
</tr>
<tr>
<td>Spend time getting to know your team ■</td>
</tr>
<tr>
<td>A model based on the literature ■</td>
</tr>
<tr>
<td>Shared data agreements within the province to reduce paperwork ■</td>
</tr>
</tbody>
</table>

■ Researchers group only
▲ Research users only
4.4.12 Processes, enablers and barriers similar to meta-narrative review

Some of the processes and activities that were said to be important by the participants and that were also found in the meta-narrative review were: identify stakeholders (112, 117, 119, 121, 123); create an inventory of available skills (2, 112, 118, 119, 122, 125); conduct research together as an extension of the partnership (2, 69, 118, 120, 125); clarify roles, responsibilities, scope of project, etc. (2, 13, 69, 112-114, 119-121, 124, 125), apply for grants and write letters of support together (2, 124, 125); address possible power inequalities (119, 122, 124, 125); establish research questions (112, 113, 120, 121, 124, 125); create project management documentation (i.e. operating plan) (2, 25, 27); establish communication channels (2, 113, 116, 121, 123); and build organizational structures (118, 119, 121, 122).

For the enablers, the interviews provided some feedback that was similar to the meta-narrative results such as: shared goals, roles, and responsibilities (2, 69, 112, 113, 118, 119, 121, 122, 124, 125); trust, commitment, and respect (2, 13, 117, 120-122, 125); create a network in advance of the partnership (2, 13, 125); a shared language and culture (2, 125); funding (2, 112, 121, 125), support from connectors, boundary spanners and mentors (2, 115, 117-119, 122, 125, 126); and a sense of ownership of the research (69, 113, 118, 119, 123-125).

For the barriers, the interviews provided some feedback that was similar to the meta-narrative results, such as: high turnover of research users (2, 117, 121); personality of the researcher or research user (124); competing priorities (115, 117, 119, 124, 125), lack of understanding of the research cycle or culture (2, 117); misaligned goals, roles and responsibilities (2, 119, 121, 123-125); geographic distance between the stakeholders (2, 115), and enthusiasm waning over time which was expressed as lack of stakeholder engagement in the meta-narrative review (115, 117, 119, 120, 124).

4.4.13 Unique Processes and Activities: Individuals with dual roles

Some of the unique processes that emerged from the interviews that were not included in the results of the meta-narrative review were: contact individuals with a dual role in researcher and research user organizations (R01, R04, R07). Individual with dual roles were mentioned as an enabler in the meta-narrative review in the context of them being involved to enrich the
research team with skills (118). However, in the context of these interviews, it was mentioned as an activity to do at the very beginning of the partnership to obtain a perspective on the practicality of the idea (R01) and to create a network where to present the idea and identify other stakeholders (R01, R04, R07). It is interesting to note that only researchers mentioned these individuals with dual role as key stakeholders in creating a network and testing the idea at the very beginning. This may suggest that these researchers were new or removed from the policy or clinical environment and relied on individuals with a dual role to introduce them to the different environment, which is separate from academia.

Individuals with dual roles were mentioned in the broader literature about collaborations where they were said to act as enablers to translating knowledge produced in a research project into practice (127). They are also mentioned elsewhere in the literature as mentors, or intermediaries in building networks between researchers and research users that to help to speed up the process of diffusion of innovation (81).

4.4.14 Unique Processes and Activities: Align ideas with RU goals

The process to create shared goals, roles and responsibilities was also found in the meta-narrative review (2, 13, 69, 112-114, 119-121, 124, 125). However, what was different in the interviews was that researchers, research users and one connector all implied that it is the responsibility of the researcher to align the project idea with the knowledge user organization (R01, R06, R07, U01 U04, U05, U06, C01). Within this theme, there was also the idea of educating each other on how to align goals. The researchers said that they had to explain how the project was relevant to research users (R06, R07), and the research users said they had to educate the researchers on how to align their idea to their organization’s goals by pointing them to resources (U01, U04, U05, U06). The connector mentioned that they have a standard process of conducting a needs assessment or SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis to help the partners align (C01).

4.4.15 Unique Processes and Activities: Meeting in-person

Meetings were mentioned as an important enabler in the meta-narrative review (113, 120, 121, 123). However, it was unique in the interviews that participant expressed in-person meetings as a very important activity at the very beginning of the partnership (R01, R04, R06,
R07, R09, U06, U07, U10, C02). One person mentioned the in-person meeting once a year throughout the process as a beneficial (U06). One researcher mentioned that the in-person meeting was a turning point in the process that really changed things for the better in terms of moving the project forward and getting buy-in (R01).

### 4.4.16 Unique Processes and Activities: Convincing

A unique theme that emerged from the interviews is that of applying effort at the very beginning of partnership formation to convince the other partner that the proposed idea is beneficial for them and is worth their time. Convincing happens before the application for funding and includes many activities such as presentations at conferences (R01), articulating how the idea will be useful to research users (R03), planning to get on the agenda of meetings to pitch their idea to researchers and research users (R01, R04), act as a travelling salesman, meaning presenting the idea to different stakeholders until they obtain ‘buy-in’ from the person that is appropriate to and is interested in taking part in the project (R10). Although most of the participants who spoke about the convincing were researchers, one research user said that as a policy-maker this type of convincing was done by them while they looked for buy-in from practitioners, and had to explain why a certain project was beneficial for the practitioner’s patients (U04). The convincing activities appeared to influence the length of the initiation phase.

### 4.4.17 Unique Enablers: making research users feel valued not a token

An enabler that emerged from the interviews was making research users feel valued. In the meta-narrative review one of the enablers found was expressing or making partners understand the value of the research (2, 121, 124, 125). In the interviews however, the feeling of value was expressed towards the research user feeling valued by the team for their time and contributions (R02, R04, R05, R05, R06, R07, R09, U04, U06, U07, U08, U09, U10, U11, C02). Some suggestions from the researchers on how to make research users feel valued were to make it clear to clinicians that their input is important (R02, R06), the PIs should reach out to partners not delegate this part to a research assistant (R05), and approach it as everyone brings something to the table and no one is better than others (R09). The research users’ suggestions were to be clear about the purpose of the partnership and the level of the involvement of the research user (U04), have some interaction with the research user (U06), researcher needs to show commitment even if it means sacrificing some publications (U07), get partners involved in
design and thinking through what the evidence means (U08), make it clear that the researcher does not just want the logo of the organization on the application for grant (U09), do not use passive communication methods such as email or teleconference without providing room for the research user to contribute to the objectives (U10), and finally provide regular communications and updates (U11). The connector provided the insight that the researchers should ensure there is an open dialogue and engage with the research user (C02).

4.4.18 Unique Enablers: Establish partnership early

Although there was some evidence in previous studies that it was beneficial for partnerships to form early in the project planning process (2, 5, 87), these interview responses really emphasize this point. All groups of participants said that it was important to establish the partnership early on (R05, R06, R09, U01, U04, U06, U07, U09, C01, C02). Part of the establishing of partnerships included to be clear on collaboration and roles from all partners the beginning and throughout the process (R06, R09, U06). Understanding at the beginning proved to be beneficial to continued collaboration throughout (R06, R09, U01, U04, U06, U07, C01).

4.4.19 Unique Enablers: Minimize time for research user involvement

One of the themes that emerged from the interviews was for researchers to try and minimize the time commitment from research users’ involvement but still provided them with the opportunity to contribute. Researchers provided suggestions to accomplish this, such as organize the project so that input is sought and implemented but their time commitment is minimal (R02, R04, R05). Research users also suggested for researchers to reflect on how to minimize time commitment from research users but still have their say (U04, U08, U10, U11) via emails, meetings, getting involved in the planning stages of the research project.

4.4.20 Unique Enablers: Partnership as buy-in incentive

The idea of partner buy-in emerged in the enablers as well. Here, it was presented as using the partnership itself as an incentive. Some ideas expressed by the participants were to use a project, such as an assessment of practice guidelines use, and presented it as a method for clinicians to stay up to date in the research in this specific field (R06). Another research user presented their project to academic-clinicians as an incentive to publish outputs which would improve their chances of obtaining tenure (U08).
4.4.21 Unique Barriers: administrative paperwork

One barrier that was unique from the interviews was administrative paperwork to conduct research (R02, R10, U08). This barrier could be related to lack of time to engage in research from the meta-narrative review. However, lack of time alone did not really capture that the participants felt overwhelmed with the amount of paperwork for each research study and the fact that it is challenging to include partners from different organizations because it increased the paperwork. One participant suggested that having one team member responsible for the paperwork would be beneficial and encourage partnership (R10).

4.4.22 Tools, strategies and interventions

The tools, strategies and interventions that emerged from the interview results were unique to this study. They represent suggestions or ideas from Canadian stakeholders who have experience with researchers and research user partnerships on how to improve or support initiation. They include having a shared forum, repository, space or document where researchers and research users can populate their interests and interact to match each other for projects in which they are both interested in (R01, R07); on the same vein, a document, checklist or toolbox of how to initiate IKT partnerships (R06, R09, R10, U02, U04, U06, U07, U09, C01); funding for IKT partnerships (U05); funding for non-research activities such as food or travel to encourage buy-in and participation (R07, U02); spending time getting to know your team (R09); a model of how to initiate IKT partnerships based on the literature (U07); and shared data agreements within the province to allow reduction of paperwork for partnerships (U10).

4.5 Summary of Blended Findings

There were many overlapping processes, enablers and barriers that emerged in both the meta-narrative review and the interviews. In addition, there were aspects that were unique to the meta-narrative and interviews. The results of the two phases are blended in a visual representation in Table 6 (page 111), which displays what is overlapping and what is unique in the meta-narrative and the interviews, thus enriching the content of the meta-narrative results with feedback from Canadian experts in IKT partnerships.
<table>
<thead>
<tr>
<th>Table 6: Summary of Blended Findings</th>
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<tbody>
<tr>
<td><strong>Processes</strong></td>
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<tr>
<td>• Identify stakeholders/leaders</td>
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<tr>
<td>• Create an inventory of available skills</td>
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<tr>
<td>• Set priorities and expectations</td>
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<tr>
<td>• Address possible power inequalities</td>
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<tr>
<td>• Establish research questions</td>
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<tr>
<td>• Create project management documentation (i.e. operating plan)</td>
</tr>
<tr>
<td>• Establish communication channels</td>
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<tr>
<td>• Conduct/offer training</td>
</tr>
<tr>
<td>• Build organizational structures</td>
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<tr>
<td>• Identify risks and benefits of partnership (Team initiation)</td>
</tr>
<tr>
<td>• Convert tacit to formal or individual to collective knowledge (Knowledge transfer)</td>
</tr>
<tr>
<td>• Contact individuals with dual roles</td>
</tr>
<tr>
<td><strong>Enablers</strong></td>
</tr>
<tr>
<td>• Build a sense of ownership</td>
</tr>
<tr>
<td>• Develop clear and agreed upon goals, roles, expectations and vision for the partnership</td>
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<tr>
<td>• Personality of researchers and research users</td>
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<tr>
<td>• Support from stakeholders</td>
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<tr>
<td>• Commitment to partnership/leadership</td>
</tr>
<tr>
<td>• Formal training of team members’ knowledge and skills</td>
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<tr>
<td>• Organizational structure or policy framework that supports researcher and researcher user collaboration</td>
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<tr>
<td><strong>Barriers</strong></td>
</tr>
<tr>
<td>• Lack of time</td>
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<tr>
<td>• Differing understanding/interpretations of IRB regulations</td>
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<tr>
<td>• Lack of stakeholder engagement</td>
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<tr>
<td>• Different needs/priorities among researchers and research users</td>
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<tr>
<td>• Unclear goals, roles and expectations</td>
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<tr>
<td>• Lack of incentives to participate</td>
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<tr>
<td>• Lack of continuity due to staff turnover or infrequent meeting attendance</td>
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<tr>
<td>• Attitudes about researchers or the value of research</td>
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<tr>
<td>• Issues of power</td>
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<tr>
<td>• Conflict of interest</td>
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5 Discussion

5.1 Overall findings

All participants, including researchers, research users and connectors, acknowledged a distinct initiation phase of IKT partnerships. They also said that IKT initiation was challenging. Common processes undertaken to initiate IKT partnerships were identify stakeholders that should be involved in the partnership; create an inventory of available skills; clarify roles, responsibilities and scope of project; and establish the research question as a team. Enablers mentioned by most participants included sharing goals, roles, and responsibilities among researchers and research users; earning trust, commitment, and respect; having support from connectors, boundary spanners and mentors; and building a sense of ownership of the research. Numerous barriers of IKT initiation were noted, most often experiencing competing priorities among researchers and research users or their organizations; similarly, having misaligned goals, roles and responsibilities; and enthusiasm waning over time, which was expressed as lack of stakeholder engagement.

To enable and support IKT initiation, researchers recommended a shared forum, repository, space or document where researchers and research users can populate their interests and interact to match each other for projects in which they are both interested in; spending time getting to know the team. Research users recommended funding for IKT partnerships; building a model of how to initiate IKT partnerships based on the literature; and having shared data agreements within the province, to reduce paperwork for partnership initiation. Researchers and researcher users largely articulated similar enablers and barriers; they differed where researchers mentioned a high turnover of stakeholders in research user organizations as a barrier. These findings confirm existing published research that was synthesized via a meta-narrative review. The findings also extend current knowledge by having identified contact individuals with dual roles at the very beginning of the partnership initiation; using the partnership as an incentive for tenure or professional development, and too much administrative paperwork as a deterrent to
initiation. In addition, the role of connector was identified by two of the participant as distinct from either researcher or research users, but equally contributing to partnership initiation.

There were hypothetical outcomes discussed as linked to the initiation of partnerships, such as increased understanding of the research value, or increased mutual understanding of research goals. However, neither the review nor the interviews identified short-term, intermediate, or long-term impact of IKT initiation on outcomes.

The results of the review are similar to other studies of IKT in several ways. There was another study conducted comparing and contrasting the histories and traditions of IKT and community based participatory research in 2017 (78). In the study by Jull et al. the co-creation of knowledge by researchers and research user to increase knowledge uptake was found to be a common aim in the two approaches (78). However, the initiation phase of the partnership was not the focus of the study. A recent scoping review of 596 KT studies from 2000 to 2016 found that 159 theories, models or frameworks that relate to KT were only used in five or fewer studies, with 60% used only once (128). Similarly, this study did not find any underlying theory to initiation.

While there are commonalities to others’ findings, this review is novel in several ways: it was the first review of a systematic nature to focus on the IKT initiation stage specifically; and, as a meta-narrative review, it compiled and compared data on how IKT initiation has been conceptualized and studied from a variety of disciplines. From this review, it is clear that more work is needed to conceptualize and refine IKT initiation – and, likely other stages of IKT. A key output of this review was an enhanced conceptual framework of IKT initiation generated from the compilation of knowledge from different research traditions (Figure 1, page 70). Researchers or research users interested in establishing IKT partnerships can draw on the blended findings to plan IKT initiation activities, anticipate challenges and identify performance measures or relevant outcomes.

Phase 2, the interviews with the IKT experts in Canada had some similarities with other studies as well. A qualitative study was conducted in Sweden with data gathered from September to November 2011 from 17 participants at the later stages of 20 different researcher and research user projects that were at the end stage (127). The study’s main focus was the different types of collaborations that exist between researchers and research users, including to develop the
research design, to engage partners at different levels of the research project, via dual roles of researchers and research users, via educational activities, and via collaboration with next of kin or patients (127). This thesis focused on the initiation phase of partnerships between researchers and research users rather than the type of collaboration that develops at later stages of the project.

5.1.1 IKT Partnership initiation phase duration

The partnership initiation phase was described as lasting from about six months to several years. This is similar to other studies, which looked at IKT partnerships that were at least 2 years and up to 8 years (2). It suggested however, that some of the partnerships which had to be newly established and did not have pre-existing relationships took a long time to establish, such as six years (R01) or about four years (U03). It is interesting to note that most of the participants had pre-existing partnerships (72.7%), however the partnership still took at least six months to form. This speaks to the amount of time it takes to establish the purpose, goals, roles, responsibilities and communication channels when multiple partners were involved in projects, even when the stakeholders were already identified in a pre-existing relationship. It also speaks to the complexity of initiation and warrants further exploration and validation.

5.2 Strengths and Limitations

5.2.1 Meta-narrative review

Strengths of this research include the use of rigorous review methods, including duplicate screening and data extraction (93), compliance with standards for literature searching (95) and adherence to reporting standards for meta-narrative reviews (91). Still, a few issues may limit the interpretation and use of these findings. Although we searched multiple relevant databases and the references of all included reviews, we may not have identified all relevant studies. As noted earlier, studies relevant to IKT are not well-indexed (5). To enhance feasibility, we included reviews and may have missed relevant primary studies.

5.2.2 Interviews

Strengths of this research include the unique focus on IKT partnership initiation and the feedback gathered from Canadian stakeholders in this field. A few limitations arose during the study. Although we searched the literature and created an interview guide for researchers and
research users, a separate group arose that was not foreseen, the two connectors. These individuals felt that they were neither researchers not research users, but wanted to participate in the study because of their experience with these types of partnerships and indeed, they provided useful feedback. We may have missed other connectors by phrasing our information letter as recruiting just researchers and research users. Another limitation may have been our recruiting strategy. Unless individuals received IKT funding via CIHR’s PHSI grant or were part of Dr. Ian Graham’s IKTR Network, they were not contacted. There may be many individuals who were involved in IKT or would like to be involved in IKT but did not receive funding that were not contacted or aware of this study. A third limitation was restricting our years of experience in researcher and research user partnership initiation to a minimum of 5 years. We have missed individuals who are less experienced but have insights on planning and conducting IKT partnerships while learning to navigate the IKT network in Canada.

5.3 Implications for practice and research

Implications for practice can be generated from the results of this thesis. Table 6 (page 110) the summary of blended findings, can be used as a guide by both researcher and research user organizations when planning for IKT partnerships. This guide has potential to decrease initiation time if planning for the processes and enablers, and anticipating and avoiding the barriers, is accomplished early in the partnership. Some suggestions of how this can be accomplished was by scheduling meetings in several formats, for example In particular, the findings showed that researchers should ensure that researcher users do not feel like a token in the partnership, and ensure there is opportunity for active participation teleconference and follow up by email; ensuring that the research user is involved at the very beginning of the partnership, for example in the grant proposal stage and not request partnership after the project goals and responsibilities are set; and finally researchers can be better prepared by familiarizing themselves with the research user organization’s strategic documents and priorities to ensure that the project is aligned with these. A potential role for connector organizations could be to ensure that researchers are aware of research user strategic documents and help them prepare project proposals that are aligned with potential research user organization goals and priorities.

The findings also showed that research users can improve initiation by creating a list of priorities and participating only in a few selected projects, if time is a constraint; they can
explore funding opportunities for the initial meetings to take place in person; and they could work on succession planning so that high turnover would not impact project continuity.

In addition, some recommendations can be made from the findings. The researchers, research users and connectors can follow these recommendations for practice that were drawn from the interview responses, which were given by Canadian experts in IKT:

- Researcher, research user, and connector organizations should explore the creation of a space or forum at the national level where researchers and research users can create profiles based on their research interests. This space or forum would allow researchers, research users and connectors to understand what types of opportunities for collaboration are available and save personal time spent trying to find individuals who may be interested in similar ideas or share common goals.

- Researchers, research users, and connectors can work together to create a document or checklist on IKT partnership initiation best practices. In addition to this research, a peer-reviewed document or checklist that provides support on initiation would be beneficial.

- Researchers, research users, and connectors should explore opportunities to create further funding for IKT partnerships, which can target initiation challenges such as travel for face-to-face meetings, provide food for lunch time meetings, and perhaps other professional development incentives.

