NO MATTER HOW YOU LAND: CHALLENGES OF A LONGITUDINAL MULTI-SITE EVALUATION

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Abstract: In an earlier article, we described the mindset and process for implementing and conducting a multi-site study. In this article, we take the perspective of the multi-site study's coordinating centre. Using the Community Mental Health Evaluation Initiative as a case study, we focus on four major aspects of the initiative — data collection and management, the evaluated programs, partnerships, and knowledge transfer. We discuss a variety of challenges that we faced in relation to these activities during the course of our longitudinal multi-site study and how we met them — both those actions that were met with success and those that were not.

Résumé: Dans un article précédent, nous avons décrit la façon de penser et le processus menant à la mise en œuvre et la réalisation d'une étude multisites. Dans cet article, nous abordons la question du point de vue du centre de coordination de l'étude multisites. En utilisant une initiative en santé communautaire comme étude de cas, nous mettons l'accent sur quatre aspects majeurs de l'initiative — la collecte et la gestion des données, les programmes évalués, les partenariats, et le transfert des connaissances. Nous discutons d'une variété de défis auxquels nous avons fait face — avec succès ou non — dans cette étude longitudinale multisites et des solutions que nous avons trouvé pour y faire face.

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In a previous article, *Considering a Multi-Site Study? Taking the Leap and Having a Soft Landing* (Dewa et al., 2002), we discussed the process for implementing and conducting a longitudinal multi-site study. As our framework, we used Lancaster's (1985) six C's or main types of challenges to collaboration: (a) contribution, (b) communication, (c) compatibility, (d) consensus, (e) credit, and (f) commitment.

Three years later, we contemplate the sequel to the first. We revisit the issues associated with conducting a longitudinal multi-site study in a way that is only possible through the eyes of experience and under many more grey hairs. While there have been reports suggesting methods for developing a successful multi-site process (e.g., Dewa, Horgan, Russell, & Keates, 2001; Lancaster, 1985; Minnick, Kleinpell, Micek, & Dudley, 1996; Pieper, Dobal, Martin, & Balding, 1998) or methodological issues associated with multi-site studies (e.g., Fuller et al., 1994; Henderson et al., 1998; Weinberger et al., 2001), few have described less than successful approaches to these challenges.

This discussion is motivated by the realization that the process of planning and implementation is not the only thing that matters. That is, on any long road trip, it does not matter how many CAA Trip Tiks you have nor whether you are cruising in a Rolls Royce, the probability is high that you will encounter potholes in the road. If the potholes are large enough, there will be detour signs suggesting an alternate route. If the road is narrow or there are no alternative routes, they cannot be avoided but must be handled. In either case, these potholes or challenges often arise in a large-scale evaluation because they are associated with two key resources — time and money. The goal of this article is to discuss potential complications that could be avoided if a large detour sign was erected beforehand, as well as offer a few suggestions about how to deal with the unavoidable difficulties. We hope that our experience can inform those who are planning multi-site studies that include coordinating centres.

As in the earlier article, the Community Mental Health Evaluation Initiative (CMHEI) serves as a case study. From the perspective of the multi-site study's coordinating centre, the focus will be on four major aspects of the initiative: data collection and management, the evaluated programs, partnerships, and knowledge transfer. These aspects of the multi-site both claim a large proportion of resources and are affected by their distribution.

BACKGROUND

The CMHEI was a multi-site longitudinal evaluation of different types of community mental health program models primarily serving individuals with severe mental illness (Dewa et al., 2002). The initiative comprised seven independent sub-studies as well as the multi-site study. Similar to the structure described by Weinberger et al. (2001), individual sub-studies were chosen through a competitive peer-review process based on submitted proposals for specific sub-studies. As a prerequisite for funding, each site agreed to participate in a multi-site study. Thus, although the multi-site management was centralized, each site also operated as an independent study and retained a great deal of autonomy. Figure 1 describes the CMHEI coordinating centre, sub-studies, and sub-studies' programs structure (Appendix A provides specific details about the sub-studies involved and the types of programs evaluated).

