Challenges of partnership research: insights from a collaborative partnership in evidence-informed public health decision making

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The investment of decision makers in research can increase the likelihood that relevant and timely practice-based research questions are asked and that these findings are readily taken up into policy and practice. While many positive benefits may be gained from this type of research, various challenges may also arise along the way. These include: unpredictable practice settings and a change in priorities or study focus over time; time and staff workload; decision maker research knowledge and experience; and balancing applied research with good scientific practice. In this paper, we discuss these challenges and offer recommendations for overcoming them.

key words evidence-informed decision making • research partnership • knowledge translation • public health

Background

A shift is occurring in health services research: decision makers are moving away from traditional ‘knowledge user’ roles to take on more active roles in the generation of new research knowledge (Mitchell et al, 2009). Funding agencies across North America, the United Kingdom, Europe, and Australia are issuing calls and creating research centres to specifically support collaborative research projects (Table 1). Collaborations between researchers and decision makers or stakeholders bring together expertise and insight from conventionally distinct parties (Cargo and Mercer, 2008; Goering et al, 2003; Golden-Biddle et al, 2003; Kho et al, 2010).

Compared to more traditional research in which decision makers are the subjects of study or end users of the results, this emerging model establishes decision makers as equal and contributing coproducers of new knowledge. Participation of decision makers throughout the research process facilitates greater access to data sources and decision makers are better able to reflect on their practice and how it may be affected by the research, internalising study findings over time (Hofmeyer et al, 2012). Decision makers may feel more confident in research findings because they were more intimately involved in generating them (Ross et al, 2003). The research also
### Table 1: Examples of partner funding opportunities and research centres

<table>
<thead>
<tr>
<th>Funding Organisation</th>
<th>Country</th>
<th>Funding Opportunity</th>
<th>Description</th>
<th>Link*</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIHR</td>
<td>Canada</td>
<td>Partnerships for Health System Improvement (PHSI)</td>
<td>PHSI supports applied, policy-relevant research that aims to strengthen the Canadian health care system by addressing questions that are important to health services decision makers.</td>
<td><a href="http://www.cihr-irsc.gc.ca/e/34347.html">http://www.cihr-irsc.gc.ca/e/34347.html</a></td>
</tr>
<tr>
<td>AHRQ</td>
<td>United States</td>
<td>Partnerships for Sustainable Research and Dissemination</td>
<td>These Partnerships aim to bridge the gap between clinical/health services research and daily practice by building capacity for research and dissemination, incorporating stakeholders and target audiences in the research process.</td>
<td><a href="http://archive.ahrq.gov/fund/rfas12005faq.htm">http://archive.ahrq.gov/fund/rfas12005faq.htm</a></td>
</tr>
<tr>
<td>NIH</td>
<td>United States</td>
<td>Community-Based Participatory Research (CPBR)</td>
<td>CBPR supports community members and research partnerships to increase community participation in the research process and ultimately affect change in community health, systems, programs and/or policies.</td>
<td><a href="http://obssr.od.nih.gov/scientific_areas/methodology/community_based_participatory_research/">http://obssr.od.nih.gov/scientific_areas/methodology/community_based_participatory_research/</a></td>
</tr>
<tr>
<td>NHMRC</td>
<td>Australia</td>
<td>NHMRC Partnerships for Better Health</td>
<td>The NHMRC Partnerships for Better Health program funds both Partnership Projects and Partnership Centres to create effective connections between decision makers and researchers, improve research quality, and facilitate research evidence accessibility.</td>
<td><a href="http://www.nhmrc.gov.au/grants/apply-funding/partnerships-better-health">http://www.nhmrc.gov.au/grants/apply-funding/partnerships-better-health</a></td>
</tr>
<tr>
<td>UKCRC</td>
<td>United Kingdom</td>
<td>United Kingdom Clinical Research Collaboration (UKCRC) - Centres of Excellence</td>
<td>Five Centres of Excellence were created to support collaborations among researchers, practitioners and policymakers from a variety of disciplines, working on a range of public health topics.</td>
<td><a href="http://www.esrc.ac.uk/research/major-investments/ukcrc.aspx">http://www.esrc.ac.uk/research/major-investments/ukcrc.aspx</a></td>
</tr>
</tbody>
</table>

* We acknowledge that the funding program details listed in this table are likely to change. The information and website links reported here were accurate and fully accessible as of December 2013.
tends to be more focused on decision makers’ needs and therefore, results are more meaningful for and ultimately more applicable to local contexts (Mitchell et al, 2009).