Implications for research can be made by highlighting issues identified in the meta-narrative review that warrant ongoing research. While a meta-narrative review is meant to describe how a phenomenon has been conceptualized, that information was not always detailed in the included reviews and the primary research they synthesized, thus conceptual issues related to IKT initiation remain vague, and we lack definitive knowledge of how to undertake IKT initiation in a way that achieves proposed associated outcomes. The following are research projects that should be explored further based on the findings:

- Conduct primary research of an exploratory nature to identify or generate theory relevant to IKT initiation. Regardless of several longstanding research traditions focused on IKT, there has been little conceptualization of the initiation phase.
• Research is needed to define and describe IKT initiation, and identify short-, intermediate, and long-term outcomes and the determinants of those outcomes.

• The duration period of initiation was reported to be anywhere between six months to six years. More research is required to identify what initiation means to different stakeholders and the specific tasks associated with it.

• Another implication for research is to explore how to overcome the barriers that are currently experienced in Canada. For example, explore how to obtain more funding for IKT partnership initiation; how to provide other types of support for IKT partnership initiation, such as a forum for sharing ideas and meeting others with similar ideas, or simply how to provide a forum for further discussion on the processes, enablers, barriers of IKT partnership initiation at the national level.

5.4 Conclusion

The purpose of this thesis, to explore IKT partnership initiation to understand and provide guidance on how to optimize the process, was met. IKT partnership initiation remains a challenging process and more research is warranted. Phase 1 of this study, the meta-narrative review, met the objective to gather the processes, enablers and barriers of researchers and research user partnership initiation by exploring the social sciences and healthcare literature. Phase 2 of this study met the second objective, to elaborate on the findings of the meta-narrative review by gathering feedback from IKT partnership stakeholders in Canada. A multi-methods approach was used to arrive at the blended findings, which can be used as a guide for researcher and research user organizations to plan more efficiently and effectively. Similar studies exploring the initiation stages of partnerships are warranted to validate these findings by comparing the processes, enablers, barriers and outcomes of initiation found, and exploring any related outcomes. Implications for practice include better planning of initiation by researchers being better prepared to align the projects with research user organizations, and research users to prioritize participation in projects when time is a constraint and have better succession planning if turnover is expected. Implications for research include exploring initiation further for theory building and to measure short-, intermediate and long-term outcomes.
Appendix A: RAMESES guidelines for meta-narrative review reporting

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<th>Heading</th>
<th>Description</th>
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</thead>
<tbody>
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<td><strong>1 TITLE</strong></td>
<td>In the title, identify the document as a meta-narrative review or synthesis</td>
<td>i</td>
</tr>
<tr>
<td><strong>2 ABSTRACT</strong></td>
<td>While acknowledging publication requirements and house style, abstracts should ideally contain brief details of: the study's background, review question or objectives; search strategy; methods of selection, appraisal, analysis and synthesis of sources; main results; and implications for practice.</td>
<td>ii</td>
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<tr>
<td><strong>INTRODUCTION</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>3 Rationale for review</strong></td>
<td>Explain why the review is needed and what it is likely to contribute to existing understanding of the topic area.</td>
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<tr>
<td><strong>4 Objectives and focus of review</strong></td>
<td>State the objective(s) of the review and/or the review question(s). Define and provide a rationale for the focus of the review.</td>
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<td><strong>METHODS</strong></td>
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<td><strong>5 Changes in the review process</strong></td>
<td>Any changes made to the review process that was initially planned should be briefly described and justified.</td>
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<tr>
<td><strong>6 Rationale for using meta-narrative review</strong></td>
<td>Explain why meta-narrative review was considered the most appropriate method to use.</td>
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<tr>
<td><strong>7 Evidence of adherence to guiding principles of meta-narrative review</strong></td>
<td>Where appropriate show how each of the six guiding principles (pragmatism, pluralism, historicity, contestation, reflexivity and peer review) have been followed.</td>
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<tr>
<td><strong>8 Scoping the literature</strong></td>
<td>Describe and justify the initial process of exploratory scoping of literature.</td>
<td>32-33</td>
</tr>
<tr>
<td><strong>9 Searching processes</strong></td>
<td>While considering specific requirements of the journal or other publication outlet, state and provide a rationale for how the iterative searching was done. Provide details on all the sources accessed for information in the review. Where searching in electronic databases has taken place, the details should include (for example) name of database, search terms, dates of coverage and date last searched. If individuals familiar with the relevant literature and/or topic area were contacted, indicate how they were identified and selected.</td>
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<tr>
<td><strong>10 Selection and appraisal of documents</strong></td>
<td>Explain how judgements were made about including and excluding data from documents, and justify these.</td>
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<tr>
<td><strong>11 Data extraction</strong></td>
<td>Describe and explain which data or information were extracted from the included documents and justify this selection.</td>
<td>36, Appendix C, p.126, Appendix D, p. 127-128</td>
</tr>
<tr>
<td><strong>12 Analysis and synthesis processes</strong></td>
<td>Describe the analysis and synthesis processes in detail. This section should include information on the constructs analyzed and describe the analytic process.</td>
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<td>RESULTS</td>
<td>DISCUSSION</td>
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<tr>
<td>------------------------------------------------------</td>
<td>----------------------------------------------------------</td>
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<tr>
<td><strong>13 Document flow diagram</strong></td>
<td><strong>16 Summary of findings</strong></td>
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<tr>
<td>Provide details on the number of documents assessed for eligibility and included in the review with reasons for exclusion at each stage as well as an indication of their source of origin (for example, from searching databases, reference lists and so on). You may consider using the example templates (which are likely to need modification to suit the data) that are provided.</td>
<td>Summarize the main findings, taking into account the review's objective(s), research question(s), focus and intended audience(s).</td>
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<tr>
<td><strong>14 Document characteristics</strong></td>
<td><strong>17 Strengths, limitations and future research</strong></td>
<td></td>
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<tr>
<td>Provide information on the characteristics of the documents included in the review.</td>
<td>Discuss both the strengths of the review and its limitations. These should include (but need not be restricted to) (a) consideration of all the steps in the review process and (b) comment on the overall strength of evidence supporting the explanatory insights which emerged. The limitations identified may point to areas where further work is needed.</td>
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<tr>
<td><strong>15 Main findings</strong></td>
<td><strong>18 Comparison with existing literature</strong></td>
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<tr>
<td>Present the key findings with a specific focus on theory building and testing.</td>
<td>Where applicable, compare and contrast the review's findings with the existing literature (for example, other reviews) on the same topic.</td>
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<tr>
<td><strong>19 Conclusion and Recommendations</strong></td>
<td><strong>19 Conclusion and Recommendations</strong></td>
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<tr>
<td>List the main implications of the findings and place these in the context of other relevant literature. If appropriate, offer recommendations for policy and practice.</td>
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<tr>
<td><strong>20 Funding</strong></td>
<td><strong>20 Funding</strong></td>
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<td>Provide details of funding source (if any) for the review, the role played by the funder (if any) and any conflicts of interests of the reviewers.</td>
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Appendix B: Search Strategies

Database(s): Ovid MEDLINE: Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE® Daily and Ovid MEDLINE® 1946-Present

Search Strategy: as of June 9, 2017

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AFTER DE-DUPLICATION

120
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Appendix C: Meta-narrative review data extraction form

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<th>Sub-elements (add additional columns)</th>
<th>Definition</th>
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<td>Last name of first author</td>
</tr>
<tr>
<td>Year</td>
<td>---</td>
<td>Year study was published</td>
</tr>
<tr>
<td>Country</td>
<td>---</td>
<td>Country of first author</td>
</tr>
<tr>
<td>Partnership</td>
<td>Partnership name and description</td>
<td>The study needs to describe an IKT partnership between researchers and research users. The term that refers to the partnership may vary and should be noted</td>
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<tr>
<td></td>
<td>Type, Purpose or goals of the review, number of articles included</td>
<td>Type of review (systematic, scoping, meta-analysis, etc.) State review purpose and goals How many articles were included?</td>
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<td>Year covered by literature search</td>
<td>What years were covered in the search strategy?</td>
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<tr>
<td></td>
<td>Participants description</td>
<td>Who participated in the project? Researchers/Research users Demographic information such as gender, job title,</td>
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<td>IKT Initiation stage</td>
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<td>Did they formally or informally evaluate the initiation and report challenges they had at the initiation stage? List all processes, enablers of and barriers to the initiation and how they were measured, if possible</td>
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<td>IKT initiation outcomes</td>
<td>What were the outcomes of the IKT initiation?</td>
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<td>What is the primary discipline of the authors? (Health services research, social sciences, other)</td>
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<td>Theory</td>
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Appendix D: Meta-narrative review data extraction form: an example of a review article

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<td>Partnership</td>
<td>Partnership name and description</td>
<td>IKT: an ongoing relationship between researchers and decision-makers (clinicians, managers, policy-makers, etc) for the purpose of engaging in a mutually beneficial research project or program of research to support decision making (from Kothari et al, 2013)</td>
</tr>
</tbody>
</table>
| Type, Purpose or goals of the review, number of articles included | Type: scoping review Purpose:  
• to characterize the nature of research in this area (IKT),  
• to describe IKT strategies that were empirically evaluated,  
• to reveal whether sufficient research is available to undertake a systematic review of the effectiveness of various IKT approaches,  
• to identify knowledge gaps for future IKT research  
Number of articles reviewed: 13 |
| Years covered by literature search | 2005-2014                           |            |
| Participant description | How were the participants in the studies reviewed described?  
• Researchers:  
• Research users described as: organization or system-level decision-makers including clinician managers, health facility managers, and policy-makers |
| IKT initiation stage | Did the study specifically mention initiation?  
• Yes. Describes as ‘formation stage’ |
| IKT initiation processes, barriers and/or enablers | Processes (from the literature review):  
• Evidence briefs  
• Web portal  
• Consultation  
• Deliberative dialogue  
• Priority-setting  
• Training sessions  
• Applying for funding  
• Joint research  
• Committees, boards, or working groups  
• Meetings (conferences, presentations, workshops)  
Barriers  
• Differing needs and priorities (5)  
• Lack of skill in understanding of IKT process (5)  
• Attitude about researchers or the value of research (4)  
• Goals, Roles, expectations not clear (3)  
• Lack of incentives to participate (3)  
• Lack of funding or infrastructure of IKT (2)  
• Little continuity of involvement due to staff turnover, infrequent attendance (2)  
• Participants are busy with multiple responsibilities (1)  
• Geographic distance imposes limits on interaction (1)  
Enablers:  
• Multiple and varied opportunities for interaction (4) |
<table>
<thead>
<tr>
<th>IKT initiation outcomes</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Strong leadership commitment, skill and experience (3)</td>
<td>• Capacity developed by researchers and research users (7)</td>
</tr>
<tr>
<td>• Phased approach to develop shared language, achieve early successes (3)</td>
<td>• Research users grew to value research (4)</td>
</tr>
<tr>
<td>• Support from facilitators, champions, and boundary spanners (2)</td>
<td>• Developed an appreciation for the collaborative process (3)</td>
</tr>
<tr>
<td>• Clear and agreed upon goals, roles, and expectations (2)</td>
<td>• Enhanced relevance of the research (3)</td>
</tr>
<tr>
<td>• Immersion of researchers in research users setting/co-location (2)</td>
<td>• Research user involvement sustained throughout entire process (2)</td>
</tr>
<tr>
<td>• Establish partnership early in the research process (1)</td>
<td>• Enhanced mutual understanding of language, work style, needs, and constraints (2)</td>
</tr>
<tr>
<td>• Openness of partners to listen, learn, and adapt (1)</td>
<td>• Number of collaborative projects undertaken/completed (2)</td>
</tr>
<tr>
<td>• Organizational support for research users to meaningfully contribute (1)</td>
<td>• Influenced policy-making (2)</td>
</tr>
<tr>
<td>• Dedicated funding (1)</td>
<td>• Influenced service delivery (2)</td>
</tr>
<tr>
<td>• Shared governance structures (1)</td>
<td>• Increased diversity of involved partners (1)</td>
</tr>
<tr>
<td>• Built on pre-existing relationships (1)</td>
<td>• Strengthened relationship, trust and goodwill (1)</td>
</tr>
<tr>
<td>• Availability of data to inform activities (1)</td>
<td>• Emergence of community leaders (1)</td>
</tr>
<tr>
<td>• Periodic external reviews to assess progress (1)</td>
<td>• Research user involvement varied across (1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Healthcare/Implementation Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theory</td>
<td>---</td>
</tr>
<tr>
<td>---</td>
<td>One or more explicitly named theories</td>
</tr>
<tr>
<td>• No</td>
<td>Benefits only beginning to emerge (1)</td>
</tr>
</tbody>
</table>
Appendix E: COREQ checklist

A checklist of items that should be included in reports of qualitative research. You must report the page number in your manuscript where you consider each of the items listed in this checklist. If you have not included this information, either revise your manuscript accordingly before submitting or note N/A. **Topic**

|----------|-------------------------------|----------------------|

**Domain 1: Research team and reflexivity**

### Personal characteristics

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Which author/s conducted the interview or focus group?</td>
<td>37</td>
</tr>
<tr>
<td>2</td>
<td>What were the researcher’s credentials? E.g. PhD, MD</td>
<td>37</td>
</tr>
<tr>
<td>3</td>
<td>What was their occupation at the time of the study?</td>
<td>37</td>
</tr>
<tr>
<td>4</td>
<td>Was the researcher male or female?</td>
<td>37</td>
</tr>
<tr>
<td>5</td>
<td>What experience or training did the researcher have?</td>
<td>37</td>
</tr>
</tbody>
</table>

### Relationship with participants

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>6</td>
<td>Was a relationship established prior to study commencement?</td>
<td>37</td>
</tr>
<tr>
<td>7</td>
<td>What did the participants know about the researcher? E.g. personal goals, reasons for doing the research</td>
<td>37</td>
</tr>
<tr>
<td>8</td>
<td>What characteristics were reported about the interviewer/facilitator? E.g. Bias, assumptions, reasons and interests in the research topic</td>
<td>37</td>
</tr>
</tbody>
</table>

**Domain 2: Study design**

### Theoretical framework

<table>
<thead>
<tr>
<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>9</td>
<td>What methodological orientation was stated to underpin the study? E.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis</td>
<td>37-38</td>
</tr>
</tbody>
</table>

### Participant selection

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>How were participants selected? E.g. purposive, convenience, consecutive, snowball</td>
<td>38-39</td>
</tr>
<tr>
<td>11</td>
<td>How were participants approached? E.g. face-to-face, telephone, mail, email</td>
<td>39,41</td>
</tr>
<tr>
<td>12</td>
<td>How many participants were in the study?</td>
<td>42</td>
</tr>
<tr>
<td>13</td>
<td>How many people refused to participate or dropped out? Reasons?</td>
<td>42</td>
</tr>
</tbody>
</table>

### Setting

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>14</td>
<td>Where was the data collected? E.g. home, clinic, workplace</td>
<td>42</td>
</tr>
<tr>
<td>15</td>
<td>Was anyone else present besides the participants and researchers?</td>
<td>42</td>
</tr>
<tr>
<td>16</td>
<td>What are the important characteristics of the sample? E.g. demographic data, date</td>
<td>70-71, Table 5 p. 76-81</td>
</tr>
</tbody>
</table>

### Data collection
<table>
<thead>
<tr>
<th>Interview guide</th>
<th>17</th>
<th>Were questions, prompts, guides provided by the authors? Was it pilot tested?</th>
<th>41</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repeat interviews</td>
<td>18</td>
<td>Were repeat interviews carried out? If yes, how many?</td>
<td>42</td>
</tr>
<tr>
<td>Audio/visual recording</td>
<td>19</td>
<td>Did the research use audio or visual recording to collect the data?</td>
<td>41</td>
</tr>
<tr>
<td>Field notes</td>
<td>20</td>
<td>Were field notes made during and/or after the interview or focus group?</td>
<td>43</td>
</tr>
<tr>
<td>Duration</td>
<td>21</td>
<td>What was the duration of the interview or focus group?</td>
<td>71, Table 5 p. 76-81</td>
</tr>
<tr>
<td>Data saturation</td>
<td>22</td>
<td>Was data saturation discussed?</td>
<td>40</td>
</tr>
<tr>
<td>Transcripts returned</td>
<td>23</td>
<td>Were transcripts returned to participants for comment and/or correction</td>
<td>43</td>
</tr>
<tr>
<td>Domain 3: analysis and findings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data analysis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of data coders</td>
<td>24</td>
<td>How many data coders coded the data?</td>
<td>43</td>
</tr>
<tr>
<td>Description of the coding tree</td>
<td>25</td>
<td>Did authors provide a description of the coding tree?</td>
<td>Appendix L, page 161</td>
</tr>
<tr>
<td>Derivation of themes</td>
<td>26</td>
<td>Were themes identified in advance or derived from the data?</td>
<td>43</td>
</tr>
<tr>
<td>Software</td>
<td>27</td>
<td>What software, if applicable, was used to manage the data?</td>
<td>43</td>
</tr>
<tr>
<td>Participant checking</td>
<td>28</td>
<td>Did participants provide feedback on the findings?</td>
<td>43</td>
</tr>
<tr>
<td>Reporting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quotations presented</td>
<td>29</td>
<td>Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number</td>
<td>82-102; Appendix M p.162-212</td>
</tr>
<tr>
<td>Data and findings consistent</td>
<td>30</td>
<td>Was there consistency between the data presented and the findings?</td>
<td>82-102; Appendix M p.162-212</td>
</tr>
<tr>
<td>Clarity of major themes</td>
<td>31</td>
<td>Were major themes clearly presented in the findings?</td>
<td>Figure 2, p. 105</td>
</tr>
<tr>
<td>Clarity of minor themes</td>
<td>32</td>
<td>Is there a description of diverse cases or discussion of minor themes?</td>
<td>105-109</td>
</tr>
</tbody>
</table>
Appendix F: Information Letter and Consent Form

Dear [Title First name LastName],

You are invited to participate in an interview to answer a few questions regarding partnership initiation between researchers and research users in the healthcare field. There is evidence in the literature that these types of partnerships increase knowledge uptake in practice. However, little is known about the processes, barriers to and enablers of partnership initiation. This is an exploratory study whose purpose is to provide guidance to researchers and research users on how to initiate partnerships. This study is part of a thesis to fulfill the requirements for a Masters of Science in Health Services Research at the University of Toronto (UofT)’s Institute of Health Policy, Management, and Evaluation (IHPME). The following are the criteria for participation:

Researchers

- Appointed to an academic position in an institution where they conduct research in the field of health sciences
- In the last 5 years, they have participated in a partnership with one or more research users to create knowledge, implement a program or project, evaluate a program or project for effectiveness on patient care
- The goal of the project was to increase knowledge use, with the long-term goal to improve patient quality of care
- They were actively involved in the team processes of the collaboration by attending meetings about planning, conducting, creating, disseminating research or evaluating the process

Research Users

- Hold a position of a health care manager, provider, or policy-maker
- In the last 5 years, they have participated in an partnership with one or more researchers to create knowledge, implement a program or project, evaluate a program or project for effectiveness on patient care
- The goal of the project was to increase knowledge use, with the long-term goal to improve patient quality of care
- They were actively involved in the team processes of the collaboration by attending meetings about planning, conducting, creating, disseminating research or evaluating the process

Methods

Semi-structured interviews will be conducted over the phone and will take approximately 30 minutes of your time. Answers will be recorded and transcribed. Qualitative description will be applied to identify any theme amongst participant answers. The deliverable of this exercise will be a list of processes, barriers to and enablers of partnership initiation. The answers will also be compared to a meta-narrative review of the healthcare and social sciences literature on partnership initiation. Similarities and differences will be outlined and summarized in a resulting thesis manuscript.
Conditions for participation

Participation is voluntary and you can withdraw at any time during the study. Upon withdrawal, any data that was gathered from you will be destroyed and will not be used in any part of the study. This interview will be recorded for better data collection. This will benefit the data transcription process for analysis to ensure more in depth analysis of your answers. You may also wish not to be recorded at all, in which case the interview will be conducted by phone with no audio recording option. This option may require more time for the candidate to write answers down.