Figure 1
Community Mental Health Evaluation Initiative Structure
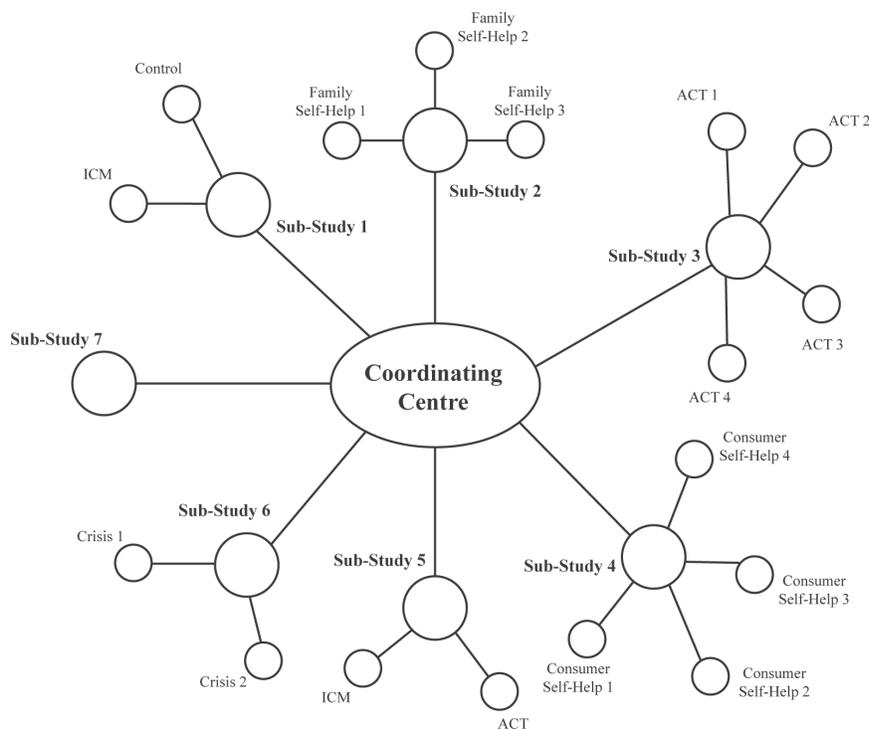
At the hub was the coordinating centre, responsible for the multi-site project management and led by its own principal investigator. It served as the main link for the six sub-studies that each operated as independent program evaluations with their own principal investigators. These sites employed longitudinal designs to evaluate a total of 17 community mental health programs and supports. In addition, there was one methodological study that was not longitudinal nor did it evaluate any one particular type of program. Rather, it surveyed an assortment of program types with the goal of identifying specific characteristics of programs that made them relatively more effective.

The coordinating centre's mandate was to ensure that multi-site objectives were met. The CMHEI's main objective was to increase knowledge to plan an integrated community mental health system. Though the multi-site study's scope could not be comprehensive, there was an impetus to include programs with varying goals and models. Attention turned to the major types of programs and supports that had been identified as priorities for development by the Ontario mental health system (Ontario Ministry of Health and Long-Term Care, 1993): case management (including assertive community treatment (ACT) and intensive case management (ICM)), self-help initiatives for consumers and families, and crisis interventions. The multi-site evaluation was designed to answer four research questions:

1. How do program types differ in whom they serve?
2. How do program types differ in their impact on users over time?
3. How do program, mental health system, and total health system costs differ by program type?
4. How does the cost-effectiveness of each program type compare?

A common assessment protocol was developed to answer these questions (for more detail about the common protocol see Goering, Durbin, Dewa, Gagne, & Tolomiczenko, 1998). Because mental illness affects many aspects of an individual's life, the goals and effects of services and supports can be numerous and diverse. Outcome assessments are expected to be comprehensive, addressing the range of domains affected by mental illness (Holcomb, Parker, & Leong, 1997; Rosenblatt & Attkisson, 1993; Srebnik et al., 1997). Thus, the study collected information from consumers and their families in the following domains: symptoms, functional status, healthcare re-

source use, legal system contacts, socio-demographics, and housing. It was administered at baseline, 9 months, and 18 months. The goal was to enroll about 900 participants into the multi-site study. At the same time, sub-studies collected additional information for their sub-study questions where appropriate.

DATA COLLECTION AND MANAGEMENT — FEAST, FAMINE AND FARMING

From the common primary data collection protocol grew a common minimum dataset. The common dataset was developed and maintained via centralized data management at the coordinating centre. This meant the coordinating centre team was responsible for designing and processing the computer-scannable forms used to collect data for the multi-site protocol. There were nine forms: (a) socio-demographic form; (b) service use logs including hospital, emergency room, psychiatrist, community services and programs, and prescription drugs; (c) Multnomah Community Assessment Scale to assess functioning; (d) Brief Symptom Rating Scale to assess symptoms; (e) Drug and Alcohol Use Scales; (f) Social Support Scale; (g) Empowerment Scale; (h) Quality of Life Scale; and (i) Satisfaction with Services Scale.

The sub-studies forwarded completed forms to the coordinating centre. In turn, the coordinating centre reviewed the quality of the submitted forms for missing information, accuracy of study identification numbers, and internal consistency. It also checked for consistency across sites, ensuring questions were interpreted the same way. The coordinating centre then created individual sub-study datasets in addition to merging the individual datasets into a multi-site dataset that was distributed to all the sub-studies for common use.

It's All in the Timing

As Fuller et al. (1994) point out, the centralization should have provided the initiative with efficiencies produced by concentrating most of the data management resources in a single centre. In reality, taking advantage of the efficiencies was a challenge. The most significant barrier was associated with data collection timing. That is, these efficiencies are dependent on the successful establishment of a data collection and submission schedule (Fuller et al., 1994; Minnick et al., 1996). Minnick and colleagues describe the advantages of a sched-

ule as keeping staff consistently occupied, ensuring data quality issues are addressed immediately, and ability to conduct analyses to identify gaps in information.

We were not able to establish a data collection schedule. The results of this failure are illustrated in Figure 2. Because data collection was staggered in the different sub-studies, the multi-site data collection continued from the point at which the first participant was recruited in the third quarter of 1998 through the second quarter of 2004. In 1998's third quarter, 30 participants were recruited, but 28 of them were from one sub-study. Three of the sub-studies did not begin data collection until the following quarter. Another sub-study did not begin until the first quarter of 1999. In addition, two of the sub-studies collected data at four time points (baseline, 9, 18, and 24 months), whereas the remaining studies stopped collection at the 18-month follow-up (F2).