**Partnerships for health system improvement**

We recently completed a case study funded by the Canadian Institutes of Health Research (CIHR) Partnerships for Health System Improvement (PHSI) program. The PHSI program supports applied, policy-relevant research that aims to strengthen health care systems by addressing questions that are important to health services decision makers. In these studies, decision makers work with researchers as Co-Primary Investigators.

The goal of our PHSI study (FRN 101867) was to collaborate with three Canadian public health departments to enhance capacity for and facilitate contexts conducive to evidence-informed decision making (EIDM). EIDM involves integrating the best available research evidence with other contextual factors such as local community health issues, political climate, available resources, and expertise in policy and program decision making (Ciliska, 2012). Using evidence to inform policy and practice in the public health sector is encouraged nationally (Public Health Agency of Canada, 2007), but research indicates that the skills and contexts supportive of EIDM are limited (Dobbins et al, 2009).

The research team and decision-maker partners jointly developed the intervention, research questions, data collection schedule, and knowledge translation strategies to ensure the diverse needs of each health department were met. Interventions involved an experienced Knowledge Broker working with health department consultants, research analysts, and project specialists via one-on-one consultations, small group meetings, workshops and presentations. We assessed intervention effectiveness by collecting and analysing data from surveys, interviews, and Knowledge Broker reflective journal entries. Full results will be published in 2014.

**Understanding unique risks and challenges**

As more health services research begins to involve decision makers in the research process, it is important to understand the unique challenges of engaging in such studies. Risks to the decision-maker partner may include a substantial investment, both financially and in kind, and uncertainty of committing to a partnership without knowing what the full impact will be on the organisation (Jagosh et al, 2012). Researchers may need to commit substantial time and effort to gain and maintain decision-maker involvement throughout the study, as well as dedicate time to resolving issues that may arise (Manson et al, 2004). In this paper, we use examples from our PHSI study and the literature to contribute to the discussion on what researchers should be aware of prior to embarking on researcher–decision-maker partnerships. Several issues raised here may not be unique to collaborative research but are key issues likely to arise during these types of studies. The challenges we identified include: changing priorities and unpredictable practice settings; staff time commitment and workload; decision makers’ experience with and understanding of the research process; and balancing scientific rigour with the flexibility of applied research.
Discussion

Changing priorities and unpredictable practice setting

Several issues in researcher-decision-maker partnership projects relate to the time it takes to implement projects and the unpredictability of the practice setting. Firstly, it is not uncommon for six to twelve months to pass between when a grant application is first discussed, prepared, submitted, and awarded, to when the project is initiated (CIHR, 2009, Cargo and Mercer, 2008). Significant time lags can lead to confusion over what the study is about and a general loss of vision with respect to study objectives and participant roles and responsibilities. It also provides more opportunity for staff turnover, a challenge we discuss later in this section.

Decision makers’ needs also change over time. Alterations to the political landscape, administration (for example, restructuring, relocation), budget allocation, and strategic plan could all affect the relevance and feasibility of the research partnership, thus shifting decision makers’ priorities and needs. Changes like these can easily occur between the time a grant is submitted and when the study is under way (Macaulay et al, 1999). We experienced a priority shift in one health department when it opted to make changes to the data collection protocol, significantly reducing the scope of the sample invited to participate in the study. We hypothesised that this was due to the research being relevant at the time of the initial agreement but as time passed, new issues arose that lessened the applicability of the research, as proposed.