Risks and benefits

There are no direct risks to you in taking part in this study. Your opinion will be of great benefit to the healthcare community who invests time and money in researchers and research user partnerships for the purposes of increasing knowledge uptake in practice. The results have a potential to minimize partnership planning time and increase efficiency, thus decrease cost.

You may contact the Research Oversight and Compliance Office - Human Research Ethics Program at ethics.review@utoronto.ca or 416-946-3273, if you have questions about your rights as participants.

Access to information, confidentially, and publication of results

The raw data will be kept confidential and only shared by the candidate with the thesis committee members. Confidentiality will be kept by anonymizing the responses, and refraining from publishing any part of the data that would reveal the identity the interviewee, such as personal name, exact job title, name of employer, and name of partnership the interviewee was involved. In the published data, the participants will be assigned alpha numeric codes and generic descriptors such as researchers or research users, as is appropriate. The place of employment will not be identified, but generic descriptors for the size, nature and location of the organization will be published.

The resulting thesis will be available publicly on TSpace, UofT’s institutional repository, as mandated by the School of Graduate Studies. A print version of the manuscript will be kept for the personal records of the candidate. All raw data files will be destroyed upon 5 years of the publication date of the thesis manuscript.

The research study you are participating in may be reviewed for quality assurance to make sure that the required laws and guidelines are followed. If chosen, (a) representative(s) of the Human Research Ethics Program (HREP) may access study-related data and/or consent materials as part of the review. All information accessed by the HREP will be upheld to the same level of confidentiality that has been stated by the research team.

Local investigators

Maria Zych, MSc Candidate, Health Services Research, IHPME, UofT
maria.zych@utoronto.ca

Dr. Anna Gagliardi
Scientist, University Health Network and Associate Professor, IHPME, UofT

Dr. Whitney Berta
Associate Professor, IHPME, UofT

Informed Consent
“I______________________________ consent to participate in the study “How do/can health care researchers and research users initiate integrated knowledge translation (IKT) partnerships?”
conducted by the above research team. I have understood the nature of this project and wish to participate. I am not waiving any of my legal rights by signing this form. My signature below indicates my consent.

_______________________________  ______________________________
Signature                        Date
Appendix G: REB PROTOCOL APPROVAL

PROTOCOL REFERENCE # 34818

July 24, 2017

Dr. Anna Gagliardi
DEPT OF SURGERY
FACULTY OF MEDICINE

Mrs. Maria Maddalena Zych
DEPT OF SURGERY
FACULTY OF MEDICINE

Dear Dr. Gagliardi and Mrs. Maria Maddalena Zych,

Re: Your research protocol entitled, "How do (or can) health care researchers and research users initiate integrated knowledge translation (IKT) partnerships?"

<table>
<thead>
<tr>
<th>ETHICS APPROVAL</th>
<th>Original Approval Date: July 24, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Expiry Date: July 23, 2018</td>
</tr>
<tr>
<td></td>
<td>Continuing Review Level: 1</td>
</tr>
</tbody>
</table>

We are writing to advise you that the Health Sciences Research Ethics Board (REB) has granted approval to the above-named research protocol under the REB’s delegated review process. Your protocol has been approved for a period of one year and ongoing research under this protocol must be renewed prior to the expiry date.

Any changes to the approved protocol or consent materials must be reviewed and approved through the amendment process prior to its implementation. Any adverse or unanticipated events in the research should be reported to the Research Oversight and Compliance Office - Human Research Ethics Program as soon as possible.

Please ensure that you submit an Ethics Renewal Form or a Study Completion/Closure Report 15 to 30 days prior to the expiry date of your current ethics approval. Note that ethics renewals for studies cannot be accepted more than 30 days prior to the date of expiry.

If your research is funded by a third party, please contact the assigned Research Funding Officer in Research Services to ensure that your funds are released.

Please note, all approved research studies are eligible for a routine Post-Approval Review (PAR) site visit. If chosen, you will receive a notification letter from our office. For information on PAR, please see http://www.healthresearch.utoronto.ca/wp-content/uploads/documents/2014/09/PAR-Program-Description-1.pdf.

Best wishes for the successful completion of your research.

Yours sincerely,

Elizabeth Peter, Ph.D.
REB Chair

Research Oversight and Compliance Office - Human Research Ethics Program
McMurrich Building, 12 Queen's Park Crescent West, 2nd Floor, Toronto, ON M5S 1S8 Canada
Tel: +1.416.946.3273 • Fax: +1.416.946.5763 • ethics.review@utoronto.ca • http://www.research.utoronto.ca/for-researchers/administration/ethics
Appendix H: Interview Guide

OPENING REMARKS

- Hello <name>. I am a graduate student at the Institute of Health, Policy, Management and Evaluation at the University of Toronto.
- I am doing this interview as part of my masters’ thesis.
- My thesis focuses on integrated knowledge translation, or IKT, referring to researcher – research user partnerships.
- There appears to be an initiation phase during which IKT partnerships form, and successful initiation may lead to IKT partnerships that successfully co-generate impactful research.
- The purpose of my study is to speak to researchers and research users involved in such partnerships to learn about enablers and barriers of partnership initiation.
- I am recording this discussion but you and your organization will not be identified. Before we begin, do you have any questions?

QUESTIONS

Before we begin I want to emphasize what we mean by partnership initiation. For this interview, we define initiation as the period from study planning or study launch used to establish strategic planning documents, communication channels, virtual or physical meeting space, team roles and responsibilities, and cognitive relationships.

Please briefly describe the objective of the research that you were involved in and your role

Prompts
- Were they a researcher or research user?; in that role, what did they do?
- What was the purpose of the study?
- When did it commence (ask for a year, or ask how long it’s been running)? Is the study now over? If yes, what were the findings or outputs (briefly)? If no, at what stage is the research?

How was the partnership initiated?

Prompts
- Who initiated the partnership?
- How was it initiated (i.e. email, was there a launch meeting, etc.)?
- How were participants identified?

What activities or types of interaction took place during initiation?

Prompts
- Define and describe problem, research question
- Set priorities and/or expectations
- Identify stakeholders and opportunities to build partnerships
- Create committees, boards or working groups

What factors enabled partnership initiation?

Prompts
- multiple and varied opportunities for interaction
- strong leadership commitment
- phased approach to develop shared language
• achieve early successes
• support from facilitators, champions, and boundary spanners
• clear and agreed upon goals, roles, and expectations
• immersion of researchers in research users setting/co-location

What factors were barriers to partnership initiation?
Prompts
• differing needs and priorities
• lack of skill in collaboration
• little understanding of IKT processes
• attitude about researchers or the value of research
• unclear goals, roles, or expectations
• lack of incentives to participate
• lack of funding or infrastructure to support IKT initiation activities

What strategies or interventions or tools would support partnership initiation?
Prompts
• Incentives to participate
• Frequent meetings
• Training

Thank you for participating in our study.
Do you have any further questions or comments?
Once interviews and analysis are done, we will share a summary of the findings with you
Appendix I: PRISMA flowchart

MEDLINE n=3777
EMBASE n=3313
PsychInfo n=1749
ABI/Inform n=778
CINAHL n=837
Cochrane n=555
ERIC n=141

Records after duplicates removed (n=7779)

Titles/abstracts excluded (n=7656)

Records after initial screening (n=122)

Full text articles excluded (n=105)
- No initiation description (36)
- No detail about partnership (36)
- Methods not systematic (16)
- Not an eligible study design (15)
- Online communities (2)

Reviews included (n=17)
**Appendix J: Data extracted from included studies**

<table>
<thead>
<tr>
<th>Author</th>
<th>Partnership label and description</th>
<th>IKT Partnership</th>
<th>Key actors</th>
<th>Discipline</th>
<th>Theory, origin, criticisms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tremblay/2017/Canada</td>
<td>Community-based participatory research is an approach to research that engages community and academic partners in a common knowledge production process aimed at understanding and improving the well-being and health of groups and communities.</td>
<td>Review details</td>
<td>Types of partners: Researchers; community members</td>
<td>Health Sciences/Community Psychology/Team-initiation</td>
<td>Theory: Social Movement Theory Origin: Action Research Criticism: NR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Type: theoretical review</td>
<td>Label: First stage</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Purpose: this study aims to describe the development of a multidimensional conceptual framework building on social movement theories capable of drawing out identifiable elements of CBPR processes. Number of articles: 58</td>
<td>Purpose: define the issue of interest</td>
<td>Processes:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Years: Up to August 1, 2015</td>
<td>Identify stakeholders/parties interested in problem</td>
<td>• Clear goals</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Goals/Elements of the context to take into consideration relating to the problem</td>
<td>• Dedicated funding, office, materials</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Establish resources available</td>
<td>• Intangible resources, skills from the community</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Enablers</td>
<td>Barriers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Outcomes:</td>
<td>Outcomes:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Research question</td>
<td>• Research output is more relevant and has more value, helps implementation</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>• Relevant agenda</td>
<td>• Relevant agenda</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Strengthen community ties</td>
<td>• Strengthen community ties</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participants</td>
<td>Type: Scoping Review</td>
<td>Purpose:</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>--------------</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Researchers; Research users described as: organization or system-level decision-makers including clinician managers, health facility managers, and policy-makers</td>
<td>• to characterize the nature of research in this area (IKT), • to describe IKT strategies that were empirically evaluated, • to reveal whether sufficient research is available to undertake a systematic review of the effectiveness of various IKT approaches, • to identify knowledge gaps for future IKT research</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Label: Formation stage |
| Processes |
| • Priority-setting |
| • Set goals |
| • Pre-existing resources |
| • Communications methods, such as meetings, evidence briefs, emails, web |
| • Training sessions |
| • Applying for funding |
| • Joint research |
| • Committees, boards, or working groups |

| Enablers |
| • Strong leadership commitment, skill and experience |
| • Phased approach to develop shared language, achieve early successes |
| • Support from enablers, champions, and boundary spanners |
| • Clear and agreed upon goals, roles, and expectations |
| • Immersion of researchers in research users setting/co-location |
| • Attitude about researchers or the value of research |
| • Multiple opportunities of interaction |

| Barriers |
| • Shared governance structures |
| • Openness of partners to listen, learn, and adapt |
| • Organizational support for research users to meaningfully contribute |
| • Dedicated funding |
| • Built on pre-existing relationships |

Gagliardi/2016/Canada | Integrated knowledge translation | Type: Scoping Review | Purpose: |

| Number of articles reviewed: 13 |
| Years: 2005-2014 |

Healthcare/Health Services Research/IKT | Theory: NR |

| Salsberg/ 2015/ Canada | Participatory Research: umbrella term to include community-based participatory research, action research, participatory action research, participatory evaluation, community engagement, and community engagement and patient engagement | Type: Critical review  
Purpose: To undertake a critical review describing key strategies supporting development of participatory research (PR) teams to engage partners for creation and translation of action-oriented knowledge; Number of papers: 54  
Years: 1995-2009 | Researchers; stakeholders (end-users, community members)  
Label: Strategies for fostering a researcher-community partnership  
Processes  
- Form a community-advisory committee,  
- Develop research agreements, formal goals, roles responsibilities, questions  
- Use facilitation techniques to establish communications, circulate agendas, small group work.  
- Hire from community  
- Frequent communication  
Enablers  
- Advisory committee, Action planning, Interpretation, data ownership, and | Healthcare/ Public Health/ Action Research  
Theory: NR  
Origin: Action research  
Criticism: NR |
| Esmail/2015/United States | Stakeholder engagement research: Researchers doing research with patients rather than for, at or to them | Type: critical review  
Purpose: to synthesize what the literature proposes as the hypothesized impacts of engagement (i.e., the benefits), share what has been evaluated and assessed and propose the steps needed to reduce the gap between research engagement's promises and the underlying evidence base supporting its practice  
Number of papers: 108  
Years: 2005-2013 | Patients, public, stakeholders; researchers | Label: Early stage  
Processes  
- Stakeholder engagement for research question  
- Engage early to provide unique perspectives, direct knowledge, helps set priorities  
- Common goals, roles, outcomes  
Enablers  
- Sense of ownership  
- Support from stakeholders  
Barriers  
- lack of assessment of engagement  
Outcomes:  
- Empowering patients,  
- Early ambassadors of research, increased translation, dissemination and uptake: more understanding from the patient makes for better research uptake  
- Democracy and accountability/Moral obligation | Healthcare/Health Services Research/Stakeholder engagement | Theory: NR  
Origin: NR  
Criticism: NR |
| Concannon/2014/United States | Stakeholder engagement: engagement as a bi-directional relationship between stakeholder and researcher that results in informed decision-making about the prioritization, conduct and use of research | Type: Systematic Review | Purpose: to catalogue reported methods of stakeholder engagement in comparative effectiveness research and patient-centered outcomes research. | Researched; Individual or group who is responsible for or affected by health-and healthcare-related decisions that can be informed by research evidence | Label: Early stage | Processes | • Define problem • Training | Enablers | • Positive attitude to learning and training • Support from stakeholders | Barriers | • Lack of time; • Managing conflict; • Geographic distance • Lack of stakeholder engagement/commitment • Increased ethical concerns in some institutional review boards (IRB); • addressing implicit power differentials/Issues of power; • Conflict of interest, • Lack of reporting on engagement detail | Outcomes: | • improved relevance of research; • increased stakeholder trust in research users and researchers, • improved research adoption • Compliance/joint decision-making | Healthcare/Medicine/Stakeholder engagement | Theory: NR | Origin: Corporate social responsibility | Criticism: SR |
Structural social capital: the patterns of social ties characterising a group of actors, it concerns the properties of the social system and the network of relation as a whole

Type: systematic review
Purpose: In this paper, we present a comprehensive and critical review of the literature on structural SC and its influence on knowledge transfer practices adopted to share different types of knowledge at different levels. The review reveals the linkages between the different dimensions of structural SC and the transfer of different knowledge resources at intra- and inter organizational levels which subsequently affect innovation. The aim of this study is to review the studies on structural SC, knowledge transfer and innovation at different level of analysis, namely at the intra-firm and inter-firm levels.

Business managers; business partners; customers; suppliers; universities; and competing firms

Label: Fuzzy-front end and development stage
Processes: NR

Enablers:
- Modern communication technologies (e.g. Skype), social networking (e.g. Socialcast, Facebook) and crowdsourcing platforms (e.g. Innocentive.com) are increasingly allowing employees and businesses to connect, collaborate and work together and share knowledge without the necessity of having intimate relationships and frequent face-to-face interactions;
- Strong ties can enhance different KT processes such as knowledge integration at the inter-firm level;

Barriers: NR

Outcomes:
- If consumers and others are involved in product development the product will be better suited for consumers;

Social Sciences /Knowledge Management/Knowledge transfer

Theory: Social Capital Theory

Origin: Knowledge Transfer;

Criticisms: hard to deal with because of different definition of Knowledge Transfer; increasing the number of ties between organizations does not necessarily result in effective knowledge transfer
| Andrews/2012 United States | Community based participatory research: a partnership approach to scientific inquiry that involves collaboration among community members, community partners and academic researchers throughout the research process | Number of papers: 109
Years: 1992-2012 | Community partner/Community organization; Academic partner | Label: Program implementation
Processes
- Set priorities
- Identify stakeholders by advisory board
Facilitator
- Seek support from advisory board to guide the process of research;
- Create supportive framework
Barriers
- Stakeholder not involved in all stages of research;
- Lack of funding
- Navigating the IRB for CBPR studies is often time consuming. Either a lack of understanding and/or differing interpretations of the institutional and federal IRB regulations by IRB administrators and investigators may impede the process.
- Time involved in developing relationships,
- Building trust, and sustaining intervention | Healthcare/
Public Health/
Action Research |

| | Type: Systematic review
Purpose: The purpose of this paper is to review the relevant literature on the use, quality, and effectiveness of CBPR for smoking cessation interventions.
Number of articles: 23
Years: 1995-2011 | | | Theory: NR
Origin: NR
Criticism: NR |
<table>
<thead>
<tr>
<th><strong>Jagosh/2012</strong>&lt;br&gt;<strong>Canada</strong></th>
<th>Participatory research: co-construction of research through partnerships between research and people affected by and/or responsible for action on issues under study.</th>
<th>Type: Realist review&lt;br&gt;Purpose: our synthesis concentrated on the impact of co-governance on research processes and outcomes; Number of articles: 276&lt;br&gt;Years: 1970-2011</th>
<th>Researchers, and people affected by issues under study and/or decision makers who apply research funding</th>
<th>Label: Early stage&lt;br&gt;Processes: • Creating common goals&lt;br&gt;Enablers • Commitment to partnership, synergy created • Pre-existing relationships&lt;br&gt;Barriers: • community resistance&lt;br&gt;Outcomes • Greater empowerment, • Established trust, respect • Deepened stakeholders' commitment to the project</th>
<th>Healthcare/Health Services Research/Action Research</th>
<th>Theory: NR&lt;br&gt;Origin: NR&lt;br&gt;Criticism” NR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Orem/2012</strong>&lt;br&gt;<strong>Uganda</strong></td>
<td>Knowledge translation; Partnership between policy makers and researchers to</td>
<td>Type: Descriptive review&lt;br&gt;Purpose: This paper aims at contributing to gap in how</td>
<td>Policy makers; researchers,</td>
<td>Label: Pre-research stage&lt;br&gt;Processes • Prioritization of research addressing policymakers’ information need, research priority setting</td>
<td>Healthcare/Health Policy/IKT</td>
<td>Theory: NR&lt;br&gt;Origin: Knowledge translation</td>
</tr>
</tbody>
</table>
| De-Pihno Campo/ Canada | Public-private partnerships | Type: Systematic review  
Purpose: to identify empirical-based descriptive articles to understand critical elements in the partnership process, and propose a framework to shed | Researchers; Research institutions, government, hospitals, pharmaceuticals and biotechnology companies, NGOs, foundations, | Label: Development stage  
Processes:  
• Define goals, responsibilities, IP rights, and project management aspects;  
• Organizational structure to allow for mutuality of interests among partner organizations in terms of expectations from the project;  
• Conduct, risks and benefits of the | Healthcare/ Public Health/ Team initiation | Theory: NR  
Origin: Project management (PMBOK)  
Criticism” NR |
<table>
<thead>
<tr>
<th><strong>Chiasson/2009/United Kingdom</strong></th>
<th><strong>Action research: form of applied research that develops a solution to a practice problem, which is</strong></th>
<th><strong>Type: Systematic review</strong></th>
<th><strong>Purpose: to investigate the role of pluralist approaches</strong></th>
<th><strong>Researchers, stakeholders, decision-makers</strong></th>
<th><strong>Label: Outset of activities</strong></th>
<th><strong>Processes</strong></th>
<th><strong>Social Sciences/Information Systems/</strong></th>
<th><strong>Theory: Many theories can be applied to AR</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>light on future guidelines to support better planning, design and management of existing and new forms of PPPs for public health.</td>
<td>experts, investors, partners;</td>
<td>• Manage power relations;</td>
<td>• Conduct appraisal of local context and infrastructure, understanding local capacity.</td>
<td>• Each partner must bring to the table something worth to others and that it be aligned with the goals of the partnership;</td>
<td>• get a clear understanding of the expectations of different partners;</td>
<td>• Identify stakeholders</td>
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</tbody>
</table>
of value to the people with whom the researchers are working, while at the same time developing theoretical knowledge of value to a research community.