In an individual project, the slow start would be an inconvenience at worst; timelines merely would be readjusted. For the coordinating centre of a multi-site study, the delayed commencement of at least one sub-study as well as differences in the number of follow-ups meant a staggered start as well as a stagger to the finish. As predicted by Weinberger et al. (2001) as well as by Minnick and colleagues (1996), this had several implications. First, workload at the coordinating centre was not evenly distributed throughout the project. The data management team was called upon to juggle a number of tasks including entering and checking the data, querying sites about data inconsistencies and other data quality issues found in each survey, as well as data cleaning. Due to the longitudinal nature of the data, they were also asked to manage multiple sets of data (i.e., data from baseline [F0], 9 [F1], and 18 [F2] months) and merge them into the primary dataset. In addition, they were asked to respond to sub-study-specific dataset requests in a timely manner. At its busiest, the team was processing a total of about 240 surveys (year 2000's third quarter) — a very stressful period. At its slowest, during year 2003's third quarter, fewer than 50 interviews were submitted — a welcomed lull.

The difficulty in planning coordinating centre staffing needs was compounded by slow sub-study recruitment. Baseline data collection lasted for four years. It was difficult to predict when data would be submitted or even when the project would be completed. In turn, it was problematic to predict how long coordinating centre staff would

Figure 2
Community Mental Health Evaluation Initiative Data Collection by Period: Quarter 2, 1998 – Quarter 2, 2004
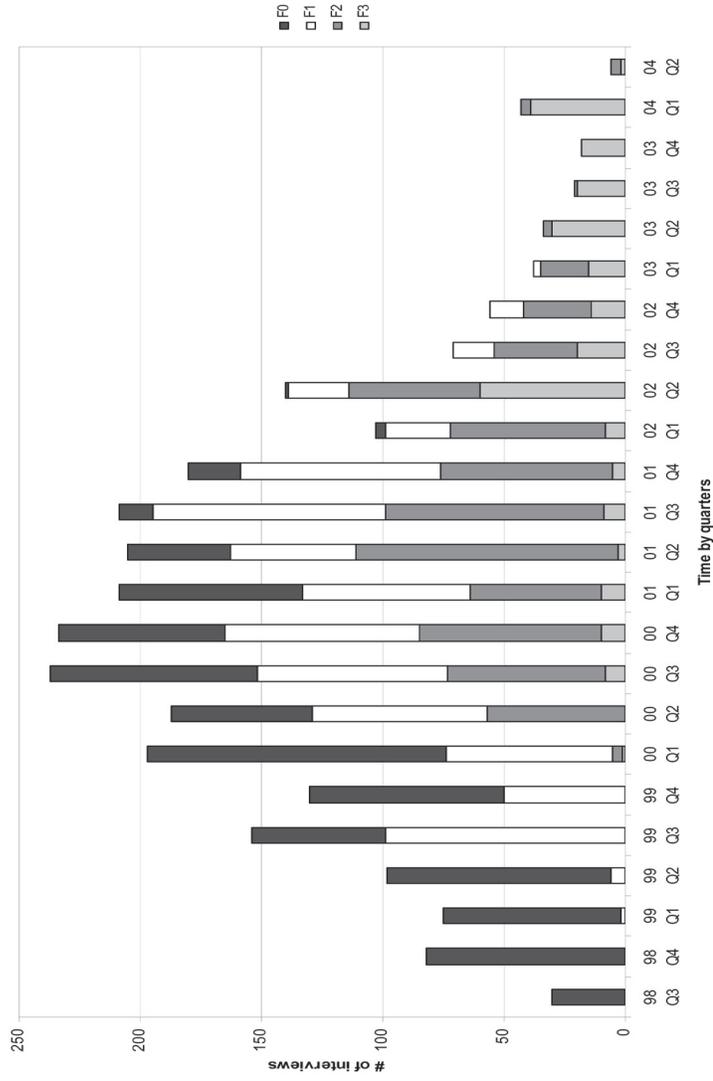
Note: F0 = Baseline data collection, F1 = Follow-up 1 data collection, F2 = Follow-up 2 data collection, and F3 = Follow-up 3 data collection

be needed. To ensure their employment, staff were assigned to multiple projects. As a consequence of this arrangement, they were required to become skilled time managers and negotiators. It was often necessary to assign priority to different projects at various points.

In turn, timing also impacted data quality assurance measures. In an effort to maintain inter-rater reliability among sites, multi-site booster training sessions were held. But, because the sites were at different points in their data collection and recruitment, it was difficult to schedule these sessions. They would have been useful at the beginning of each collection wave. However, the absence of a common starting point made this type of scheduling virtually impossible. As a result, booster training sessions were held during the summers of the first and second years of the project. Monthly teleconferences during which data quality issues were discussed with all sub-study coordinators were treated as intermediate mini-booster sessions. These conference calls were useful in preventing the spread of misinformation and ensured common understanding and interpretation across all sites (Kraemer, 2000).