Research studies that involve decision makers from health departments must also be able to accommodate the unpredictable nature of public health. One source of this unpredictability comes from crises or unexpected events that may arise during or just prior to study implementation. For example, mass immunisation campaigns and environmental emergencies are common yet difficult to plan for (Turner et al, 2009). In these instances, the time and attention of health department staff must be diverted from the research study. It may also be difficult to plan data collection for a time when staff will be most available and willing to participate. We had difficulty establishing definitive baseline data collection cutoff dates in our study as we worked through issues such as office relocation and staff involvement in a department-wide engagement survey that had been scheduled for the same time as our baseline survey.

Another source of unpredictability concerns staff turnover. In a report on public health in Ontario (Canada), the majority of the province’s health departments reported peak staff length of service as being ‘more than 1 year but less than 5 years’ (Turner et al, 2009). A systematic review of the public health workforce in the United States highlighted issues of recruitment and retention, as caused by retirement, layoffs and staff leaving to seek additional training (Hilliard and Boulton, 2012). A similar issue has been reported in the United Kingdom (Dabrera et al, 2012; Public Health Policy and Strategy Unit, 2012). Frequent staff turnover can represent a significant barrier to forming stable linkages between researchers and decision-maker partners (Canadian Health Services Research Foundation 1999). Staff involved in the study at the outset may change positions or leave the health department entirely and no longer be able to take part, as previously observed in studies conducted by the primary investigator for this study, where loss to follow-up due to staff turnover was approximately 25% (Dobbins et al, 2009; Dobbins, 1999). This can be an unexpected drain on researcher time and resources if participants must be replaced. Employees leaving an organisation
take their knowledge with them, which can have a dire impact on the organisation’s overall knowledge (Hilliard and Boulton, 2012; Martins and Meyer, 2012) and, consequently, the continuity of the research partnership.

We recognise that the very nature of health services research can make a quick turnaround from study introduction to implementation generally unrealistic. Instead, we recommend that researchers and decision makers maintain constant, ongoing communication in the form of progress updates and meetings with all involved partners. The literature is consistent with this recommendation (CIHR, 2009, Goering et al, 2003, Jones and Wells, 2007, Kho et al, 2010). CIHR recommends using routine communication to maintain momentum and interest in the project and to reinforce partner commitment (CIHR, 2009). Regular meetings also give decision-maker partners the opportunity to voice concerns and ideas for change. In our study, we established a specific contact person within each partner organisation. This person was knowledgeable in both the internal organisational requirements and the research project and was able to promote effective communication between the research team and the health department. In light of our discussion on employee retention, it may also be worthwhile to interact with multiple decision makers from partner organisations.

**Staff time commitment and workload**

Decision makers taking part in research have limited time to devote to research activities (Jones and Wells, 2007). Participants interviewed in our study noted that time and workload were the main barriers for staff interested in engaging in the study and in incorporating EIDM into their work. Participants were generally quite receptive to EIDM and to incorporating it into their practice, but reported that it requires more time than they felt they could allocate. They saw this as ‘add-on’ work, regardless of whether the study intervention had been intended to help them complete the work they already do. Limited time and competing institutional demands have previously been linked with limited research participation (Kho et al, 2010). Participants may also be involved in several different but concurrently implemented research studies, resulting in participation fatigue and sub-optimal participation rates. When decision makers are asked to participate in multiple studies within their area of responsibility, their ability to fully engage in any one project is restricted (Hofmeyer et al, 2012). Changes in organisational priorities, staff turnover and unexpected events, as noted above, can also contribute to the time and workload demands on study participants.

We recommend researchers ensure their partners understand the time commitment required of their staff and confirm this commitment with all parties involved, particularly management. The commitment of senior management in the form of visible support for the project, encouraging staff participation, and contributing their own time to the project was critically important in our study and in other work (Cargo and Mercer, 2008). In larger centres where there may be more staff assigned to projects and tasks, a suggestion would be to delegate specific staff to the study and have participation become part of their scheduled work time (Cargo and Mercer, 2008). One strategy we employed to secure time for our study in participants’ schedules was to arrange weekly ‘working meetings’ where participants would gather at a specified time to complete study-related work. Finally, a written agreement should be created at the project outset to establish these timeline, goal, and role expectations, as well as communication guidelines, as described above (Jones and Wells, 2007; Macaulay and
Nutting, 2006). In our study, all partners contributed to and approved the final grant application and applications for ethics approval, which outlined general expectations, goals and timelines for the study. All participants were required to read an Information and Consent Form that further outlined their roles in the study. However, the project may have been conducted more efficiently if a formal communication plan had been devised.