Enablers
- Training
- Make time for meetings

Barriers:
- Lack of time
- Lack of understanding of institutional policies
- Lack of stakeholder engagement
- Lack of infrastructure for partnership
- Inequalities
- Lack of reporting

Outcomes
- Relevant research question
- Research more likely to be implemented if understood by research users
- Increased trust
- Decreased fear or anxiety of results

### Number of articles: 63

### Years: 1982-2005

<table>
<thead>
<tr>
<th>Suarez-Balcazar/2005/United States</th>
<th>Community-university collaborations: explicit written or verbal agreement between a</th>
<th>Type: Theoretical review</th>
<th>Purpose: proposes an interactive and contextual model for</th>
<th>Academics and community members</th>
<th>Label: Gaining entry to community, developing mutual collaboration</th>
<th>Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>Involvement in the community to understand issue or develop question</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Action Research</th>
<th>Origin: Just for AR in Information Systems</th>
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</thead>
<tbody>
<tr>
<td>Social Sciences/</td>
<td>Criticisms: lack of impartiality of the researcher; lack of discipline; often mistaken for consulting; context-dependency leading to difficulty in generalizing results</td>
</tr>
<tr>
<td>Psychology /</td>
<td>Theory: NR</td>
</tr>
<tr>
<td>Action</td>
<td>Origin: NR</td>
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<tr>
<td></td>
<td>Criticism: NR</td>
</tr>
</tbody>
</table>
| community setting (community-based organization [CBO]) | developing and sustaining community-university partnerships; Number of articles: 54 Years: 1977-2004 | • Develop project mission, goals, roles, and expectations of the partnership and a common vision  
• Establish communication methods  
• Learn about the community, developing a culture of learning  
• Build structures to facilitate exchange  

Enablers  
• Commitment  
• Make time for information sharing  
• Clear mission, vision, goals, develop a collaborative action agenda  
• Dedicated funding  
• Hire from community or get community members involved on the team  

Barriers  
• Maintain rigor  
• Lack of incentives  
• Lack of understanding of research value  
• Issues of Power and Resource Inequalities;  
• Time Commitment;  
• Conflict of Interest;  
• Budget Cuts and End of Funding;  
• Community resistance  
• Staff turnover  

Outcomes  
• creating mission, goals, roles, and vision, research questions;  
• communication with partners, developing trust and mutual  
• Empowerment  
• Develop action agenda.  |
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<tbody>
<tr>
<td>Research</td>
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<tr>
<td>Guzman/ Australia</td>
<td>inter and intra-organizational knowledge transfer</td>
<td>Type: theoretical review</td>
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<td></td>
<td>Purpose: the goal of this study is to contribute, from the organizational perspective, towards the understanding of key aspects that shape the transfer of organizational knowledge. Based on a case study and literature review, an architecture for understanding the existing theoretical framework is delineated first; to point out the 'soft' managerial aspects that need to be considered to support the transfer process. Number of articles: 29 Years: 1979-2003</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Organization or team members</td>
<td>Label: “Soft” issues before developmental stage of collaboration</td>
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<td></td>
<td></td>
<td>Processes</td>
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<tr>
<td></td>
<td></td>
<td>• Define expectations and priorities</td>
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<td></td>
<td></td>
<td>• Consider power and politics</td>
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<tr>
<td></td>
<td></td>
<td>• Establish available resources and skills; Solving operational problems by drawing on cross-functional expertise</td>
</tr>
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<td></td>
<td></td>
<td>• Allow channels of knowledge transfer from tacit to formal and individual to collective; disseminate knowledge through all organizational levels</td>
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<tr>
<td></td>
<td></td>
<td>• Mobilize knowledge/change agents</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Build organizational structures aligned with both strategy and external context</td>
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<tr>
<td></td>
<td></td>
<td>Enablers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Support from enablers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Shared goals, agenda building</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Barriers: NR</td>
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<tr>
<td></td>
<td></td>
<td>Outcomes</td>
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<tr>
<td></td>
<td></td>
<td>• Gaining attention and agenda building;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Gaining legitimacy and backing, trust</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Social Sciences/ Knowledge Management/ Knowledge transfer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Theory: Many theoretical frameworks can be applied depending on context</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Origin: Organizational Knowledge Transfer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Criticism: NR</td>
</tr>
</tbody>
</table>
| Riley-Tillman/ 2005/United States | Participatory action research (PAR): a model of research designed to develop new technology (or innovation) that is considerate of the realities of practice; occurs through ongoing collaboration between researchers and practitioners within the design and implementation phases of the research process. | Type: Narrative review  
Purpose: we discuss the history behind efforts to transfer school psychology research into practice and present a model for systematically programming for this transfer. In particular, the literature regarding treatment acceptability, participatory action research, organizational change, and generalization programming are reviewed given the direct relevance to our proposed framework for transferring school psychology research into practice.  
Number of articles: 49  
Years: 1977-20015 | Research users are School psychology practitioners work in many settings including schools, hospitals, and private practice; researchers are: trainers/researchers are typically, in university settings, and focus on training individuals to use and conduct research regarding issues related to the field of school psychology | Label: Initiation processes  
Processes  
- Create common goals  
- Jointly developing knowledge with all stakeholders  
Enablers  
- Sense of ownership  
- Positive attitude towards partnership  
- Common goals  
Barriers: NR  
Outcome  
- Research user involvement in development of interventions has a high potential for generalization implementation in school settings | Social Sciences/  
Education/  
Action Research  
Theory: NR  
Origin: NR  
Criticism: not well-described; lack specific procedures for developing partnerships, and/or involve poorly defined constructs |
<table>
<thead>
<tr>
<th>Study</th>
<th>Country</th>
<th>Research Design</th>
<th>Purpose</th>
<th>Type</th>
<th>Team members</th>
<th>Label</th>
<th>Processes</th>
<th>Enablers</th>
<th>Barriers</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Druskat/ 2002/United States</td>
<td></td>
<td>Shared mental models emerge as teams interact to make sense of their situation and cultivate shared beliefs about how they should work together to complete their task. There are 3 primary sources that influence the development and sustainability of the SMM that emerge in a team: team member history or prior experience in teams, team task, and organizational culture and environment</td>
<td></td>
<td>Theoretical review</td>
<td>Team members</td>
<td>Early stage</td>
<td>Identify internal and external leaders, Establish communication methods, Training and learning</td>
<td>Build psychological ownership, Continuous learning, formal training and development and the acquisition of team members’ knowledge and skills, Positive attitude towards model, Make time for meetings and training, Supportive framework for mental model development; team members' serious approach to learning contributed to early success</td>
<td>Organizations provided less time for formal training and education, Lack of resources, Performance rewards awarded to individuals rather than groups, Performance feedback that mixed individual with group level feedback, External leaders were experiencing mixed messages about their roles</td>
<td>NR</td>
</tr>
<tr>
<td>Waterman/ 2001/United Kingdom</td>
<td></td>
<td>Action research: a period of inquiry that describes, interprets, and</td>
<td>1. To identify the content of effective shared mental models in self-managing work teams (SMWT), to examine how these effective mental models emerge in SMWT, and to examine how they endure in dynamic organizational context;</td>
<td>Systematic Review</td>
<td>Researchers; Managers, patients, nurses, occupational</td>
<td>Problem identification phase and planning phase</td>
<td></td>
<td></td>
<td>Healthcare/ Health Services Research/</td>
<td>Theory: NR</td>
</tr>
</tbody>
</table>
explains social situations while executing a change intervention aimed at improvement and involvement…
founded on a partnership between action researchers and participants, all of whom are involved in the change process

| Provides a definition of action research (see chapter 3). | To identify published and unpublished action research projects conducted in healthcare settings in the UK. | To analyse action research in the healthcare field, by looking at:
| • aims of action research | • problem identification | • problem identification
| • reasons for choosing action research | • set priorities | • set priorities
| • issues addressed by action research | • create common objectives, | • create common objectives, 
| • outcomes and impacts of action research | • establish rapport, manage inequalities of power | • establish rapport, manage inequalities of power
| • pivotal factors – strengths and limitations | • apply for funding together | • apply for funding together

(see chapter 6).

4. To develop guidance for the development and

therapists, students, practitioners, educational staff,

| Enablers | Barriers | Outcomes |
| • promotes ownership of change | • lack of time | • empowerment of researcher user |
| • willingness to participate | • maintain academic rigour | • relevant research question or research scope |
| • clear expectations, goals | • lack of participation | • if research user understands research, more likely to implement |
| • personality of the researcher | • different goals, priorities | • greater understanding of project from both researchers and research users |
| | • research not valued, lacked concern for outcome | • build a relevant agenda |
| | • issues of power | • build resources within the community |
| | • personality of the action researcher | • compliance and accountability |
| | • lack of data on initiation | |
| Israel/1998/United States | Community-based research in public health is a collaborative approach to research that equitably involves for example, community members, organizational representatives, and researchers in all aspects of the research process. | Type: narrative review  
Purpose: to synthesize key principles or characteristics of community based research; to examine community-based research within the context of different scientific paradigms; to discuss rationales for its use; and to explore challenges and facilitating factors and their implications for conducting effective community-based research aimed at improving the public's health. Number of articles: 130  
Years: 1968-1997 | Community members, organizational representatives; Researchers  
Label: Development of partnership  
Processes:  
- Define scope or problem  
- Set priorities  
- Identification of common goals and objectives  
- Establish list of resources  
- Consider power and control  
- Training and learning  
- Apply for funding together  
- Conduct research together  
Enablers:  
- Build sense of ownership  
- Development of jointly agreed upon research principles, jointly developed operating norms  
- Commit to partnership  
- Formal training, researchers’ role skills, and competencies are clear  
- Involvement of support staff/team  
- Identification of key community members  
- Support and involvement of community members  
- Phased approach to develop partnership  
- Funding  
- Prior history of working relationship  
- Hire from community  
- Organizational structure that allows | Healthcare/Public Health/Action Research  
Origin: NR  
Criticism: NR |
partnerships, feasibility and benefit of shared control on all aspects of the research process

**Barriers**
- Lack of time
- Maintain rigour
- Differing needs or priorities
- Conflicts associated with differences in perspectives, priorities, assumptions, values, beliefs and language
- Conflicts over or lack of funding
- Community resistance
- Power and control, reluctance for community partners to participate because they were familiar with the hierarchical modes of decision-making in universities and their reluctance to share power and control

**Outcomes**
- Builds strengths and resources within the community,
- Compliance and accountability
- Increase trust and respect
### Appendix K: Empirical details about IKT initiation

<table>
<thead>
<tr>
<th>Narrative</th>
<th>IKT initiation details that were examined and reported</th>
<th>Processes</th>
<th>Enablers</th>
<th>Barriers</th>
<th>Hypothetical Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IKT</td>
<td></td>
<td>• Set priorities, establish resources and plan to conduct joint research (2, 118)</td>
<td>• Support from individuals such as facilitators, champions, boundary spanners or an advisory board (2, 118)</td>
<td>• Lack of time for learning and training, developing relationships, building trust, and sustaining intervention (2)</td>
<td>• Early engagement of research users increased research users’ understanding of the research, which results in an increased understanding the value, easier dissemination and interpretation of findings (2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Define and describe the problem or research question (118)</td>
<td>• Have clear and agreed upon goals, roles, expectations, and vision (2, 118)</td>
<td>• Lack of skill in understanding of IKT processes (2)</td>
<td>• Increased trust and respect among researchers and research users, thus minimized fear and anxiety of research results (2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Mobilize knowledge and change agents (118)</td>
<td>• Have a supportive policy framework or network that encourages researchers and research users to create and implement knowledge (2, 118)</td>
<td>• Unclear goals, roles and expectations (2)</td>
<td>• Build an agenda for the project, build strength and resources within the community (2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Build organizational structures aligned with strategies and external context (118)</td>
<td>• Build a sense of ownership of research output (118)</td>
<td>• Lack of incentives to participate (2)</td>
<td>• Facilitate collaborative partnerships in all phases of the research project (2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Create common goals to common outcomes, objectives, memorandum of understanding, agreement, and operating norms (2)</td>
<td>• Have policymakers with a research background and researchers skilled in policymaking on the team (118)</td>
<td>• Lack of funding or infrastructure for IKT (2)</td>
<td>• Enhance mutual understanding of process including language, work style, needs and constraints (2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Establish communication methods (2)</td>
<td>• Commitment to partnership, attitude towards listening, learning, adapting, and training, create a multitude and varied opportunities for interaction [31]</td>
<td>• Little continuity of involvement due to staff turnover or infrequent attendance (2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Training and learning, apply for funding, and committees, boards and working groups (2)</td>
<td>• Use a phased approach to develop shared language (2)</td>
<td>• Geographic distance limiting interaction (2)</td>
<td></td>
</tr>
<tr>
<td>Action research</td>
<td></td>
<td>• Create common goals and objectives with common outcomes by developing a memorandum of understanding,</td>
<td>• Build a sense of ownership of research or its output (69, 113, 124, 125)</td>
<td>• Lack of time for tasks including learning and training, developing relationships, building trust</td>
<td>• Early engagement of research users increased research users’ understanding of the research, which results in an increased</td>
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<tr>
<td>Problem or Research Question</td>
<td>Solution</td>
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<td></td>
</tr>
<tr>
<td>An agreement, developing operating norms (13, 69, 112, 113, 120, 121, 124, 125)</td>
<td>Commitment to partnership (13, 121, 124, 125)</td>
<td></td>
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</tr>
<tr>
<td>• Define and describe the problem or research question (112, 113, 120, 121, 124, 125)</td>
<td>Receive formal training and development related to the project (120, 125)</td>
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<td></td>
</tr>
<tr>
<td>• Set priorities and/or expectations by conducting a needs assessment or other method (117, 121, 124, 125)</td>
<td>Attitude towards listening, learning, adapting and training (69, 113)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• Identify stakeholders and opportunities to build internal and external partnerships (112, 117, 121)</td>
<td>Make time for team meetings (113, 120, 121)</td>
<td></td>
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<td></td>
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<tr>
<td>• Conduct training and learning exercises (113, 121, 125)</td>
<td>Support from individuals such as facilitators, champions, boundary spanners or an advisory board (117, 125)</td>
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<tr>
<td>• Plan to conduct joint research (69, 120, 125)</td>
<td>Have clear and agreed upon goals, roles, expectations, and vision (69, 112, 113, 121, 124, 125)</td>
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<tr>
<td>• Establish pre-existing resources that can be used or acquired for the project (112, 125)</td>
<td>Have dedicated funding to the partnership (112, 121, 125)</td>
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<tr>
<td>• Consider how to manage inequalities of power (124, 125), establish communication methods for the project (113, 121)</td>
<td>Have pre-existing relationship between researchers and research users (13, 125)</td>
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<tr>
<td>• Jointly apply for funding (124, 125)</td>
<td>Have a supportive policy framework or network that encourages researchers and research users to create and implement knowledge (117, 125)</td>
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<tr>
<td>• Build organizational structures aligned with both strategy and external context (121)</td>
<td>Hire from the community or have the researchers being involved in the target community in a significant way such as volunteering, dedicating time to learn about the community, join community events, read reports and other publications (112, 113, 121, 125)</td>
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</table>

- Lack of understanding or differences in interpretations of institutional IRB policies between researchers and research users (117, 120) |
- Maintaining a balance between academic rigor and community preferences (117, 121, 124, 125) |
- Lack of stakeholder engagement (117, 120, 124) |
- Differing needs and priorities (117, 124, 125) |
- Attitude towards researchers or value of research for the community (121, 124, 125) |
- Unclear goals, roles and expectations (121, 124, 125) |
- Lack of funding or infrastructure for IKT (117, 120, 121, 125) |
- Little continuity of involvement due to staff turnover or infrequent attendance (117, 121) |
- Community resistance (13, 125) |
- Issues of power (120, 121, 124, 125) |
- Lack of data on initiation of partnerships (117, 120, 124) |
- Conflict of interest (121) |

- Understanding the value, easier dissemination and implementation and interpretation of findings (69, 112, 120, 121, 124) |
- Increased trust and respect among researchers and research users, thus minimized fear and anxiety of research results (13, 117, 120, 121, 125) |
- Empowerment of the research user (13, 117, 121, 124, 125) |
- Develop the research question (112, 120, 121, 124) |
- Get a clear understanding of the expectations of different partners (121) |
- Enhance mutual understanding of processes such as language, work style, needs and constraints (120, 124) |
- Strengthen relationship, trust and goodwill (13, 120, 121) |
- Build an agenda for the project (112, 121, 124) |
- Build strength and resources within the community, which facilitates collaborative partnerships in all phases of the research project (13, 112, 121, 124, 125) |
<table>
<thead>
<tr>
<th><strong>Stakeholder engagement</strong></th>
<th><strong>Knowledge transfer</strong></th>
<th><strong>Early engagement of research users increased research users’ understanding of the research, which results in an increased understanding the value, easier dissemination and implementation and interpretation of findings (114, 115)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Define or describe problem or research question (114, 115)</td>
<td>• Set priorities and/or expectations by conducting a needs assessment or other method (122)</td>
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<tr>
<td>• Set priorities and/or expectations by conducting a needs assessment or other method (114)</td>
<td>• Establish pre-existing resources that can be used or acquired for the project (122)</td>
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<tr>
<td>• Create common goals to common outcomes, objectives, memorandum of understanding, agreement, and operating norms (114)</td>
<td>• Support from facilitators, champions, boundary spanners, or advisory boards (122)</td>
<td>• Early engagement of research users increased research users’ understanding of the research, which results in an increased understanding the value, easier dissemination and implementation and interpretation of findings (114, 115)</td>
</tr>
<tr>
<td>• Conduct training and learning activities (115)</td>
<td>• Have clear and agreed upon goals, roles, and expectations (116)</td>
<td>• Early engagement of research users increased research users’ understanding of the research, which results in an increased understanding the value, easier dissemination and implementation and interpretation of findings (114, 115)</td>
</tr>
<tr>
<td>• Build a sense of ownership of research or output and have a supportive policy framework or network structures/ties for researchers and research user to create knowledge and implement research results (114)</td>
<td>• Have a supportive policy framework or network</td>
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<tr>
<td>• Attitude towards listening, learning, adapting and training and support from facilitators, champions, boundary spanners or an advisory board (115)</td>
<td>• Empowerment of research users (114)</td>
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<td></td>
<td>• Geographic distance imposes limits on interaction issues of power, and conflict of interest (115)</td>
<td>• Get a clear understanding of the expectations of different partners (114)</td>
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<tr>
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<td></td>
<td>• Get a clear understanding of the expectations of different partners (114)</td>
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**Knowledge transfer**

- Define or describe problem or research question (114, 115)
- Set priorities and/or expectations by conducting a needs assessment or other method (122)
- Establish pre-existing resources that can be used or acquired for the project (122)
- Support from facilitators, champions, boundary spanners, or advisory boards (122)
- Have clear and agreed upon goals, roles, and expectations (116)
- Have a supportive policy framework or network

**Stakeholder engagement**

- Have a phased approach to develop shared language (125)
- Personality of the action researcher (124)
- Lack of skill in understanding IKT processes (117)
- The personality of the action research (124)
- Define or describe problem or research question (114, 115)
- Set priorities and/or expectations by conducting a needs assessment or other method (114)
- Create common goals to common outcomes, objectives, memorandum of understanding, agreement, and operating norms (114)
- Conduct training and learning activities (115)
- Build a sense of ownership of research or output and have a supportive policy framework or network structures/ties for researchers and research user to create knowledge and implement research results (114)
- Facilitators reported in the other review were attitude towards listening, learning, adapting and training and support from facilitators, champions, boundary spanners or an advisory board (115).
- Lack of reporting of partnership initiation in the literature as a barrier to initiating partnerships (114, 115)
- Lack of time for learning and training, developing relationships, building trust and sustaining interventions (115)
- Lack of understanding or differing interpretations of the institutional and federal IRB regulations (115)
- Lack of stakeholder engagement, differing needs and priorities (115)
- Geographic distance imposes limits on interaction issues of power, and conflict of interest (115)
- Empowerment of research users (114)
- Early engagement of research users increased research users’ understanding of the research, which results in an increased understanding the value, easier dissemination and implementation and interpretation of findings (114, 115)
- Get a clear understanding of the expectations of different partners (114)
<table>
<thead>
<tr>
<th>Team initiation</th>
<th>Consider any inequalities in power (122)</th>
<th>Establish processes to convert and assimilate tacit knowledge to formal knowledge (122)</th>
<th>Mobilize knowledge/change agents who coordinate processes to create and diffuse knowledge (122)</th>
<th>Build organizational structures aligned with both strategy and external context (122)</th>
<th>Establish communication methods (116)</th>
<th>Structures/ties for researchers and research users to create knowledge and implement research results (116)</th>
<th>Implementation and interpretation of findings (116)</th>
<th>Increased trust and respect among researchers and research users, thus minimized fear and anxiety of research results (122)</th>
<th>Agenda building (122)</th>
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<tr>
<td></td>
<td>Define or describe problem or research question (119)</td>
<td>Set priorities and/or expectations by conducting a needs assessment or other method (119)</td>
<td>Identify stakeholders and opportunities to build internal and external partnerships (119)</td>
<td>Create common goals to common outcomes, objectives, memorandum of understanding, agreement, and operating norms (119)</td>
<td>Establish processes to convert and assimilate tacit knowledge to formal knowledge (119)</td>
<td>Build a sense of ownership of research or output (119)</td>
<td>Commitment to partnership</td>
<td>Formal training and development and the acquisition of team members’ knowledge (119)</td>
<td>Support from facilitators, champions, boundary spanners, or advisory boards (119)</td>
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### Shared mental models