Planting and Harvesting

Adding to the complexity of managing the project was the fact that the CMHEI was committed to building Canada's mental health services research capacity. Thus, the coordinating centre sought to use the initiative as a training experience to attract students who would not necessarily have considered a career in the field to mental health services research. For the data management piece of the initiative, the focus was on recruiting undergraduates with specializations in computer science and statistics — individuals who would have basic skills on which content areas might be built. This was done with an acknowledgement that the data management would become more difficult. Hiring students almost guarantees high staff turnover — something that can be detrimental to a longitudinal project (Fuller et al., 1994). Weighing the pros and cons, the decision was made to take the risk and invest in the future.

While the notion of training the next generation of researchers is in theory an attractive proposition, in practice it is an undertaking akin to farming. It is not sufficient to till the soil or to plant the seeds. The fields must constantly be tended, and there is no guarantee of a harvest in the end. While the trainees quickly absorbed the technical aspects of the statistical programs and database file structure, they

had little experience with basic research methods, and this was their first opportunity to apply their classroom skills in a real-world setting.

As a result, the CMHEI became a training ground. At any one time, there were 1.5 full-time equivalents (FTEs) assigned to the project, translating into four part-time students. To facilitate learning, a team was formed. A very strong emphasis was placed on the idea of teamwork. The idea of specialization was de-emphasized. Instead, each member was required to understand every aspect of the data management with the ability to substitute for one another at any given point. This allowed the team to multi-task on a number of other projects when there was downtime and accommodated academic schedules (e.g., mid-terms and final exams).

The team approach required a large upfront time investment. Skills were developed through weekly supervised team meetings, during which the team learned to communicate, brainstorm, and problem solve together as well as negotiate time frames and deadlines. During this time, they were also taught to use project management principles. At the beginning of each week, project plans were reviewed and points that necessitated adjustments were identified. This gave team members the opportunity to understand areas of team strengths and weaknesses and how to work together to achieve team goals.

Is Hindsight 20/20?

In hindsight, what would have been done differently? Would we have chosen to hire experienced data management and project coordinators? Probably not. We remain committed to training and still believe that one of the best ways to attract students into the field is through offering them opportunities for hands-on experience. Even if they choose not to continue to work in this area, they will still leave with critical workplace tools, transferable to any situation.

Would we change the timelines and try to enforce a schedule? Though there is no way to completely ensure projects remain on the same timeline, we would try our best to decrease impeding factors. Specifically, it would be helpful if all the sites began at the same time and ended with the same number of follow-ups. If they shared a common starting point, it would be easier to compare recruitment rates at each site. This way, sites could share "real-time" recruitment insights that could have immediate impacts on slower substudies. One way to accomplish this is to have funding tied to

starting. That is, funding would not commence until all the sub-studies were ready to begin data collection.

EVALUATING PROGRAMS — DO YOU LIKE SKEET SHOOTING?

Henderson and colleagues (1998) point out that one of the reasons that health services research has been slow to use the multi-site design is that programs rather than specific interventions are generally the focus of the studies. These programs are often difficult to describe, partially because they are dynamic. For instance, each year community mental health programs must participate in a budget process that has the potential to significantly change funding. Thus, with each additional year of a project, there is the threat that the programs you start with may not be the same ones with which you end. This could be especially true with the loss or addition of a dynamic program manager or the increase in program budgets to expand services or populations served. During the course of the CMHEI, both of these events occurred to the ACT and ICM programs that were being evaluated in the study.

It is generally not a good idea to step in the way of progress — especially when it will do good. Most of the time, it is not even an option. So we needed to get a sense of what was changing. This was dealt with in several ways. One was to implement Koehler, Miller, Vojir, Hester, and Foster's (1997) suggestion of making periodic visits to sub-study programs, shadowing their teams and interviewing their case managers to see what they did. This allowed us to have a better idea of what was happening at the program level.

In addition, to measure program changes, the sub-studies were asked to describe their programs using existing fidelity scales. For example, for the ACT teams, sub-study programs were requested to complete an Index of Fidelity of Assertive Community Treatment (IFACT) scale (McGrew, Bond, Dietzen, & Salyers, 1994) for each team. Because ACT and ICM share common objectives and there is no fidelity measure for ICM, ICM teams were asked to complete IFACTs to indicate how different they were, where the differences lay, and how the differences changed over time. These differences were incorporated into interpreting the results of analyses.

Though a seemingly inconvenient task, filling out these measures and discussing the results with sites made it clear that it was in fact a helpful exercise. It opened the door for discussions among sites

and forced us to entertain result interpretations in ways that we might not have done otherwise. In the end, it added to the richness of our understanding about community mental health programs.

Finally, workload measures were collected and examined for staff of the sub-study programs. For most of the ACT and ICM programs, automated databases were already in place and case managers regularly recorded their daily activities for each client (e.g, assessment, medication visit, counselling visit). A recording form (Dewa et al., 2001) was introduced to capture similar workload and activity data as collected in the automated datasets. These data also allowed us to understand the service processes and how they differed and changed over time (Barrow, Hellman, Lovell, Plapinger, & Struening, 1991).

WORKING WITH THE STAKEHOLDER PARTNERS —
SHALL WE DANCE?