Understanding the research process

Many of the decision makers in our study had some previous exposure to research but most indicated that research was not within the ‘scope’ of their regular practice. This is exactly the reason for these partnerships but this disparity may also introduce challenges with communication and expectations.

One challenge we encountered was encouraging staff participation while maintaining confidentiality and anonymity. A critical component of the informed consent process is to ensure that participants understand they have the right to participate voluntarily and withdraw at any time without fear of consequence. They need to know that participating (or not) in the study will not have an impact on their current or future status with their employer. However, senior management or another staff member may be involved in recruiting participants. This ‘peer-driven recruitment’ may introduce an unconscious persuasion to participate, with staff being more likely to agree if the request comes from their superiors or colleagues (Phillips, 2010). This can be construed as a positive effect if participants feel more confident and secure in their decision to participate because the study has been ‘endorsed’ by their colleagues (Jagosh et al, 2012). Decision makers who hold a stake in the research have a vested interest in maximising response rates; the onus is therefore on the research team to encourage participation without coercion. It becomes increasingly difficult to maintain participant anonymity and confidentiality if the organisation wants to know who has participated and who has not. Perceived lack of anonymity may then be a reason for staff wariness to participate (Hofmeyer et al, 2012, Kho et al, 2010).

Another challenge can be the difference between researcher and partner timeframe expectations. Public health decision makers are generally interested in evaluations with a quick turnaround and release of findings to implement effective policy change. Researchers may not be able to produce rigorous research as quickly as their partners would like (Canadian Health Services Research Foundation, 1999). Decision-maker partners may request results before final analyses are complete because they are under pressure to reveal the outcomes of their investment (Golden-Biddle et al, 2003). Extracting high-level results and sharing only these main messages can be a logical compromise when researchers are wary of presenting misleading findings after only an interim analysis (Goering et al, 2003). We presented emerging results with each of our partner organisations throughout the study, with the disclaimer that final results would be shared when all analyses were complete. We felt it was our responsibility to provide these progress updates to our partners, and in this way, we were also able to maintain partner engagement and involvement in the study, through to its completion.

During the development of the research proposal, the research team should ensure that decision makers fully understand and agree with the study timelines, as well as informed consent and voluntary participation (Cargo and Mercer, 2008). In our study, the primary investigator also continued to meet regularly with decision makers during
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the study to discuss issues and answer questions that had arisen. Finally, it is just as critical for the researcher to understand the decision-making process and inherent timelines (Mitchell et al, 2009) and acknowledge the complexities and constraints informing the decision makers’ expectations (Golden-Biddle et al, 2003). Promoting personal, two-way communication is an invaluable means of achieving this mutual understanding (Innvaer et al, 2002).

Balancing scientific rigour with the flexibility of applied research

Collaborative, or participatory research can employ different research methods (Cargo and Mercer, 2008; Jagosh et al, 2012). The use of a case study design allowed us the flexibility to modify the intervention and data collection to meet the needs of our partners while maintaining a rigorous, documented scientific process. This flexibility can be uncomfortable for many researchers who have been trained to be rigid in research design (Yin, 2014). It was necessary to revisit our study protocol, altering data collection schedules to suit partners’ internal timeframes or changing the way in which we collected data (for example, an in-person interview became a telephone interview) to make it more convenient for participants. For example, following baseline data collection and the launch of the intervention, other staff in our partner organisations learned about our study and wanted to participate. We decided to establish a more flexible ‘baseline’ period in order to accommodate a greater sample size. Others have described working with their partners to reduce the burden of assessments and arrange control group access to the intervention following a randomised controlled trial, without compromising study quality (Fabrizio et al, 2012).