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<tr>
<td><strong>strategy and external context (119)</strong></td>
<td><strong>Identify stakeholders and opportunities to build internal and external partnerships (123)</strong>&lt;br&gt;<strong>Establish communication methods, and conduct training and learning activities (123)</strong></td>
</tr>
<tr>
<td><strong>Build a sense of ownership of the research and output (123)</strong>&lt;br&gt;<strong>Commitment to the partnership, formal training and development and the acquisition of team members’ knowledge and skills (123)</strong>&lt;br&gt;<strong>Attitude towards listening, learning, adapting and training (123)</strong>&lt;br&gt;<strong>Make time for meetings for information sharing by using all-day conferences or other methods (123)</strong>&lt;br&gt;<strong>Have a supportive policy framework or network structure/ties for researchers and research users to create knowledge and implement research results (123)</strong></td>
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<tr>
<td><strong>Lack of time for learning and training (123)</strong>&lt;br&gt;<strong>Develop relationships, build trust, and sustain intervention (123)</strong>&lt;br&gt;<strong>Performance feedback and rewards awarded to an individual when they should be awarded to a group (123)</strong>&lt;br&gt;<strong>Unclear goals, roles, and expectations (123)</strong></td>
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<tr>
<td><strong>Lack of time for learning and training, develop relationships, build trust, and sustain intervention (123)</strong>&lt;br&gt;<strong>Performance feedback and rewards awarded to an individual when they should be awarded to a group (123)</strong>&lt;br&gt;<strong>Unclear goals, roles, and expectations (123)</strong></td>
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Appendix L: Code book tree

PROCESSES OF IKT PARTNERSHIP INITIATION
  Clarifying roles and responsibilities
  Research activities
  Convincing and aligning
  Provide opportunities for communication
  Individuals with dual roles
  Align ideas with RU goals
  Meeting in-person

ENABLERS OF IKT PARTNERSHIP INITIATION
  Role of leader
  Shared goals amongst researchers and research users
  Early partnership formation and collaboration from the onset
  Trust and commitment
  A pre-defined network and organizational capacity for network
  Shared interest, synergy and passion
  Funding opportunities
  Connectors, boundary spanners or mentors
  Time
  Value, respect and ownership, not a token
  Shared language and culture
  Research project as incentive
  Geographical proximity
  Minimize time for research user involvement
  Partnership as buy-in incentive

BARRIERS TO IKT PARTNERSHIP INITIATION
  High turnover of research users
  One person representing a group
  Enthusiasm waned over time
  Competing priorities
  Administrative paperwork
  Personality of the researcher or research user
  Lack of understanding of the research cycle or research culture
  Geographical distance
  Misaligned goals, roles and expectations

TOOLS/INTERVENTIONS
  Shared forum or repository
  Funding
  Document, space or toolbox to identify interests
### Appendix M: Data extraction from the interview transcripts

<table>
<thead>
<tr>
<th>Interview question</th>
<th>Theme</th>
<th>Researcher (R) Quotes</th>
<th>Research User (U) Quotes</th>
<th>Connector (C) Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Briefly describe objectives of research that you were involved in and your role</td>
<td>Objectives</td>
<td>This is a randomized control clinical trial aiming to determine the effectiveness of a new mobile device application. (R01)</td>
<td>We initiated on the basis of grants that were funded that had a pre-specified KT plan and then we worked really hard to connect them up to specific knowledge users; it was a homecare focused research project (U01)</td>
<td>So in work that were currently doing with the [province] is looking at an impact framework in terms of how research informs decision in terms of policy and practices, processes, etc. And taking kind of a similar approach that we are hypothesizing that in the very early stages if the researchers and the end-users identify the questions, needs and priorities using a code developed model and the chances of optimizing or achieving the outcomes and impacts will be higher (C01).</td>
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<td>Working with our nursing department on improving hand hygiene (R02)</td>
<td>Mobile app to track healthcare worker activities to assess healthcare worker's program (U02)</td>
<td>We have put funding programs together that have tried to support that kind of IKT approach and that relationship building (C02)</td>
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<tr>
<td></td>
<td></td>
<td>Increase public engagement for cancer program decision-making (R03)</td>
<td>Creation of an implementation handbook introducing [healthcare professionals]'s into primary care settings and family medicine practice. (U03)</td>
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<td></td>
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<td>Inter-regional variation in patient flow performance (R04)</td>
<td>What impacts panels sizes in primary care? (U04)</td>
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<td>To evaluate the outcomes and implementation of managed alcohol programs in Canada (R05)</td>
<td>Evaluating usability of a technology that can help support [specific type of patient] living in the community. It was a GPS locator technology (U05)</td>
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<td>We were interested in trying to examine the integrated knowledge translation within each [5] projects (R06)</td>
<td>Working with researcher to develop a foundation grant award for researcher and knowledge user projects (U06)</td>
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<td>What are the barriers of the facilitators and the readiness of the population to uptake this [specific] policy? (R07)</td>
<td>We’ve tried to articulate that in a memorandum of understanding... putting in place some formal structures to enable that relationship to be built and developed (U07)</td>
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<td></td>
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<td>Increase the capacity of frontline staff in acute care (R09)</td>
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<td><strong>Objective was to try to implement an intervention that would aim to improve pain management in the emergency department</strong> (R10)</td>
<td>have interdisciplinary teams of clinicians who work with my health research methodology staff to identify and interpret the evidence and come up with recommendations (U08) To support patient engagement and health system user engagement in our own programs internally. (U11)</td>
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<tr>
<td><strong>Length of initiation period</strong></td>
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<tr>
<td>About six years (R01) 6 months (R02) 26 months (R03) 20 months (R04) 24 months (R05) over 12 months (R06) 24 months (R07) About 12 months (R09) So depending on which users you’re trying to get too, obviously the time involved in trying to establish these relationships and these partnerships varies tremendously (R10)</td>
<td>24 months (U02) 4 years (U03) Six months to a year (U04)</td>
<td>Six months to a year (C01)</td>
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<tr>
<td><strong>Identified potential stakeholders through workshops, pilot projects, conferences, meetings, and contacting pre-existing contacts, environmental scans</strong></td>
<td>So when we commence new programs we had a stakeholder engagement process where all of the programs initiated out of the community based on an engagement process with the community in terms of needs and gaps and that process resulted in the development of all of our new programs...It involved workshops with the community in addition to a standardized needs assessment survey (R01)</td>
<td>Sometimes we need to pull in appropriate partners from the ministry or even could sometimes even be from another ministry that where there’s relevance...housing sectors there’s multiple ministries that might have a role. As well in housing we have a number of different organizations that we contract with who provide long term care and supportive living services. So we always need to look and see whose being impacted potentially. Who might have knowledge and expertise that is</td>
<td>So it was all driven out of stakeholder engagement; all of our programs and that was a formal process, a systematic process and involved workshops with the community in addition to a standardized needs assessment survey. (C01) And so not just to sign the letter of support but also to look at the applications in the early stage and say, yes this is</td>
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</table>
Pursuing individual discussions with contacts that I already had through previous work (R01)

Okay, so I began by presenting the idea of the [Product Name] at meetings where there were both researchers and also knowledge users. And so I started through the venue I believe where it was a gathering already of knowledge users and researchers and you know weaseled my way onto the agenda so that I could put the idea out there and try and attract interest (R01)

Contacted pre-existing relationship (R01, R02, R03, R05, R08, R09, R10)

We did an environmental scan of some structural and population features for background and also some people would realize that this is actually moving along (R04)

So from the pilot data we had been able to identify the kind of the key players that would be partnering with us both from the patients side if you will and the health professional side. So here I mean the health professionals who work in the emergency department as knowledge users (R10)

relevant and make sure that you know if they, if they’re you know quite closely impacted or you know would have critical input to give that they’re at the table (U05).

Or when we were sitting, we’ve been offering knowledge translation capacity building workshops for researchers and users. And there was an opportunity came up to actually study those workshops because there’s nothing actually in the literature particularly that talks about how successful it is to do capacity building workshops. And so we had a researcher who was very, who was offering these, also very interested and so we partnered that we’ll, you know we’ll be out there, we’ll help to pay and organize and bring the groups together and do our regular workshop stuff. But the researcher…do the training would also make it as part of a research project and study the whole thing (U06)

VP at the university and the VP in [Regional] Health coming together and organizing several sessions where the researchers and some of the decision-makers in [Regional] Health were led through workshops and that took a long time (U07)

Pre-existing relationship (U01, U04, U05, U06, U07, U08, U09)

We do a lot of knowledge transfer activities like national webinars you

something that’s of interest and yes, they have the right people involved. Or no, they should be talking to this person here and making the connections. So but what we’ve begun to do a little bit more recently is to more actively engage and be the connector between the researchers who are interested in something and the policy-maker or the clinicians or service providers that are the most appropriate to fit (C02)
| How was partnership initiated? | Conducted research together as an extension of partnership | For many of them the partnerships have been pre-existing and...the research is in some ways an extension of the partnership (R02) And so we ended up doing a pilot study together, designed it all together, like I really did very little, collected all the data together, analyzed the data together....there [were] focus groups involved and surveys, some data collection and you know they were the ones who sort of like recruited people and scheduled everything and coordinated it all. And then we did the focus groups together, we did the educational stuff together…And then we developed our intervention out of that work and sort of refined it and so on (R09) | I sit on an executive committee as the knowledge user for a foundation grant and that is regular meetings that get together with this executive group and looking at the business how to run the network and what that looks like and then how to inform moving those things forward (U06) These people are involved from the outset of when we start a project. So there are structures, there’s governance within my program within [Provincial Organization] at large and within sort of the [disease] field in our province which allows us to identify people and bring people on to the various, the individual guideline projects that we do (U08) | We identified; a) that it has to be a priority within the health system and there were some priority areas listed but they were fairly broad. And secondly, that there had to be both a policy-maker and health service provider actually engaged in the process (C02) |
| Contacted individuals with dual role as researcher and research users | So I’m thinking specifically back, I used a prior connection. I had people that I knew were not only researchers but they were also had some role in the [research user] in [Province]. So he sort of wore two hats; one hat as a researcher but one hat on the sort of advisory operations arm of [Provincial service]. So I used that relationship and that person who had this kind of dual role to take me from the medical side of things to the kind |
of operational knowledge user side of things and through that connection he introduced me to the non-physician operational people that would eventually support the project and become knowledge users on the project (R01)

On another project for instance, there’s a former colleague, she was a researcher, she’s now a decision-maker and when she left her research role we decided to go for lunch now and then and find out what some of the pressing issues were in her neck of the woods and for a while it was just this meeting for lunch but eventually that evolved into a project where she was talking about certain things that were a big issue and I thought okay, well this sounds like something we might study. Are there other people I should talk too and we built a team from the ground up that way. So she introduced me to a number of people I wouldn’t have known otherwise. We actually got funded, that project is just wrapping up (R04)

So was very fortunate to have senior mentors, who had been bridging this gap between research and healthcare system for some years ahead of me; who were able to help me to create a viable sort of feasible grant and to engage some of the senior leads to
| Worked hard to convince and get partner buy-in on the research project | The Co-PI whose identified as the knowledge user PI on the grant partnered with me; was in the role of the VP of [Provincial service]. So that was my prime knowledge user but there were also other people who are not listed on the grant but just through the process of engaging with this, that person and through [Name]. There are others in the organization but then sort of you know I needed to get buy-in and approval from them and convince them that they would use knowledge from the project and the organization would benefit from that. Well I didn’t have grey hair when I started it and now I do. (R01) Like you’ve done all this work, you listened to the policy-makers, you’ve done this research together. And so you have this taddah moment, right? So here’s the results of this work or you know whether you’re building a toolkit or a framework or you know or whatever to help them. And so it’s like well, you need to keep on working with them to help them understand what that’s about and how it’s useful to them. And sometimes that’s the hardest piece because sometimes we don’t know either, right? And it’s still a work in progress (R03) | Finding existing meetings to bring it forward and then you know at the end of the day the biggest argument is but my patients are special or I’m special. And at the end of the day we said everybody’s special, help us determine what we mean by special and we got buy-in (U04). |
Then we did continued planning of trying to get me on the agenda [of the stakeholders meeting]… Not everyone initially thought this was something that they wanted to participate in. I had one region almost fall through. There were people that were interested and then a higher level manager said, no we don’t want to do this because we have no time. And I had to reach out to that person and explain this would be a very, very minimal burden on the participating regions that was another enabler to try to see incidentally (R04)

We’ve as I have said, I’ve had meetings where I was kind of the travelling salesman you know going to these various groups and trying to build these relationships… And so basically what happened is that you initially kind of think you’ve got the right people but then you meet up with them and they tell you well no, it’s not me but your project is great but it’s this other person. And so in the end you end up meeting a whole bunch of people and you having to kind of sell your project and try to convince them that this is something worth more than just endorsement but something that they would like to get involved with (R10)

<table>
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<tr>
<th>Initiated by research user</th>
<th>In the case, the grant we have right now that we were awarded in 2017, actually the decision-makers and</th>
<th>The project was initiated by [Provincial] Health Services. The researcher you know who was recognized …in this field would have been approached to see stakeholder engagement process where all of the programs initiated out of the community based on an</th>
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| Initiated by researcher | I was particularly interested to see well, if we’re trying to do this maybe it would be interesting to try to study it [IKT], not only encourage it but then find out how well it worked because they were different projects. And so I would say it was initiated by me just being curious as to whether not, how easy or how hard would it | I’m thinking about another big research initiative but again, I haven’t been so directly involved in myself. But where it’s a big sort of collaboration and that one was certainly initiated by the researchers but they have made an effort to engage you know folks from [Provincial Health Service] and the Ministry of Health here as well, as kind |}

|  | policy-makers were the driving force of the grant (R03) But yah, I’ve rarely have ever done a project that wasn’t responding some pressing knowledge need. It gets a little diluted when there are this many regions participating but it was certainly initiated from a decision-maker priority (R04) And so when we did the initial pilot evaluation with one of our community partners you know we initiated that at their request (R05) The decision-maker, my co-lead sort of administrative person, right? Came to me with the idea because they knew, you know I had some interest in the topic area; two of them were cancer related and that’s what I do, right? And the other one was sort of care of older adults and frailty and I do that as well. And so they came to me with an idea and they were all new, like they were all, I didn’t have longstanding relationships with these people at all actually (R09) | if she would have an interest in being involved (U05) Typically it starts with us… we have a partnership matrix that the executive team and the board have prioritized in terms of I guess assigning an executive lead in assigning like a project sponsor, setting up governance and we have formal participation agreements with those big partners in the system. (U10) engagement process with the community in terms of needs and gaps and that process resulted in the development of all of our new programs (C01) |
be to try to study it could we do that and then what kind of method would be appropriate to try to study it. So I thought about that and then had some conversations with [researchers] and others about just how we would go about doing it. And so I would say it was initiated by me and supported by the knowledge user at the time because I had a conversation with her about would this be something that would be interesting or of interest to her and her [portfolio] and there was support for that as well (R06)

of decision-makers or knowledge users. (U05)

And the experience is very different from case to case as you can imagine. It really sort of depends on what the application is about, how much we’re brought into that. And a lot of it depends also on the researcher who approaches us as to how much they want us involved or at least how much we perceive that they want us to be involved, maybe that’s a better way of putting it. (U06)

We were approached by the lead PI and she had a massive PAN Canadian cohort of investigators that were interested in looking at remote tele-consult for specialist services (U09)

We often have been approached by health system researchers to, who want to generate knowledge that would apply to our programs and products but they also are looking for us to help them engage with patients in the courses of conducting their research and so we’ve done that in a couple of different ways as well (U11)

In person meetings

And I feel like that in-person meeting was when things really changed and I could feel that there was buy-in (R01)

And I also used the planning grant to go and meet in-person at each of the regions where we made a connection for the planning grant and also to see what I could do either in-person or by

Face to face meeting once a year [otherwise] teleconference or email (U06)

The president of [University] at the time and myself (CEO Health Region) had some exploratory conversations and there was some real interest in synergy there (U07)

So it really depends on the situation and on the previous knowledge of one another. I personally think that it’s really important to meet face-to-face (C02)
I found more successful is at least to have an in-person kick-off… I feel like when you see somebody face-to-face you’re less likely to maybe ignore that email or have it fall to the bottom of the list of things … Like even if it’s a kick-off of a new project or something, just try to do it in-person, try to get, even if you have to fly to the hospital in [another City] to do it (U10)

| What activities or types of interaction took place during initiation? | Clarified roles, responsibilities, scope of project, research question by meetings, committees, agreements, So the formal like legal contract of who’s doing what is just being drafted right now. But I think the expectations initially were laid out in a personal communications kind of informally and also in the letters of support and the grant application (R01) So as much as possible the face-to-face meetings and being able to be clear about that their input is really needed, and it feels a little more formal at the beginning. But when there are people, two people who know of each other and know they’re working on something similar but what they need to be doing is | It started off as an ad hoc committees that became more structured committees which then became a formal research group (U03). Advisory committee and I’ve sat on several of those where key stakeholders, not just policy-makers, decision-makers but also practicing stakeholders; are engaged in an advisory capacity throughout the research work. So the engagement then is very meaningful. By doing that, the knowledge exchange and | We do facilitate meetings, face-to-face meetings where I’m included sometimes, particularly if people don’t know one another. And it needs, and it feels a little more formal at the beginning. But when there are people, two people who know of each other and know they’re working on something similar but what they need to be doing is |

phone in regions where we haven’t made a connection yet (R04)

So at the beginning there was definitely where possible where I could meet with people. I chose to do that one-on-one where I could. The individual who was one of the key I would say knowledge users at that time before they left was in fairly close proximity to my office. So I could walk because of where my office was, so I could walk over and meet with her (R06)

So that face-to-face component I think always essential in building the trust, the human relationship part to move work forward across the multiple sectors and with people who don’t necessarily work alongside each other very frequently (R07)

Monthly meetings 1.5 hour each (R09)
valuable to this and what you see their role is (R03)

Scope document [took several meetings to clarify] what’s the scope, what’s the focus, what are the methods, and I summarized what I’ve heard from people, their interest, their concerns and I suggested based on what I’ve heard this is what I think we should do (R04)

So the first is the agreement about how will they be involved in recruitment, how will they be involved in data analysis, how would they, and then you know agreements about how old they’d be involved in or what do they want to do in terms of publications rather than a pre-set upfront agreement. We generally start with principles for how we’re gonna work together and timing you know frequency and timing of meetings. (R05)

Research charter or a project charter to help people feel that they’re clear about what their role is in association with the project and who else they might be able to call on when they’ve got issues they need to resolve (R07)

knowledge transfer has actually been growing. It’s not an event (U04).