Collaborative evaluation approaches that include stakeholder involvement are the subject of an extensive literature (e.g., Greene, 1988; Sullivan & Kelly, 2001). Reineke (1991) offers three key questions that should be asked as stakeholder involvement is considered. They are: (a) who should be involved, (b) when should involvement occur, and (c) how can they be meaningfully involved using a dialogue-dependent process? These questions have not been previously reflected upon from the perspective of a multi-site coordinating centre. Many of the principles and procedures guiding evaluator-stakeholder interaction (Brandon, 1998; Reineke, 1991) apply in a slightly different manner in a multi-site context. For example, their advice to carefully select the appropriate stakeholder groups and to involve them early and actively played out in a unique manner in this initiative. From its inception, the CMHEI involved the Ministry of Health and Long-Term Care's (MOHLTC) mental health policy branch in a more active role than had been typical of most research projects. When the need for more evaluation of community mental health programs and the lack of any appropriate funding mechanisms were identified, the lead of the MOHLTC's policy branch was on side. She was also forthright about the requirement that any initiative would have to be a multi-organizational, peer-reviewed effort. It was the MOHLTC's goal that any new initiative would need to generate results that were generalizable, facilitate buy-in from all parts of the province, and develop a provincial mental health network to build research capacity. This could not just be a waltz with one research institute and government on the dance floor.
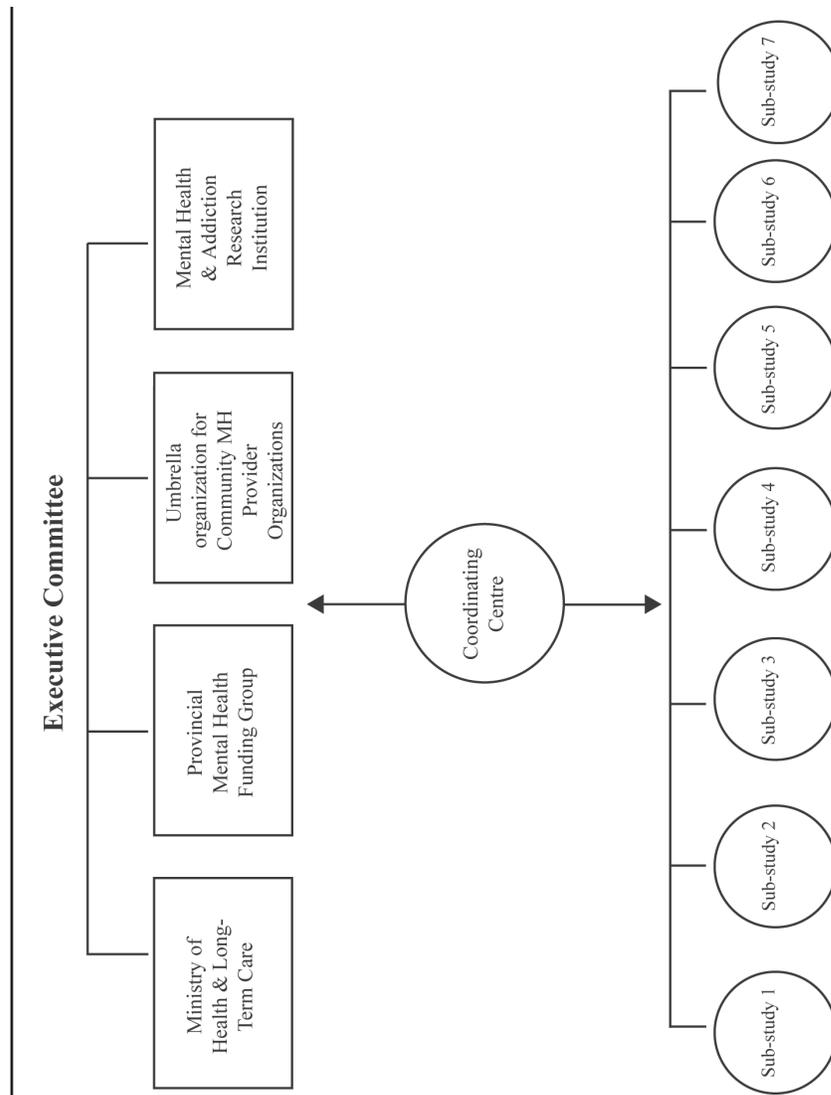
Invitations and Choreography

In practice, this meant choreographing an intricate set of steps with a variety of partners with a range of dance skills — in essence, starting off was akin to attending a first lesson at Arthur Murray's. To make it a success meant the participants needed to practice interacting with one another — a time-intensive challenge (Lomas, Fulop, Gagnon, & Allen, 2003).

To maximize participation, it was decided to create square dance teams as well as a team of callers: in this case, an executive committee with the responsibility of overseeing the development and the implementation of the multi-site project (Figure 3). The first step to forming this team involved recruiting partners to join the executive committee. In answer, a mental health policy research group was formed comprising the Centre for Addiction and Mental Health, a leading mental health and addictions research institution; the MOHLTC policy branch, who is responsible for administering the healthcare system and providing services to Ontarians; the provincial mental health research funding group (the Ontario Mental Health Foundation); and the umbrella for many of the community mental health provider organizations (Canadian Mental Health Association–Ontario). Eventually, the seven sub-study teams with their multiple partners joined in. As in a square dance, it was easier for new partners to participate at different project phases as well as to match up with different partners depending on the need and question at hand.