We experienced additional challenges with respect to participant recruitment during our study. All staff were invited to provide consent and data, regardless of their level of involvement in the project; however, not all complied. Staff new to the health department began working with the Knowledge Broker long after the (extended) baseline data collection period had ended. Others consented to the study but chose to leave all survey questions blank, indirectly declining to participate. In all three health departments, some of those who did not provide data were still exposed to the intervention, although it was not possible to assess intervention impact on these individuals. It was necessary to allow these staff to participate in the intervention to maintain a positive relationship with our decision-maker partners. This is a clear departure from more traditional research where individuals who do not consent to participate do not receive the intervention. In this situation, we recognised the importance of critical mass to the success of organisation-wide change, as it is only when ‘sufficient people act with sufficient urgency’ that significant change can occur (Kotter and Cohen, 2002). Deciding to continue with these ‘non-participants’ consumed research resources but we deemed it essential to maintain the partnerships with the health departments.

We worked with our partners to tailor interventions during the study proposal phase. One partner requested that the Knowledge Broker be on-site for the entirety of the study to provide support to staff on completing rapid evidence reviews, a specific process that had recently been implemented in that organisation. The other two partners opted for more virtual support (that is, accessible via email and telephone), with one on-site visit per month, and more general mentoring through the steps of EIDM (Ciliska, 2012). These interventions were further adapted to

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accommodate the decision makers’ evolving needs, as we have described in the above section on partners’ changing priorities. As in other research (Israel et al, 2001), we also adapted the intervention based on lessons learned through the early days of the study. For example, the two health departments that initially opted for more of a virtual Knowledge Broker presence found that regular face-to-face meetings helped to boost staff participation and garner momentum and visibility of the work. The health departments also wanted to provide more cross-organisation capacity building to satisfy strategic goals for EIDM and requested a greater focus on large-group training for staff not involved in the small group work.

The ability to tailor how the intervention was implemented and how data was collected was a key feature built in from the outset of our study. Previous work also supports methodological flexibility, emphasising the importance of tailoring study methods to the purpose of the research and interests of involved partners (Viswanathan et al, 2004). However, one must be cognisant of upholding the rigour of the study. It may be challenging to maintain study objectivity and reliability and to reduce bias if altering the research to fulfil partners’ needs (DiStefano et al, 2013). Researchers need to balance the need for rigour with the realities of the practice setting. Rigour can be maintained through ‘collective discussion and negotiation’ of methodological issues (Balazs and Morello-Frosch, 2013), as well as working with partners to modify features within non-negotiable parameters of the research design (Fabrizio et al, 2012).

From our experience working through a case study design, we recommend detailed and consistent documentation of any changes to the protocol, as well as the rationale for these deviations, throughout the project.

Conclusions

Collaborative researcher-decision-maker partnerships can enhance the richness, relevance and real-world applicability of study findings (Hofmeyer et al, 2012). These partnerships are gaining momentum as an effective approach to knowledge translation, specifically in health services research (Mitchell et al, 2009). Collaborative partnerships are by necessity a balancing act on multiple fronts, including maintaining methodological rigour with intervention flexibility and reconciling diverse researcher and decision-maker goals and interests. Practice setting unpredictability, changing priorities, available time commitment and staff workload, and varying partner research knowledge and experience are additional challenges when engaging in these partnerships.

The success of researcher-decision-maker studies is dependent, in part, on the success of the partnership between the researchers and the decision maker(s). We recommend the following when engaging in these partnerships:

1. Sustain open and ongoing communication, with regular meetings, to ensure role clarity, maintain momentum, and reinforce partner commitment throughout the study
2. Identify a key contact within the partner organisation(s) to help facilitate the study and promote effective communication between both parties
3. Ensure all partners understand and approve the time commitment required, and consider providing a written agreement to outline all relevant timelines, goals, and communication and role expectations
4. Establish a mutual understanding of the research and decision-making processes, working together to discuss methodological issues and design parameters and negotiating flexible solutions, where possible.

Underlying all of these recommendations is the need to develop mutually respectful and trusting working relationships between partners (Cargo and Mercer, 2008; Israel et al, 2001). Taking the time to invest in these relationships can lead to sustainable, highly productive partnerships (CIHR, 2009; Ross et al, 2003). In providing this discussion on research partnership challenges and their accompanying solutions, both researchers and decision makers will be better equipped to collaborate in effective and productive partnerships.

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