Well we try to clarify that at the very beginning just even when we’re asked to be part of a you know a letter of supports for an application. And it’s sort of what do you expecting from us to get a bit of an idea. So even if it’s just in terms of time commitment which is a huge deal because we’re all quite busy. So how much time are you expecting from us and then it’s part of it is just going through the process with them and getting a better understanding of where we can give more time. (U06)

And then we drafted a MOU and it went back and forth between the two, the two organizations; ultimately was discuss by our Board and was discussed by the [University 3] Board. And then the presidents and the board chairs of both organizations signed that off. And then we’ve used that to guide discussions between the two universities or between the two organizations since then. It you know I might say that it was really important at the beginning of building the relationship (U07)

So we use contractual levers, data levers, clinician engagement levers, policy levers. So I would say [Provincial Organization] as an organization is quite sophisticated in their use of partnerships and setting them up. And that was out of necessity because we’re usually doing

connected I would send an email (C02)
| Applied for a grants, wrote letters of support together | Yah and some of that relationship building was just happening through the creation of the research…just because that forced communication and so we were building, I think there was sense that by applying for the grant together that this was more than just some guy showing up with this kind of interesting new mobile app, just kind of wanting to show it off. (R01)  
The act of actually writing the letters of support together was also a way that we kind of ensured that we were all I think on board with the questions that we were asking and the way that we were gonna get the data. So there were lots of back and forth. as far as those letters go and the protocol and the application and it was all over email but it involved a lot of comments and edits and they were probably five or six versions and it was the iterative process that kind of developed the project (R01)  
Again the [GRANT] has been sort of, so I suppose we did have a bit of a relationship for a year because we did that pilot work. But before that, I had no…I didn’t know these people at all. And then we got the [GRANT] and again the [GRANT] was sort of completely, well completely followed |
<p>| fairly large costly and complex projects with our partners (U10) | Just you have this relationships that you just are, to me that’s the enabler to a great extent is we have good working relationships just in general. And when we get on a grant with them it just makes it easier to work (U06) |</p>
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<th>Aligned idea with research user organization’s goals: educating each other on how to align idea with organizational or research goals</th>
<th>Our pilot work but was completely sort of developed together and the intervention has been delivered together and the data have been collected together and stuff like that. (R09)</th>
<th>If a researcher came and said, hey let’s set some priorities up, I might say, you need to start with some of the key documents like in our case there’s [Provincial Health Priority Document]. You want to see what’s important to me, you go look at those documents and then come back and talk. So that’s part of, I find that part of my role is just educating researchers who want to make an impact on what, how do they engage in that conversation upon initiation because you might say, I’m really interested in some topic that isn’t even on the radar and you don’t line up to the you know the platform commitments or the budget commitments. (U01)</th>
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<td>They didn’t know about this innovation. So I had to, I thought my first role was that I had to introduce them to the innovation and teach them about the potential for this innovation to help them with their mission…. And then the part two of that was to seek their partnership on the actual research development itself (R01)</td>
<td>I think it’s really important that at what phase are you when you are initiating a project, at what phase is this particular research project in the context of other things that have already gone on. So I think the history of a collaboration is important because I think then you have to decide is this something that you need to re-engage people as in the case of new surgeons, you definitely did need to do that. And then how do you then keep this particular practice, community of practice important in the view of competing, I would say competing priorities because all the surgeons we talked too, they were all, some of them had academic appointments but a lot didn’t, we’re based in community hospitals (R06)</td>
<td>Engage them [clinicians] but inform them and educate them because there’s a huge distance between practice and policy (U04)</td>
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<td>If a researcher came and said, hey let’s set some priorities up, I might say, you need to start with some of the key documents like in our case there’s [Provincial Health Priority Document]. You want to see what’s important to me, you go look at those documents and then come back and talk. So that’s part of, I find that part of my role is just educating researchers who want to make an impact on what, how do they engage in that conversation upon initiation because you might say, I’m really interested in some topic that isn’t even on the radar and you don’t line up to the you know the platform commitments or the budget commitments. (U01)</td>
<td>Priorities might be set by government or by leadership in the organization. And so we were looking to you know align with that or follow that (U05)</td>
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<td>I think it’s really important that at what phase are you when you are initiating a project, at what phase is this particular research project in the context of other things that have already gone on. So I think the history of a collaboration is important because I think then you have to decide is this something that you need to re-engage people as in the case of new surgeons, you definitely did need to do that. And then how do you then keep this particular practice, community of practice important in the view of competing, I would say competing priorities because all the surgeons we talked too, they were all, some of them had academic appointments but a lot didn’t, we’re based in community hospitals (R06)</td>
<td>So when we’re approached we do look at it fairly critically to get enough information. What is the benefit to be on here? In KT it’s sometimes a little</td>
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standardized needs assessment survey and workshops (C01) SWAT analysis (C01)
So with the work we’ve done, we’ve created steering committees where we invite the health system leads to review the research and the project periodically and to make sure that we’re remaining aligned with their priorities and to seek their advice on what else they need to know, where else we might be taking the findings (R07)

harder because we are all very much enthusiastic about promoting knowledge translation in general. Like we really want to see if people understanding KT, understanding a place in planning and science and being able to build the skills and use these provincially, nationally and internationally to you know increase the use of a relevant health research evidence. So everything that comes to us along those lines are things that we can passionately say yes too. But you have to step back and go, we can’t say yes to everything. So what is that actually, specifically we can improve what we’re doing as a foundation within this province? (U06)

It could be priorities emerging because [Provincial Organization] has to provide advice around funding decisions or organizational decisions. But in all respects or in almost all respects, they would also align with the [Provincial Action Plan] which is a plan that [Provincial Organization] creates every few years to direct its scope of activity and its priorities and what its function is gonna be(U08)

I would say, [Provincial Organization] actually takes a very, I guess robust or rigorous approach to partnership and it’s quite formal. But we found that that formality helps with very clear roles and responsibilities clear setting of scope and objectives for a partnership and they don’t necessarily need to be on-going (U10)
| Provided opportunities for communication such as events, and workshops | So we have some teleconferences, we do meetings, we send people email updates; for the [Local Group for Infection Control], we have education days twice a year where we bring other speakers in but we also use it as a mechanism for presenting results that people can think about. (R02) So reached out to them and a clinician as well and they were very responsive. They attended our deliberation. We wanted them to know: a) what was going on in their backyard that we were gonna be there. We were gonna be doing this engagement event. We invited them to attend which they did on a weekend, it was awesome. And in fact, they’ve become, they are now on our new grant as stakeholders. So that was a really great relationship to cultivate and develop and they were enthusiastic about our work and they wanted to be part of sort of the next iteration of the project which is the one we’ve got right now (R03) I think the opportunity was equal for all the regions because I did try to reach out to people to make sure everyone was consulted. And I also looped back to [Region] just before starting the data collection to make sure that whatever we had started off here haven’t been forgotten (R04) | Well now most when they were much more in-person in the olden days. The, that opportunity to participate as an external reviewer and the way that we did external reviews, that it was very transparent, that the committee would then respond to the reviews and make changes accordingly or to give feedback about why no changes would be made. I think that was a way of broadening the engagement to go beyond people who are just at the table (U08) And she [PI] would host more than one meeting just to make sure that everybody felt a part of the discussion and dialogue. Email was used quite a bit too… There were some working groups established and that was of course…that we gave feedback on where we saw ourselves in what working groups we would want to contribute or participate as partners (U09) teleconference and email just because we’re a provincial organization (U10) | So that would be a good example of a partnered initiative where we would facilitate meetings and workshops and kind of one-on-one discussions with the program managers and the researchers (C01) |}

| Identified stakeholders | So in terms of who specifically the participants were going to be, the | So quite often we have to think about engaging our colleagues who are more at | And so we work, because we work so closely with our |
balance of strategic and operational roles, for example for interviewees or what roles exactly; those were things that were negotiated out with people, once we’d already decided we were doing this work but more of an adhoc basis (R04)

So we reached out, we found out who the [lead] was and we reached out to them to say, you know we know you’ve got a new program we’re putting in a big evaluation with other programs in the country…you don’t know us and we don’t know you but we just are gonna take and it was very short timelines but by the time we figured out about them and we just said, we’re gonna take a short stab and see if you might be interested and we know you know we’d have to work with you and get to know you and all that. So the interesting part of that story is the program responded to my email…literally within minutes, absolutely yes! (R05)

the frontlines of the service delivery side of things. And as well, sometimes we need to pull in appropriate partners from the ministry or even could sometimes even be from another ministry that where there’s relevance as well even outside of the Ministry of Health in housing sectors there’s multiple ministries that might have a role. As well in housing we have a number of different organizations that we contract with who provide long term care and supportive living services and you know we always need to look and see whose being impacted potentially. Who might have you know knowledge and expertise that is relevant and make sure that you know if they, if they’re you know quite closely impacted or you know would have critical input to give that they’re at the table (U05)

think the other thing is willingness for people to understand the practice environment and develop those relationships. Some experienced researchers I think is needed. You need a range of research people with a range of research methodologies and sort of positions in their research. So qualitative epidemiology, quantitative, you needed that, that kind of range of perspective (U07)

different stakeholders going you know from ministries and academics to health system or whatever, we will, we do have kind of a standard analysis and then part of that is in terms of moving forward to your point; is then using that based on kind of doing horizontal scans or looking to see who else is in the funding in the area; is other emerging areas, so and we get data from different sources. So you know looking at emerging areas in terms of for example, artificial intelligence. And so then that would help us explore new stakeholder groups you know depending on priorities. So and because we work cross-sectoral that stakeholder group analysis is broadening, (C01)

What factors enabled partnership initiation?

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<th>Leadership</th>
<th>Yah, I would say for us it would definitely, well leadership will be underlying always important. So it was mostly the operational leadership of [Provincial service] and a separate stability in [Regional] Health in terms of</th>
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<td>So I think you need consistent leadership. Because you have a lot of turn in your leadership group that would make this hard. And there was stability at the university and there was also stability in [Regional] Health in terms of</td>
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<td>I would say for us it would definitely, well leadership will, is all, will be underlying always important (C01)</td>
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<td><strong>Shared goals between researchers and research users</strong></td>
<td><strong>[The protocol] document served as you know an understanding between us about what we were doing Because until we actually got those documents created it was all conversation and presentations and discussion but it was all out in the air. The letters and the protocols sort of crystalized what we had been talking about and confirmed that you know everybody had read it and looked at it and thought about it and I felt like that was the mechanism of how we actually got the projects confirmed about what we were doing together.</strong> (R01)</td>
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But I would say there is a process and the process is that you need to understand the knowledge user and what are they gonna do with the results. What do they want from you? What are, do they need to make their life easier? And try as much as you can when you’re thinking through about how ultimately you’re getting their input it’s obviously needs to be something that they’re really interested in or they’re not gonna consider it in their own portfolio. But I think you need to be able to think through about how best do you need to provide information to this person so that they have a better chance of being able to use the result or their team because often it’s a team (R06).

I think the research charter was more important for academic members than it was for health services members, that’s in contrast to a project I’ve recently done in that last couple of years which was the quality improvement project in a clinical space. That was a very different kind of project charter, much more created by the clinical teams for the clinical teams, much, not about, not a research charter but a priority charter around what was in scope, what we’re gonna change, what will we not gonna try and change during the project. And that one was created by the clinical teams themselves, so very different for different purposes (R07).

be a willingness and an openness to actually work with the policy-makers and not all researchers are that open all the time (C02)
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<th><strong>Form partnership early on; Collaboration from the start and throughout;</strong></th>
<th><strong>I think you really, really have to do a good job at pre-initiation as well as when you actually initiate the research (R05)</strong></th>
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<td><strong>We established collaboration at the beginning inviting people to understand what we were after, eliciting their support and then thinking through about right from the beginning where would we disseminate our results too and who would do that? And so when I think about some of those things we didn’t, we had agreement on the study proposal. So everybody talked about that. We had involvement of our study team throughout and at the end. (R06)</strong></td>
<td><strong>So you know a really forward thinking research team will try to approach bureaucrats and try to do that very early co-design but it is enormously challenging mainly because of time availability of the policy-makers (U01)</strong></td>
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<td><strong>Collaboratively from beginning (R09)</strong></td>
<td><strong>it would be nice if some people first start thinking about these applications and asking us if, what we tend to get is like a you know a one, maybe two page kind of summary of what the application is gonna look like. But you know it would have been helpful if we’d been brought in sometimes even earlier. So for example, I know…there was one we recently approached on that they’d had a large webinar for a particular project for the funding program. And I mean the researcher, maybe you can’t always think ahead who you want to have as part of your group. But if we could have been part of that, it would have really helped to set us up and understand much clearer what they were working for and what they were doing. Where there are opportunities to bring in us in earlier, I think that would be really helpful (U06)</strong></td>
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<td><strong>So I refer to IAP II, the International Association of Public Participation. If you look at their framing it forces you to think about what are you meaning by partnerships? So if it’s strictly to get endorsement that’s one thing. Is that equalled decision-making then you’re wanting a different level of relationship with me. If you’re wanting feedback</strong></td>
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<td><strong>As an organization we would see ourselves not only as a funder but as a facilitator or a convenor or a catalyst for bringing together at the very beginning as part of needs and planning to kind of address shared needs and moving forward. So yes, both our organization and our department. So the term we are or our practice is moving very much to a partnered... or partnered approach in addition to co-developing right along with our partners through need planning development and implementation (C01)</strong></td>
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<td><strong>But to have, to try and establish those kinds of relationships early on does make for successful approach at least. I think it doesn’t where I’ve seen things work that’s where I’ve, where I’ve seen it work. Those relationships are there, they’re not just created because of a specific you know fund or whatever (C02)</strong></td>
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that means you’re doing the work but I will comment on it. So I think the expectations at the on-set, the intent needs to be very clear (U04)

And then we drafted a MOU and it went back and forth between the two, the two organizations; ultimately was discuss by our Board and was discussed by the [University 3] Board. And then the presidents and the board chairs of both organizations signed that off. And then we’ve used that to guide discussions between the two universities or between the two organizations since then. It you know I might say that it was really important at the beginning of building the relationship. It’s probably less important now and it’s probably referenced less now. Although we do still pull that out and we refresh it but it’s, you know as the relationships have at the organization level have been established, its, so it was really important at the beginning I guess is what I’m trying to say (U07)

Make some deliberate decision-making around our priorities where we can invest our time and effort and that’s sometimes hard to do and maybe that’s something we could be a little bit more transparent about; where we are willing to support researchers and have those conversations earlier (U09).

| Trust: Demonstrate commitment to the | I think there was sense that by applying for the grant together that So the president and I met several times. We also did went back and forth via | Sometimes we need to be patient in our timing, timing of |
| Project, personalize emails, be responsive, face to face meetings, maintain credibility | This was more than just some guy showing up with this kind of interesting new [product], just kind of wanting to show it off (R01)  

So what it meant is a personal email for me…phrased in a very specific way. I have to think about what is the title of the email that will get their attention. I make the email relatively short but I make it extremely personal. If I know anything about them, I say something about that. If I don’t know anything like when I reached out to the person I told you that you know we approached late and then she was very responsive I basically started my email with saying you don’t know me, we’ve never met. I just want to tell you who I am, what you’re doing and I can tell you one hundred percent when those emails come to them probably one of the first things they do is they Google you….to see who’s that researcher. They look at what you’ve done, they’re looking for, they’re looking people who they think have some of the same values. They might even ask their colleagues about you, right? So your reputation really matters. And if you don’t have a reputation that’s fine, I mean you don’t have to but the way you write that email…Your priority has to be responding to their email, if they choose to respond to you and you have to make sure you make yourself  

Electronic means on the actual document itself. When we did the signing of the documents or first of all, we took it to our respective boards; that was an individual process and then when we worked together on signing it and getting it signed-off. And then I think if I’m remembering correctly, we actually did have a kind of an event around the signing of the final MOU (U07)  

And the other piece that is a really important factors is credibility. So I’ve always said to folks…the world is too small. I mean it’s not [City] it’s the whole world is way too small to burn bridges. So and I mean I can always tell you, I mean you know so I live in [City] but I do work nationally and I do work internationally. And if you burned a bridge somewhere or haven’t considered voices or haven’t followed through credibility is lost. And the other thing is, is sticking to the plan. So to engage people and then they don’t hear anything or there is no feedback or there is no cycle of feedback they will quickly become disengaged. You have to look at what the initial engagement is that you have to deliver (U04)  

But a lot of this is coming down to civility. Like how civil are we being with our colleagues? How do we set out a very clear scope of what we’re actually trying to accomplish; people are so busy. People don’t even have time to read  

Applications in order to let some of this relationship building actually happen. So you can’t just you know in a three or two month period, right? That you’re writing the application form that you’re you know trying to find people that you know to engage in this conversation. You can’t just establish a trust relationship at that point… make sure that you can give enough time to have a trusting relationship because that becomes critical in the IKT process I think. And a factor, I mean I don’t know this happens. You know I don’t think this has been necessarily born out but that, if that trust isn’t there then you don’t get the kind of impact that you might at the end of it. (C02) |
like in my original email I’ll say something like, if you prefer to talk on the phone I’d be happy to do that (R05)

I showed respect that I reached out to them, that it was, I made an effort to come and meet with them to show my interest and engaging their support because without their engagement this really would not go anywhere. And so I think that that part is really important in reaching out as much as you can (R06)

So that face-to-face component I think always essential in building the trust, the human relationship part to move work forward across the multiple sectors and with people who don’t necessarily work alongside each other very frequently (R07)

documents before meetings or anything or be prepared anymore (U10)

And so [Researcher] would provide regular communication and updates without necessarily asking anything of us. And so I just thought the sequencing of the communication she offered, the different levels of involvement and the different level of that sort of involve, yah making us feel like we were a part of it; I think was really good, well done (U11)

Pre-defined network in advanced of project deadline: Individual or organizational capacity to develop and maintain a network

I guess a piece of that [beginning a partnership] is about knowing whose gonna say yes, and not approaching the people who are gonna say no (R02)

So we always have the steering committee [we] keep them up-to-date. We speak with our stakeholders on the steering committee probably three times a year. (R03)

I was already embedded in the decision-maker context; in that people were hearing from their own

Anybody who is in this space of health services and policy research really needs to have a network and they need to either initiate that themselves or they need somebody in their department whose role it is to help facilitate the creation of the network. And so again, it goes back to this idea of organizational capacity on the delivery planning policy side and on the university side because I’ve seen really effective professors who just are great at developing networks and those that are not and you know it feels a little inequitable that because of you know personality or you know introversion versus extroversion that you’re, you

Looking at those areas [of interest] and priorities and identifying who we should be partnering with that we may not have considered (C01)