Deciding how the project should be choreographed, how it should be shaped, and how it would proceed was a joint effort. The MOHLTC had just committed new funds for expanding crisis intervention, case management, and self-help programs. They wanted to know, down the road, whether this was a wise investment and how they might fine-tune their directions to improve effectiveness. We followed their lead and developed the request for proposal (RFP) focusing on these types of community mental health services. We also included a health economist position in the coordinating centre to ensure that the evaluation of effectiveness would have a cost component.

To maximize input surrounding the multi-site evaluation, a one-day workshop was held to develop the RFP, announce the program, and solicit proposals. To increase the likelihood that study results would be used to improve service delivery and organization, a mix of stakeholders including the executive committee was convened to

Figure 3
Community Mental Health Evaluation Initiative Stakeholders

Executive Committee

Ministry of Health & Long-Term Care

Provincial Mental Health Funding Group

Umbrella organization for Community MH Provider Organizations

Mental Health & Addiction Research Institution

Coordinating Centre

Sub-study 1

Sub-study 2

Sub-study 3

Sub-study 4

Sub-study 5

Sub-study 6

Sub-study 7

refine the RFP (Lomas et al., 2003). These stakeholders also sat in on the peer review process to add their policy relevance perspective to the discussions. At that time none of the players were accustomed to having peer review include non-researchers. Consequently, there was hesitancy and awkwardness on all sides. Since then, stakeholder input and participation in the peer review process has become routine and occurs whenever the MOHLTC policy branch commissions peer-reviewed research.

Learning a new dance inevitably includes some bumping up against each other and some stepping on toes in the process. Tensions developed around several issues. The original MOHLTC concern about not being perceived as "playing favourites" was never entirely resolved. Even though multiple investigators and programs were involved in this initiative and benefited from the MOHLTC investment of time and resources, there were other mental health researchers in the province who were not. Watching such a major production from the sidelines created some resentment that the MOHLTC policy branch had to address.

Welcoming New Partners

A re-organization at the MOHLTC, creating a new mental health and rehabilitation policy branch with a new director, introduced a change in dance partners. Fortunately, he was quite familiar with research and committed to building even closer ties between policy and evidence (Goering, Butterill, Jacobson, & Sturtevant, 2003). This allowed for another dancer to come on to the floor: a knowledge broker, jointly funded to bridge our research and policy worlds. She became a dance instructor for the project, teaching us all the new knowledge transfer steps.

At the same time, our new Ministry partner took an active interest in what we were doing. We continued to have a MOHLTC representative attending all our core committee meetings; the director often came to listen to updates and encourage the group to share findings with the broader field. Before he bowed out and moved to another Ministry position, he also expanded opportunities for communicating findings.

One of the realities of working with government is that partners change, particularly at the senior levels. We did have continuity in the person who has represented the MOHLTC, a policy consultant

with a research background. Developing relationships at more than one level within the bureaucracy is a good strategy to cope with unpredictable partner change.

A Good Yenta

The coordinating centre served as the go-between for the sub-studies and the executive committee, especially between sub-studies and the MOHLTC as funder. One of the most crucial issues was related to the sub-study budgets and the problems that arose as a result of subject recruitment. True to the research law that "the number of research subjects available will be one-tenth of your first estimate," several of the projects encountered major obstacles to achieving the goals set out in their research protocols and plans. There were legitimate but unexpected reasons for these delays. In one case the number of participants on an agency's records turned out to be highly inflated when compared to the number actually involved in the program. In another example, an agency had serious human resource difficulties and reduced their staff complement and intake as a result.

Field evaluations often face changes in the program landscapes that they are studying, but it is hard to adequately prepare for the nature and extent of the problems (Hohmann, 1999). When the external review was conducted at the two-year mark, it was evident that the success of many of the sub-studies was in jeopardy unless adjustments were made to timelines and budgets. The coordinating centre helped each sub-study to conduct power analyses using baseline data to substantiate their required sample sizes and, in turn, support requests for additional funding. It was clear that five of the eight sub-studies required timeline extensions and three of the eight required additional funds in order to complete their sub-studies as planned. The coordinating centre prepared a response to the external review that included details regarding what was needed. Because the MOHLTC partner had been at the table all along, they were not surprised by these developments and the request for extra time and funds. The requests were granted and all of the projects were able to meet their initial sample size targets.

Staying in Step

Working so closely together over a long period of time heightened awareness of the accountability structure. The CMHEI had been

set up as a traditional research grant, with the emphasis on the research questions and methods and the expectation that the process of conducting the study and disseminating the results would be defined by the sub-study principal investigators and coordinating centre over time. The MOHLTC partner was more accustomed to and comfortable with service agreement or contract arrangements that spell out in more detail what the processes and deliverables would be. In retrospect, that type of accountability instrument would have been more appropriate for this type of initiative and would have facilitated communication and trust between the partners.

Not Strictly Ballroom

Working closely with a policy partner required time, energy, and effort on both sides, but the investment has many rewards. As is often stated in the literature (Brandon, 1998; Reineke, 1991; Weiss, 1984), the involvement of a stakeholder group enhances the use of the findings. The preliminary results of the multi-site project have already been incorporated into the decision-making process, and a climate of expectation has been created that will facilitate the results having broader impact on Ontario's community mental health field. The experience of dancing to a new tune in this project will also better prepare all those involved for future opportunities to bridge the gap between research and application.

KNOWLEDGE TRANSFER AND DISSEMINATION —
MORE THAN THE BLUES

Generally, it is unusual for four organizations, each with its own sense of priority, organizational culture, and disciplinary orientation, to be engaged in a common knowledge transfer and exchange relationship. Yet, as Innvaer, Vist, Trommald, and Oxman (2002) point out, for effective knowledge transfer and exchange to take place, it is imperative to have all the players at the table — preferably throughout all the phases. In the CMHEI, the executive committee represented three perspectives — research (including funder and investigators), government, and the field (community mental health). The partners orchestrating the project had the responsibility of deciding when, what, to whom, and how to communicate the findings from the project. Matters were complicated by the fact that while each organization was highly invested in this enterprise, at times each had different needs or agendas; it seemed a bit like a musical trio with players from three different musical traditions with vying conductors.

The mandate of the community mental health partner is to serve as a strong advocate for the field. It is somewhat like a rhythm and blues band whose primary role is to make compelling, high-volume music with the purpose of advancing the community mental health agenda. The judicious use of evidence strengthens its efforts in this domain.

The policy staff, while interested in learning from the research, must also be sensitive to their role as government representatives and must ensure that the government's position is not misrepresented. They play more in the baroque tradition with necessary attention to detail and nuance.

Lastly, researchers by necessity aim to be neutral to outcomes and are more concerned about the soundness of their methodologies, enabling confidence in the results, whatever they might be. While they play by strict rules, they must be skilled at improvisation to manage the inevitable "unexpected events" in research, making them not unlike jazz musicians.

Knowledge transfer and exchange are best accomplished when the findings are sound, the main messages clear, and the media appropriate to the audience. The different playing styles in this partnership mitigated against easy decision-making concerning when and what to "play," to whom, and how in the knowledge transfer and exchange arena.

A Matter of Harmony

The project had a dedicated but small budget for ongoing communications, assigned to the community mental health partner for the maintenance of a website and regular newsletters to the field. These tasks appeared simpler than they were and required more time, coordination, and collaboration than initially anticipated. There were early issues about the lack of visibility of the CMHEI website on the host website, the style of the newsletters, which needed to strike a balance between being interesting to the field and doing justice to the research, and the unanticipated demands on the coordinating centre to manage these concerns. They offered a good testing ground for how the project would bring harmony into its knowledge transfer work.

We also learned that our ideas about communication were not always in sync. We discovered that what we meant when we talked

about a knowledge transfer plan was somewhat different than a government communication plan. This led to subtle negotiations about wording and emphasis. There was a tension in crafting a message so that research results were not diluted but the policy partner could maintain its role as government representative.

Jam Sessions

In addition to the budgeted activities, several unplanned and novel knowledge transfer opportunities arose, placing additional demands on already stretched financial resources and human resources, especially in the coordinating centre. Looking back, it would have made sense to have anticipated the unanticipated, as it was only natural that a project of such scope, relevance, and duration would be of high interest to stakeholders. The question of "when" the research was ready to communicate was a major discussion point among the partners. This being an evaluation with three data collection points, one could argue that there were at least three obvious points in time at which to communicate findings from the project as a whole. Also, as noted earlier, data collection schedules were not synchronized across projects. Yet the rigorous rules of "jazz" usually dictate that results are communicated upon completion of the research after all the data have been thoroughly analyzed.

Early pressure to communicate results came from the "rhythm and blues" section seeking scientific claim for their community mental health advocacy efforts. When the scientists learned that some very early findings had been incorporated into the community mental health partner's communication materials and were being used in a province-wide strategy to convince politicians to invest more in community mental health, they had serious concerns. The scientists were most reluctant to state results too early despite pressures, for fear that they could turn out to be misleading or even worse inaccurate.

At around the mid-point, the "baroque players" entered the stage with a recommendation that the project take advantage of the provincial mental health implementation planning process then underway, and present main messages from the research to the decision-making tables. Much discussion ensued around the readiness of the findings and a decision was made to go forward, cautiously. Scientists' concerns were managed by defining the purpose as being an introduction to CMHEI for decision-makers with the objective of putting the research on their "radar screens" for future use and by

deciding to communicate only preliminary findings identified as such and organized around emerging themes.

This compromise resulted in the scientists assuming some degree of comfort with an activity that was not the typical research development-dissemination process with which they were most familiar. It illustrates one of the common side effects of stakeholder collaboration that includes a reduced sense of control for the researchers (Reineke, 1991). As a result of the recognition the project received, the scientists seemed to feel they had achieved something important by "breaking the rules" and using their improvisational skills to put the research onto the decision-making landscape.

The questions of how and what to play arose when CMHEI was offered the opening (three-hour) plenary session of the largest mental health and addictions conference in Canada. As expected, there were different perspectives reflecting the differing priorities.

The MOHLTC policy staff and the community mental health organization were aligned in the "how," wanting very brief presentations of the research in a highly interactive format. They feared losing the audience, mainly program staff, volunteers, and consumers and families, with overly complex analyses and dense research considerations. The presentation had to be crisp and clear. This raised scientists' concerns about shortchanging the research methodological processes and presenting findings so superficial as to be misleading. The group compromised around the methodology question by agreeing there would be a high-level overview of CMHEI methods rather than individual study methodologies and that the scientists' presentations would lead with the results and be limited to 10 minutes.