From a researcher perspective to find, find some key advocates within the health system for your research and then they can always be there to help connect, right? And that’s not something that happens because of an application. That just happens because you’re, you know
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<td>colleagues in other parts of the country (R04)</td>
<td>Researchers really have to know the networks and they have to be able to tap into networks at different points in order to get a full picture of who is involved in this work and who needs to be involved in this work (R05)</td>
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<td>And so I was aware through my work [previous project] that there was a group of people who were part of a drug user organization who were specifically focused on the harms of illicit alcohol and that they were advocating for programs for their peers. So I reached out through my network to individuals that I knew that were working with that group and they became like an amazing partner. (R05)</td>
<td>should not have that network that your colleagues does because they are more inclined to be you know meeting new people and expanding their network (U01)</td>
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<td>So I would say in both projects were really important that the PI was known or you know of the person you wanted to collaborate with through a previous experience. I think it’s really hard once you identify people if you’ve not come in contact with them before (R06)</td>
<td>It’s getting the group to gum up to speed and feel like a group that over time we use the project as a means to sort of create that sense of community and commitment and I guess that sense of you’re doing it together (U08)</td>
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<td>shared interest, synergy and passion for the topic</td>
<td>interested in doing something and somebody shares that interest and then you can you know sort of go on working on something together. So I think that’s an important, that’s important piece and this trust and in being able to move things along in this kind of approach (C02)</td>
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<tr>
<td>Shared interest, synergy and passion for the topic</td>
<td>They are you know we’re empathic clinicians and we see when the care that they’re providing just doesn’t seem to be meeting the needs of the people that are living with the illness. And so it was not difficult when it’s a topic that people are internally interested in doing something</td>
<td>We have kind of a synergy around shared interests definitely yah when there's sort of a number of stakeholders who are seeing a potential benefit or a you know a key gap in knowledge that there’s agreement this needs to be addressed with sometimes you know that</td>
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<td>Motivated to you know the what’s in it for me component; is maybe it isn’t an identified selfish...as in what’s in it for me. It’s always identified as what’s in it for the patient (R07)</td>
<td>Aligns quite nicely with a researcher existing interests and quite often it seems to come together that way (U04)</td>
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<td>Yah, so I think what helped is that it was their idea. Like this is something they were very passionate about and they just needed a researcher who they could work with and who sort of you know who could bring that research lens and bring some of the rigour and they thought their work would be more credible and so on. But this was something that they’re really, really interested in and passionate about, right?... having them really like be passionate about the topic and coming to me with the question and I had to help them refine it as a research question (R09)</td>
<td>Certainly you know sometimes we have kind of a synergy around shared interests definitely yah when there’s sort of a number of stakeholders who are seeing a potential benefit or a you know a key gap in knowledge that there’s agreement this needs to be addressed with sometimes you know that aligns quite nicely with a researchers existing interests and quite often it seems to come together that way (U05)</td>
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<td>Funding opportunity legitimized and enabled researcher research user collaboration</td>
<td>And so doing things that build up that quality relationship that and that kind of identify the areas of mutual gain I think are enablers (U11)</td>
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<td>So that CIHR funded body was really helpful in being able to find contacts and it also lent kind of legitimacy to my position within that network and their positioning within the network. So it’s sort of a, there was an automatic shared interest even before we met on another. So I would say that sort of facilitated the initial meeting of the right knowledge user because they were already at the table to discuss things within the general category of improving survival from cardiac arrest (R01) I would say the grant opportunity itself. So you know the opportunity</td>
<td>Funding opportunity that’s well aligned (U05) Just you have this relationships that you just are, to me that’s the enabler to a great extent is we have good working relationships just in general. And when we get on a grant with them it just makes it easier to work (U06)</td>
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<td>So I would say that is kind of happens with the funding. So an example is that with one of our funding programs, the partnership in research and innovation for the health system, [name of program], it’s a partnered funding program between [province] and [health system organization] and we have at the beginning really co-designed the program to meet the health system need and then have facilitated meetings and workshops with researchers and where the program</td>
<td>Think the other enabler and this was pretty critical is the [Private Foundation Grant] had some, had an investigative team grant process that they were unfolding as well as capacity building grant for health authority that they were</td>
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to have the funding as a goal kind of brings people together for the purpose of the research. Whereas if the funding wasn’t available this relationship would have never happened to be honest, so yah the funding opportunity itself, like creates these knowledge user and scientist relationships that would not otherwise have happened as easily. (R01)

unfolding. And we were successful in getting an investigative team grant that was a collaboration between the university and [Regional] Health. As well as a capacity building grant that enabled us to put some leadership in place at the health authority which we then, it was 3-year funding and at the end of the 3-years we sustained that funding into the future. But that injection of funding was really helpful (U07)

we’re a very well-funded guidelines program, sort of relative to most guideline programs world-wide. So the fact that we have resources and an exceptionally well-trained staff to do sort of the core work, that makes it easier (U08)

manager would meet with the research community and the health system every quarter. And in terms of that partnership through that whole funding period. So that would be a good example of a partnered initiative where we would facilitate meetings and workshops and kind of one-on-one discussions with the program managers and the researchers (C01)

Well I, I mean obviously funding does help. So the opportunity absolutely, like the opportunity of funding and say just as an example this rewarding success. It provided an impetus for researchers who may be interested in doing something you know to really go out and talk to the policy-makers about their ideas and about what they would like to see done and vice versa (C02)
| **Funding for travel or other opportunities** | The funds to make the face-to-face visit, I had done through my university through a research initiation grant. Which specifically you know could fund things like this which was you know a flight and trip for a few days from [City] to [City] to meet people in-person and so that was an enabler for sure (R01) And then it’s a about finding places where we have the current group of people and the funding agencies and the practicalities allow you to answer a related question. And in my life, it’s a, say relatively complicated mix of what people will pay for and that’s from funding agencies to you know of all sorts to sometimes to companies that you know have an interest, right? There’s a, there’s some things that I would like to do that nobody is gonna fund, okay and there’s no point…about them because it doesn’t matter what kind of grant I write, it’s not gonna happen and periodically that changes (R02) Money to meet in person, resources (R05) | Availability of resources to pursue the research (U01) | So it really depends on the situation and on the previous knowledge of one another. I personally think that it’s really important to meet face-to-face (C02) |
| **Connectors, Boundary Spanners, Mentors** | So by knowing both of those things they can kind of mentor you or guide you to the right people. And I really think it’s an advantage over a cold call of a scientist to a knowledge user that often doesn’t pick up and take off. But if you have a matchmaker then there’s some trust and sort of There’s the idea of the boundary spanner role, you know that somebody who spent time in multiple domains (U01) The chair of the nursing program was a key person in this, in this process; very experienced researcher and have a lot of creditability in the practice environment. Well I think it’s kind of having a foot in both worlds, right? We obviously very deliberately connect with the researchers and the research community to understand what their needs are and to just understand where the strengths are and what’s |
prior history, prior knowledge of you through this person that makes the relationship much more to be successful I think. That’s right. And often these people I find who are connectors like have their hands in a lot of pots are often mentors and in my case that was certainly true. So they’re often senior members I find. (R01)

Identifying people who have a leg in both camps. So finding those people who have like kind of live in both worlds, they’re great connectors. I think they act as translators and connecters. So they can hear, they can hear about an innovation or an idea or a project and because of their roles as both you know scientist and also knowledge users in an operational agency, they have a good view of the landscape of an organization and the politics of an organization and they also understand the clinical aspect of what you’re trying to do. (R01)

We had to, there was a lot sort of checking in that the research user wanted with the project; how are things going? Do you need anything from us? We want your principle investigators to do a presentation to [National Association], can you set that up? So that kind of stuff would all go through me and I think that’s a good point for them to have where And so she was, there were a few champions amongst the researchers that were really important. She was one. Another one was the person who was in the associate dean research position with the [University] Medical program. He was a very critical piece of bringing this together and really been nursing person and the medical, the research associate dean; the two of them were the ones that really spearheaded this. And then got you know people from medical geography, a social work and so on. The indigenous health, some of the other areas of the university to come to the table, so it was very definitely championed by a few key people (U07)

I sit on guideline panels when something is going a bit squirrely or something is [a bit] off. But if you have someone sort of a little bit removed, so when there’s a challenge or a problem or a difference of opinion, you have this sort of unbiased person, I’m not a physician, clinician, so like I’m disease diagnostic, I’m program diagnostic, all of that, that can help come up with a consensus of a remedial solution (U08)

going on. So we do that as part of our role. But another part of our role as I mentioned is to ensure that we’re getting the greatest impact out of the research that’s funded so that there is actually translation of the knowledge whether that’s in health services or whether that’s a products being developed or you know policy change because of an engineering discovery or whatever it is (C02)
they don’t, might not want to bother the PI or not sort of those kinds of organizational things, those kinds of checking in things. The big ticket questions they’ll go obviously directly to him but I can also mediate that at little bit. I can solve a lot of stuff for [Supervisory] or for the research user. So having that kind of point person who’s right on, that that’s a go to person for the research user, if they need that. (R03)

She [key stakeholder] helped us introduce me to the [CEO Forum of Regional Organization] and actually before she introduced me to the CEO Forum, she helped us make some contacts (R04)

My experience with a lot of kind of those knowledge brokers is that they some, they don’t have the networks but they’re excellent once you connect them to those networks….Anyways, they are really good, they were really good at tapping into some people that weren’t in my networks but were in their networks (R05)

You might not know who the people are so you need someone to help, help you understand the organization and it might take you a few tries before you actually get to the right person…You may need to use an intermediary, someone else to help
broker that relationship initially… So the researcher is well known and they already have a reputation as being a good researcher. I think from my perspective on the first project I mentioned I think it…easier and our data from that study suggested that people were willing to collaborate because they really respected the PI, they’d done previous good work before and so they were willing to engage with them again (R06)

So I went to at the time my division head, and he had done work before in pain and large grant, he’s had success with large grants around pain, international work and very much connected to both the research community within [Province] and to the [clinical network]. So this mentor was really essential (R07)

| Time commitment from busy knowledge users: Try to minimize their time commitment | So a big piece of it is trying to organize the project so that you have minimal impact on clinical function, or organize it such that there is an actual benefit, the clinical function so that people are you know and then people do the research because there is a direct benefit or at least not much of an issue for them. You can’t go to primary clinical people and say, you know I need you to spend one day a week doing research to work on this research project for the next five years, right. It’s not gonna happen (R02) | So I think it’s being mindful of your stakeholders; what their day jobs are because really you’re asking people to be engaged off the side of their desks. So I think we have to be very mindful particularly in the current environment (U04) You have to think broadly about how you can achieve the goal, the overall goal that you have while minimizing the impact on their time and making sure that their time is used wisely (U08) Like I worked in an academic space as well as in the operation side and in |
| Making research users feel valued and respected, not just a token partner, sense of ownership | A big piece of what makes clinicians I think willing to be part of research enterprises is having their input valued and having their contribution valued. And so, there’s two part thing, right? There’s a piece about getting their input which is valuable and then there’s the piece about making sure that you are always recognizing their input and valuing it. | I am feeling that partnerships are becoming token. So when we say partnerships they’d better be meaningful. If they’re not meaningful or if it’s a partnership to put on paper so you can get grant money, it doesn’t take a few of us too long to figure out that my engagement is of absolutely not important to you but was important to get the grant. So we need to really | Where I’ve seen it work is where there is openness on both sides, right? There’s…there is a real willingness from the researcher to engage with and openly dialogue with you the end-users or the patients or the service providers or the policy-makers that that openness from |
and so, and that, so that’s about being willing to provide information to them if they need it… it’s about personal relationships and about people feeling valued and about people knowing that the research group is there to help them too (R02).

Sometimes, a researcher might have a very pre-defined notion of what they want to study and then goes searching for decision-makers to involve perhaps in a slightly tokenistic manner and there’s increasing pressure from grant agencies to involve decision-makers but sometimes what that can lead to is involvement that might take place around the question that even if it’s of some interest to the decision-makers won’t necessarily will acknowledge that’s a priority for the system (R04).

You have to reach out to your partners, when I say reach out I don’t mean the RA reach out, the RA who’s helped you write the proposal, no. It has to be someone who’s in a lead researcher role, someone who has the skills and the knowledge to work with community partners. (R05)

Once you do get to meet with them, I think you need to be able to present the case that their input is really important to what you’re doing. So I think you have to make the case and define what we mean by partnerships. Do you really want my involvement? Are you using my involvement to get money? And what is the nature of the partnership? Is it one of consultation? Is it an equal decision-making? (U04)

In other [instances] there’s hardly any interaction at all and you do feel that so you’re being asked because the researcher needs to show they got knowledge users on board and you kind of wonder you know. You know, hello, I’m here. Are you gonna use me or not? (U06)

I also think and I can think of several researchers that we’ve partnered extensively with who have probably sacrificed some publications because they haven’t invested their time in not necessarily disseminating information through a publication but they’ve invested their time in ensuring that the knowledge exchange happened right into the practice environment (U07)

Making sure that their time is used wisely and that they feel valued for their time… be nimble enough to allow that process to unfold in a way that the partners that we have, have as much control as they can around shaping, designing and thinking through what the evidence means… people feel ownership of that project and allow that project to unfold in a way where people feel committed, people feel good about the researcher absolutely has to be there. And if that’s there then it does allow for a lot more open dialogue and the you know the people who are engaged in the process can see value in what they’re doing and are much more willing to I think engage in an on-going fashion when that happens. I think if it’s just and most people can tell when you know the consultation process is not real and people already have the answers you know already accept (C02)
if you don’t make the case I think that that’s potentially a barrier (R06)

Never being quite sure to what extent senior leads within a health system are truly engaged and supportive of work versus yes you go ahead that sounds fine, I’ll sign-off on it. But you know don’t really want to be necessarily bothered with some of the findings that might require change or investment or you know so you’re never quite sure when people sign-up to say, yes, yes we’ll act on the findings or we’re supportive of this piece of work. Whether it’s gonna be something that’s at the end of the day they can act on or will want to act on (R07)

We all bring expertise to the table and no one is better than the others or no one will value one person expertise other, well I value their expertise probably than I do my own. But you know they come like so I bring research methods expertise or study design expertise but I mean they bring a whole lot of expertise and the inside knowledge and who’s who and they can get people involved and so on (R09)

dead end result and because if they feel good for the end result, that’s gonna be also very useful for implementation (U08)

But certainly I think also that you know having a name of an organization or a logo and the creditability that we provide on an application. I think sometimes desirable for some investigators which we want to make sure that we’re meaningfully you know able to contribute and that we also are in agreement with you know the actual proposed objectives for the research as well so that we’re committing our time appropriately. (U09).

So it’s about truly ensuring that you’re understanding that person, you’re understanding their objectives out of this. What’s in it for them? But I think there’s a lack of, the lack of civility that happens with some of our more passive communication methods like teleconference and email. People are quick to be a bit more or bit less diplomatic I would say (U10)

And so, and would provide regular communication and updates without necessarily asking anything of us. And so I just thought the sequencing of the communication…making us feel like we were a part of it; I think was really good, well done. (U11)

Have a good track record by being respectful of You know making sure that we’re very consciousness about people’s

The other biggest barrier and I’ve got one I’m dealing with right now is our
| research users’ time, being honest about goals | time you know for these conference calls for any asks that we have of them; if we want them to, I don’t know, review something or take a look at something or ask their opinion on something. We’re very respectful of that, of their time and their interests. So that I think is key. So just sort of that, that interaction with them to be, yah, mindful of their time and yah, be respectful and not, if we haven’t asked make sure it’s a good one, make sure it’s sort of targeted that they have any information they need. It’s you know packaged into you know some bullet points that you know they could take a quick look at, ten minutes before the call so they’re brought up to speed, that we’re not wasting their time by giving them lots of background and you know just like you know executive summary (R03)

But you know I’ve got this idea for a research project and I’m gonna tell you about it right now and I always say, well you know if you think this is not relevant or whatever I’m like just tell me right away because I won’t do it. And lots of times their mouth drops open and I’m like no, seriously. If this is not relevant to you I’m not gonna waste my time trying to put something together, right? So sort of take that approach and I’ve said that to lots of people over the years and so now people know me and they know I sort of do that. But like I’ve had like expectations. If the research is expectations exceed the time capacity of the individual, it’s a huge barrier and that’s the biggest one. So scheduling meetings without enough lead time, keeping in mind you know especially if you’re a practicing clinician you got a busy practice or appointments but also thinking you’re gonna schedule a meeting in two week’s notice, is just not appropriate (U04)

I think it would be very helpful though if there was a bit more upfront discussion on what expectations are. I kind of feel like sometimes we have to kind of make it up. It’s like so, here’s where we think we could help but we actually don’t necessarily know enough about your project. Or could you tell us where you see using us in some ways. It’s not always clear what that looks like. Sometimes it is, often it’s not (U06)

You have to think broadly about how you can achieve the goal, the overall goal that you have while minimizing the impact on their time and making sure that their time is used wisely and that they feel valued for their time (U08).

So she [PI] provided a few different options around where we might want to contribute and instead leaving it to us, not to do off the side of our desk, to say this is what we can do. She would actually provide some templates or even you know it was pretty much like you
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<th><strong>I remember one guy, he was like head of diagnostic imaging because I had this idea and he was like but you’re a researcher you can do whatever you want to do. Like you know what I mean? I’m like oh no, I don’t…but I mean if this is not relevant to you guys here on the ground then I don’t want to do (R09)</strong></th>
<th>said, like almost a bit of a description about here’s what I heard you say you could do, does this resonate and she would confirm that with us. So even you know helping support the development of the template letter of support on the application (U09) And so I think that from the very beginning being explicitly clear on mutually beneficial objectives and then not allowing scope creep unless it’s all of the mutually understood and respected and formally added and keeping civil with you know difficult conversations in partnerships (U10)</th>
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<td><strong>Speaking the same language, shared culture</strong> Also I’ve been around the decision-makers for so long that I sort of know the management language associated with this domain and even though I’m not a clinician I know some of the clinical language. So we didn’t I think have language problems going back and forth (R04) Being able to talk in each other’s language and I’m a bit, I probably am not as good as I used to be at being able to talk in non-research speak (R05) An essential change agent, who also use the language of what motivates the health service people knew the if you like, the buzz phrases of the day in terms of you know learning organizations and how to mobilize health service leads around a project First of all, it’s a practice driven environment even though research is an interest for lots of the practitioners and decision-makers in the health authority. The real drivers are about care and service delivery and it’s much more of a traditional organizational structure. Whereas at the university, it’s more of a collection of faculty that you have in a university environment. And the drivers are very much they drive people to individual work. Where what we need in the health authority is more of a collective endeavour. So and then the other thing at the university is often the drivers push you towards curiosity driven research and there aren’t as many incentives to encourage a robust knowledge exchange strategies (U07) We talked a lot about what our, harmonizing of our ethics processes. So</td>
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by aligning it to their existing burning platforms or existing priorities (R07)

And so in terms of you know approaching if you will, as I said before kind of fellow healthcare professionals approaching middle management and even approaching higher up healthcare administrators; we kind of speak, everybody speaks the same language in terms of we’re trying to improve either healthcare delivery or we’re trying to improve you know management of some kind of issue. And so everybody understands that. So that you know the higher level, they’re more interested in cost containment maybe but we can use that language as well (R10)

the people that were involved in those research review processes were involved (U07)

| Research project as a way of research users to stay up to date or researcher to obtain tenure | They [Research Users] were very interested in being up to date and keeping in touch. And so particularly some in the community hospital saw this, a participation in a research project as a way of keeping up to date. So I think there was some motivation from their side that this would be one way to from them learn more about current practice and make sure that their own practice was up to date [R06] |
| Outputs] can be published or they are published. So they’re always published on the [Provincial Organization] website of course but they’re also published in peer-reviewed journals...So I write many letters of promotion for clinicians moving to the next stage of their career and to ensure that that work and the website publications are counted as peer-reviewed publications. So some of those small things to sort of help the deans of medicine or the deans of health science and to understand what the work is and why we view this as peer-reviewed as much as when it goes to a journal (U08) |

| Geographic proximity | [Province] is really small, so we, you can always find a connection almost to sort of build the relationship even | [City] is pretty small and depending on the question you tend to know who [to contact]. Often you know you got your |
| In [City] is a small place and they know it’s easy to say that if you’re in hip and knees, this |
if it’s like you know your kids go to the same school or something like that. I’ve been really lucky out here because there’s a lot of informal, like everybody, I say everybody knows everybody and that sounds funny but it almost feels true. And physically, like geographically, physically we can meet more often, right? Like quite literally you know we’re all within you know I say we, like any decision-makers I work with or any clinicians for the most part we’re all within ten minutes of walking to each other (R09)

key informants and it’s a bit like a web…limit the number on an advisory because you know people are not gonna come even if it’s every three months. So it’s usually between 15 and 20 people. Although often be invited as you know priority informants and then is there anybody we’re missing. So it’s not like we’re sitting in [large city] (U04)

So to keep sustained relationship with some of the organizations it can become challenging when there’s a high turnover of people (C01)

| What factors were barriers to partnership initiation? | High turnover of stakeholders | When you know an organization like these, they are kind of reporting to their political master, their masters at the provincial level and you know those cycles are you know four years or shorter for our representatives in the government. And so I find sometimes they operate on like government cycles. And so sometimes when a government changes, like it did in [Province], it put a real sort of change in appetite for the project into the knowledge base (C02) |
users. So this might be specific to this project but I think it was a barrier for this and it might be for other (R01)

The other issue of course is there’s turnover, like as this project is way, way longer than I’m used too. There’s some regions where they’ve already switched over three times, who that individual is and they may not be as involved as the person who started there. (R04)

But the knowledge user in fact changed and that certainly is an issue. So the person I spent some time talking with and developing a relationship with has since gone so (R06)

Where I have had problems before on-going and I can’t even think of, I have no projects right now actually where anybody from like the government is on like Ministry of Health but I have in the past and I found that always very challenging. And the barriers I think involves many things. One is I think like high turnover often in ministry. So people take different positions, right? They move a lot. And I think within policy-making, like policy-makers and at the ministry they’re you know priorities change quickly sometimes, their timelines are quite different than mine and there’s a lot of turnover and I
| Over-reliance on one person representing a group of research users | I felt that the partnership kind of, the partnership between me and that knowledge user organization suffered a little bit because it all of a sudden became dependent on that one link, that one person (R01)  

There was a lot of peer influence at all levels including the CEO level to encourage other regions to participate and to communicate the benefits of the research (R04) | But I would say that a lot of those partnerships and gathering of those folks for the different committees, I’m not convinced we have been completely representative of all of the clinic, if I focus on the clinicians specifically; representative of all the clinicians who are out there (U08) |
| Enthusiasm waned over time | So one thing I would mention is that I felt as the project got further and further away from its inception and further away from that initial warm fuzzy buy-in period where I felt like I’ve teether in the senior leadership team (R01)  

So keeping everyone engaged and on board when the timeline of this particular type of research, getting it funded and getting it happening is very slow; it was a barrier (R04)  

When you’re doing the initiation there’s a lot of hope I think and there’s a lot of things that you have to learn about each other. And so in that I would say one of the barriers is you can lose people if they don’t, if they don’t really understand that the | Difficult around being able to sustain their interest, their capacity to participate (U08) |
| Competing priorities made for limited involvement from Research Users | I was trying to engage with the group of people who had a really heavy responsibility load, they’re kind of looking after this, you know these giant [research user organization], they have really big fish to fry and this little you know [product] thing was interesting, innovative, could help them with their mission but probably represented less than one percent of what they had on their you know global agenda for the organization. So I feel a little bit of it was that I was competing with many, many other interests on the part of the particular knowledge users (R01) it doesn’t matter you know how much I would like to be able to take off their plate [partners], they have to do it. (R02) So they’ve been quite good about that but you know sometimes it’s a little bit like herding cats but that’s because people are busy you know and it’s not that they don’t care, it’s just they got very full schedules and they’re trying to make things work and they’ve got lots of competing you know demands on their time. (R03) Create a shared understanding of what this project is about and | Research may not be a priority unless change is possible (U01) There was at the same time an inter-professional collaboration project going on that was trying to utilize a lot of the resources and they had their own agenda (U03) So don’t invite me to a meeting if it’s a topic I really don’t care about. (U04) There’s you know real interest in seeing if we can find evidence around you know looking at longer term impacts on healthcare utilization. And that requires like a you know a randomized control trial that, the recruitment for that takes quite a long time. And then there needs to be a sufficient duration of data collection as well. Of course need a control group. So this, there is a study underway right now but just the timeline is so long to get that kind of a big study finished and you know meanwhile our windows of opportunity sometimes when we’re looking at you know questions around whether to decide to fund something sometimes our timelines are much shorter (U05) Trying to engage folks who are in the community and less attached to an academic centre is, has been more difficult because they don’t have the | And also see and this is one thing that I think is important is an openness to having those relationships. Not all policy-makers are not all service providers or have enough time; a) or b) interested in actually working with researchers necessarily (C02) |
everybody has a little bit different interest (R05)

So some of the difficulties is that in doing that, as a researcher you always have a timeline if you’re applying for funding. And so sometimes it, these people are super busy, have a lot on the go, everybody does but you need to fit in their schedule and that sometimes takes a while. So you have to be super flexible in when you’re willing to meet with people, if it’s at the end of the day, the beginning of the day that they’re willing to meet with you (R06)

same flexibility in terms of participating and being available to be for meetings; similarly non-physician clinicians, sometimes it’s a little bit more tricky because for example, if we think about nurses, again they have less flexibility about the scope of their activities and having time specifically for quality and research orientated activities. So that’s been a little bit tricky around trying to create either formal or informal ways of gathering participants or potential participants to be involved at the table (U08)

Administrative paperwork for studies is time consuming, need a dedicated person for larger networks

in my lab…there’s probably patients at three hospitals; we might contribute I don’t know, five or six cases over a ten year period. But those five cases, six data-sharing agreements, subcontracts, material transfer agreements, it’ll take eight months to get all those signed and that’s, it’s only gonna be eight months because I’m good at it. It’s every lab across the country that has to do this, to put together a hundred cases or you know a hundred and twenty cases…we’ve created these layers of necessary agreements that are now really onerous to maintain. I had in one of the great glories of life, I have an appointment at both [Hospital] and the [Larger Hospital Network]; I have data-sharing agreements with myself. (R02)

you have to think broadly about how you can achieve the goal, the overall goal that you have while minimizing the impact on their time and making sure that their time is used wisely and that they feel valued for their time (U08)
I think I find now that I’m part of other groups but again they’re a larger network like networks where they actually have a dedicated person who can, you know they have a manager of the network. So I find that these groups are much better organized and have much more ability to document everything. You know either recording the meetings or having particular like very extensive minutes or even technical reports (R10).

Personality of the researcher or research user: Researcher too passionate, not networked, interpersonal dynamics, not open to change, not communicative

And because I was driving it and because I was enthusiastic and because I was passionate about it, they, I feel like they just kind of let me go with it and kind of just diverted their attention elsewhere because it was needed elsewhere (R01)

They [researchers] have the interpersonal skills, they know how to reach out to people, they prioritize the work with the partners; often that, you know their own expense you know of staying up late and doing extra work or you know being delayed on other things. But there are many researchers in my experience who do not have these skills (R05)

I’ve seen really effective professors who just are great at developing networks and those that are not and you know it feels a little inequitable that because of you know personality or you know introversion versus extroversion that you’re, you should not have that network that your colleagues does because they are more inclined to be you know meeting new people and expanding their network (U01)

Sometimes people just don’t get along. And I don’t know how you quantify that in knowledge translation; like you know I might just not like the person and as much as my frontal lobes says, they’ve got valuable work and I really should be listening, the, all the subconscious biases that might be clouding that might not allow me to engage with the person. (U01)

You do need people who are tenured to be, because you know if you’re not that openness from the researcher to change and to really adjust the things that they’re doing in order to or reflect what they’re partners are saying and doing. And researchers, not all researchers are necessarily good at doing that or have thought that that’s the way they should be doing it because they’re kind of trained in opposite way, right? (C02)
tenured you’re in a bit of a vulnerable place and there’s some riskiness to this kind of work because it does take you away from what the usual incentives are in a university environment in terms of your individual research agenda and publications and conference presentation (U07)

Sometimes it doesn’t work. Sometimes you have to actually say to a particular person whose being you know disruptive or toxic in an environment, thank you very much but this isn’t working and you know. I don’t know what the best word be, to fire them? (U08)

Sometimes we’ve encountered where we’ve lost communication with the lead researcher, not knowing what stage there at and then at the end of the research they’re saying, thanks, great. You said you’d host a webinar for us, like oh weren’t you know where has this been and where has this led and it was different then where the original out-set was. So that hasn’t happened often and that was some time ago but certainly that’s a bit of a barrier too (U09)

The structural pieces help and they’re kind of guide posts for partnerships but I really do feel like the other organizations culture and then the individual that you’re working with directly that you’re paired up with at whatever level you’re at. You can be at project-level, you can be at sponsor-level, you could be at
| Lack of understanding of the research cycle, research culture | Their [researcher users] timeline and expectation of knowledge is much shorter than the realities of clinical research…So you know they often need to make decisions quickly with kind of knowledge that’s right in front of them. And so I feel like the project like this where you’re asking them to participate in a clinical trial which might take you know a year or two to plan and another year or two to recruit enough patients and then six months after that to analyze the results and then publish data in a peer-review journal. I always get the sense that you know the knowledge users expectations and needs for knowledge is much shorter than our kind of practical limitations for clinical research. So I don’t really know you know what the solution to that is but it’s just something that I have noticed sometimes (R01) | I mean policy-makers don’t really understand the research process and the specificity to which questions need to be posed and methods need to be developed and researchers don’t understand the, I mean this is you know over generalization but typically don’t understand the time pressures and demands on a bureaucrats time. (U01) |
| --- | Team were not researchers. So they might not have had the kind of comfort or confidence to start picking away at a scientific protocol and making suggestions and changes (R01) | And there’s the legislative framework that exists. You might have great model of care that has PSW’s doing something but maybe that doesn’t fit with you know how those health professionals are regulated and they can’t actually do that in practice outside of a research setting. So you know as that, UK science advisor said, law and economics are top dogs and if you don’t address those then you’re probably gonna have a tough time initiating relationships (U01) |
|  | You know people like me that don’t know anything about this [initiating partnerships] come up to researchers and go, blah, blah, blah, blah what do you think, right? And then you know the response that you get is either oh that’s really cool, I think I can help you or no. (U02) |  |
| **Geography/Distance** | I think for me is the difficulty in accessing the higher level healthcare administrators. I think it’s difficult. You have to kind of almost know somebody in the field. People obviously they talk to you on the phone but then they try to kind of refer you to somebody else. So I think that’s a bit hard, this kind of barrier in terms of I know what needs to improve on the ground but then often it’s required for a grant application that you actually have knowledge users that are in the higher you know administrative field (R10)

I think I made an assumption that people would know what IKT was but I think we found from the second project that I’m not sure that was the case; that everybody kind of thought they knew what it was but when we talked to some of the knowledge users both in the individual projects that was part of the study as well as our own knowledge user on our team. That I wasn’t sure that they, we were as clear as we could have been. And so that’s a bit of a dilemma because you think maybe people know (R06)

| On the [Regional] Health side, I think there was a need for and there were people who are willing to be again, build relationships, be flexible and understand that university doesn’t operate the way the health authority does. And there’s different drivers and different incentives in the university environment than there are in the health authority environment. And so it’s a different culture and you have to figure out how to bridge that culture. And we had some people in some key leadership positions that got that and we’re willing to learn to understand that or seek to understand that and yah so (U07)

| My capacity to do on the ground really good community engaged work in partnerships is non-existent in communities in [other provinces] where a lot of the programs were at the time. So I needed to draw on my academic partners who were situated in various cities to engage them in the So because we’re a smaller geographic health authority we’ve worked, we didn’t have a lot of bench strength at the time of in the organization to build a research endeavour. So we felt that what we needed to do was rather than duplicate and have research institutes within our organization; how could we work with |
research so that they could do community-based work with [their local] communities…And then you know I would say provincially we did a good job in some provinces but not in others in terms of engaging the provincial partners (R05)

Geographic disbursement. I think humans are still, we’re still wired for you know eye contact and body language and fulsome communication. So I think that working by phone or by skype link, tele link, whatever but through a computer is still challenging for all of us (R07)

the university that covered the same geographic areas that we did to together leverage the strengths of both organizations (U07)

Misaligned goals and expectations, applying for a grant without clearly defining participation,

And typically at the beginning in initiation phase you have everybody excited there, they’re involved, they want to be involved. But if you don’t have a clear plan for how that involvement is gonna look and people don’t know they’re role, what their roles are and this is where it’s often very difficult because they’re looking to us as the researcher often to be the leader yet we want to co-lead, right? (R05)

But it probably would have been worth to say, alright, just all on the same page here; this is what we think your role is on the study and is that something that you’re prepared to take on? Making it more explicit than what we did. And thinking right at the beginning where would be a home for this particular study (R06)

To be honest, my ultimate project and goal that I wished has not happened…And partly that was because of everybody else’s priorities and The politically correct way of saying it, is that they decided to focus on what was accomplishable versus what was desirable (U03)

I think sometimes there can just be a challenge in terms of those sectors having different kinds of priorities in a way or different timelines as well. Often times for academic work and you know to for example, to develop certain kinds of evidence requires maybe a certain methodological approach that’s gonna be quite resource intensive and may have quite a long timelines (U05)

I think it would be very helpful though if there was a bit more upfront discussion Alignment and when you get into formal partnerships; if the end game aren’t aligned it can be really problematic because you’re, you have different accountabilities (C01)

sometimes it is a person that is just not like super interested or doesn’t have enough time to do that (C02)
And sort of expectation management I guess and role clarity. So try and understand what it is everybody wants to contribute to the team and how we’re gonna do it. So I think if there’s lack of clarity around that and sort of if expectations aren’t sort of put out on the table and they’re maligned or misaligned then those things cause barriers, create barriers (R09)

And people who are just trying to put in a PHSI grant or they’re trying to put in a different type of you know project grant; in the end you try to get something that’s functional and that where people are interested in participating. But in whom the full sledged participation may not have been yet optimized and would probably be once the funding has been secured (R10)

on what expectations are. I kind of feel like sometimes we have to kind of make it up. It’s like so, here’s where we think we could help but we actually don’t necessarily know enough about your project. (U06)

I think one of the things around any of the partnerships is being very clear and crisp on the expectations. So what’s everybody’s role, like a really clear terms of reference about what’s everybody’s role, what’s the time commitment, what do we expect from folks, what can they expect from us, what’s the reinforcement or what are the rewards of doing it; so that people are coming in with very clear expectations and know what they’re getting themselves in for (U08)

And the more details at a researcher or an investigator or assistant can tell us about the process or what they need from us or the expectation and the timelines the better… But then you know we there’s sometimes that we have to actually say no because we want to make sure that our contribution is both meaningful and that what we’re investing our time and our precious and limited time into or resources to help support dissemination, it actually is aligned with our priorities especially when you know a couple years down the road when the results come out (U09)
Structural things like contracts and procurement and like directives that we have to comply with; policies and procedures within organizations that don’t match up (U10)

| Shared forum, repository or space where KUs would share research priorities with researchers | I think a way for researchers to interact with knowledge users or to at least be able to identify who’s who within their particular fields would be useful. I don’t know if that’s practical because it’s, there’s so much variability in everyone’s research field and you know variability and a few of the knowledge users are that might not be practical. But if there were some kind of occasional events or databases along the lines of what I just spoke about but some way of bringing together researchers and policy-makers to talk about different knowledge gaps, knowledge needs and opportunities for working together. That might help a lot (R01) But for there to be a shared place where the types of questions that are important or the type of innovative opportunities are available are kind of more visible…So if there was a way for policy-makers and knowledge users to be able to kind of post or present their knowledge needs then there might be more pick up from researchers who want to try and fill that knowledge gap (R01) |

| Network really bringing together change agents, innovators, |
researchers, healthcare administrators; we in particular, topic areas for example, [specific areas] healthcare system. And so those were made a, they’re automatically a bit of a knowledge translation vehicle and a way to both seek collaboratives for a grant or people who are gonna help the success of any knowledge translation products that created to that grant. They’re the kind of people who are going to help to implement or move that forward. Not sure if that structure exists elsewhere in the country but it’s based out of similar work I think from the U.K. and Australia and other places (R07)

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<tr>
<th>What strategies or interventions or tools would support partnership initiation?</th>
<th>Funding for non-research related activities to encourage buy in or participation from research users</th>
<th>We’ve ended up using some of our research money for food because you cannot reward frontline clinicians with time they’re giving to your project. And if you’re bringing them together to do a piece of work in a room face-to-face we found being able to provide food, so you know muffins, coffee, nothing extravagant, pizza…[or other activities such as] data visualization (R07)</th>
<th>So I’ve been talking to the [National Specific Health Professionals Association] you know partners to buy into this. So one of the incentive is that we’ve been batting around would be you know a free conference for somebody [to get involved in project] (U02)</th>
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<td>A document or toolbox describing interests, knowledge gaps, a how to start IKT partnerships both formal and informal, ; a written checklist of practical items to pay attention to when starting different types of partnerships</td>
<td>So I think doing your homework, it’s an important strategy and allowing enough time and making sure that you’re not missing anybody. Because in inevitably you will and so what strategies will you use? So some people might say something like, well you know it would be great if there was some sort of clear document that you have that you would describe</td>
<td>Something that would be pretty amazing would be to have somebody write a document that says, so you think that you need to do research in any given area that you worked in. Here’s some of the questions that you need to ask, right? As opposed to you know you, you know an idiot’s guide to how to get research done (U02)</td>
<td>Toolbox we would have many tools going from organic I would say to very formal. So a lot of formal partnerships are with kind of key stakeholders in the province that you know we would do through contracts and grants and MOU. And in our toolbox we also have the ability to initiate partnerships</td>
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what your role is as a researcher and not just assume that it’s understood (R06)

May be some kind of a list or a documents that warns the researchers, okay whose never been involved in such a thing of what, you know what they need to pay attention too and you know intellectual property, patent, all these things. People may not think of this as they’re doing, as they’re writing the grants and stuff like that (R10)

I’m saying, before we go off and say we’re going to partner with everybody we’d better know partnering on what? What’s the level of engagement? And how are we gonna provide feedback? (U04)

No, no one has ever sent anything on roles and responsibilities. nothing on that you know the whole idea of let’s talk first about who does what, when, how to the point of like location. How do the users get noted on publications such, none of that’s ever occurred. But…find rather interesting since the groups that we primarily work with are all heavily, at least for myself are all heavily involved in knowledge translation…not a translation scientist and practitioners and researchers. So knowing how we could be involved and potentially best practices around involving; I don’t necessarily see a lot of that actually to formally being followed through in being approached and working with them. It’s much more friendly, ad hoc you know kind of idea (U06)

there’s other things out there that do talk about having those discussions up front is what are the responsibilities for each of the groups? What are the expectations? How do you handle publications? So that’s at the end but having those discussions at the beginning just helps to set-up that positive trusting relationship (U06)

through different mechanisms like alliances and networks and a bit more informal but can be equally as powerful in terms of the partnership continuum (C01)
research that is being done on knowledge exchange, integrated knowledge exchange and what we’re learning about those processes have started to produce some models and some ways of approaching it; that first of all, give validity to the endeavour and also point to some of the things that need to be put in place to, can make integrated knowledge translation a reality… you know checklists and processes are all useful and they can help people get in off into the right direction (U07)

the role clarity and just understanding the roles and the different players and partners. You know we use charters a lot so improvement charters and you know a synthesis of what you know a little bit more than an abstract but a synthesis of what the intent of the research is, is usually really helpful…that shared value and also some shared understanding of what’s required from each. So it’s usually a discussion but I wouldn’t say it’s written in stone but there probably are some you know a checklist kind of a piece might be helpful so everybody’s clear who’s on first (U09)

| Spend time getting to know your team | So I and I don’t know why maybe well in my past life before I was in academic I was a knowledge broker and that was my entire for years and that was actually my entire focus was building relationship between different, like between decision-makers, clinicians, researchers and so |
on. So I guess that’s why I focus on it so much. I say that, I don’t have, I don’t know if that’s a strategy or not but sort of I spend a lot time like face-to-face, a lot of meetings, a lot of sort of casual conversation, a lot of like how’s your kids? Like I actually try to get to know people which might sound really funny in a work context but it’s, it’s sort of all-around relationship building (R09)

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<th>A model based on literature</th>
<th>Research that is being done on knowledge exchange, integrated knowledge exchange and what we’re learning about those processes have started to produce some models and some ways of approaching it; that first of all, give validity to the endeavour and also point to some of the things that need to be put in place to, can make integrated knowledge translation a reality (U07)</th>
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<td>Funding for partnerships</td>
<td>There needs to be resourcing available both in terms of funding for a project perhaps but also in terms of availability of people’s time (U05)</td>
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<td>Shared data agreements within the province</td>
<td>Like if we had in the province like you know master data-sharing agreements and master privacy clauses for contracts and a standard contract template for participation agreement; like we’ve done that in the clinical trials world quite a bit but we haven’t done that in the partnership world (U10)</td>
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References


16. Gagliardi AR, Dobrow MJ. Identifying the conditions needed for integrated knowledge translation (IKT) in health care organizations: qualitative interviews with researchers and research users. BMC Health Serv Res. 2016;16:256.