Concerning the "what," everyone agreed that findings from all the projects were to be presented, which meant the coordinating centre needed to be the linchpin in making this happen. Three cross-cutting themes were selected for their relevance to the audience and the robustness of the results, which satisfied all the players. The resulting music appealed to the audience who expressed interest in hearing more. Once again, the players were rewarded.

A third project, the preparation of the final CMHEI report, raised the question of who the appropriate target audience for the report was. This issue spawned an alliance between the scientists and the

community mental health organization, both of which prized the idea of influencing policy- and decision-makers. It was their sense that the research had strong implications for funding and policy-making. The policy staff saw it differently and put forward the idea of orienting the report to the field, front-line staff, program directors, and consumers and families. As a compromise, the target audience was broadened. Now, the report is being viewed as an opportunity to build a larger base of support for research and to aid practice.

CONCLUSION

Robert Burns is often credited with the quote, "The best-laid schemes o' mice an' men, gang aft agley, an' lea'e us nought but grief an' pain, for promis'd joy!" Or, put into the vernacular, the best-laid plans of mice and men often go awry. Recognized as farmer, poet, and songwriter, Mr. Burns must also have had "researcher" buried in his CV somewhere, as his sentiment perfectly describes the research process. The unpredictability of conducting research is one of its greatest challenges. At the same time, it is often the catalyst for the greatest discoveries.

In Table 1, we summarize some of the lessons learned during the course of the CMHEI. Among the most important realizations is that it would be helpful to have everyone begin at the same point, whether that means commencing data collection, experience with research methods, having the same expectations or understanding of the project, or possessing similar agendas for the knowledge produced. But the reality is that this is rarely the case and many of the challenges arise because of this.

The encouraging news is that with time and commitment on the part of all the players, these challenges are not insurmountable. Much of the coordinating centre's energy will be devoted to facilitating the activities that ensure the multi-site goals are achieved. Sometimes, incentives may help in achieving common objectives. For example, it may be helpful to have the major proportion of funding withheld until all projects are prepared to go into the field. That is, all the sub-studies should have their protocols prepared, interviewers trained, and ethics approval granted. The coordinating centre can play an important role in assisting sub-studies with these preparations. At the same time, it is important that each sub-study have adequate funding to hire their staff to carry out the set-up. Thus,

Table 1
Summary of Multi-Site Lessons

Issues	Challenges	Solutions	Cautions
Data Collection & Management Taking advantage of efficiencies of centralized data management	• Data collection timing that is staggered & leads to: – to increased costs & inefficient use of personnel – difficulty implementing data quality assurance measures across all sub-studies – barrier to timely dissemination of multi-site findings	• Funding for all projects does not commence until all sub-studies are prepared to go into the field	• The entire multi-site project may be delayed by a single sub-study • The sub-studies that are ready relatively earlier must accommodate late starters • Simultaneous start will not necessarily guarantee identical recruitment rates among all the sub-studies
Increasing Research Capacity Using the multi-site project to attract students into health services research	• Inexperience with research methods & lack of work experience that leads to: – significant time spent teaching basic research methods & appropriate workplace behaviour • Work is not the top priority of students – high turnover & frequent absences due to course work (i.e., exams)	• Flexible work hours • Team-based approach	• Time investment is not insignificant. • Though the rewards are potentially high, they are not guaranteed.
Evaluating Dynamic Programs During the course of a longitudinal study programs can change	• May not be studying what you think you are studying	• Site visits and shadowing program frontline staff • Use of fidelity measures • Examination of workload measures of frontline staff	• Requires time & cooperation of frontline staff
Working with Stakeholder Partners Creating an initiative that would generate results that were generalizable, would receive buy-in from multi-stakeholders & build a provincial mental health network	• Disparate groups that have not worked together before & learning how to do it • Begin with different understandings & approaches	• Willingness to explore new roles • Face-to-face meetings to develop working relationships • Use of an intermediary group to facilitate discussions & negotiations among stakeholders • Ensuring the accountability structure & expectations for stakeholders is clear at the project outset	• Requires a time investment on the part of all stakeholders • Not all groups can be involved which can lead to resentment
Knowledge Transfer & Dissemination Engaging all stakeholders during all phases of the project	• Differing needs for the knowledge & agendas for using the knowledge	• Ensuring the knowledge is sound • Collaboratively developing main messages that are clear • Ensure the media is audience appropriate	• Tension between crafting a message that is not diluted but can be endorsed by all groups including policy makers

the funding agency might consider providing each sub-study with start-up funds.

The breadth of activities that the coordinating centre assumes offers a wonderful training ground for students interested in research. It provides an opportunity for them to develop practical skills and to apply the theories they learn in class. However, to offer these opportunities, it is critical to have a team-based approach to the tasks, flexible workloads, and patient supervisors. This also means that there will be an emphasis on recruiting individuals who have the capacity to work in teams as a leader and a follower. Excluded will be those bright, promising individuals who are at their best working independently.

The coordinating centre staff must also devote time to understanding each of the programs being studied in the multi-site study. This will entail site visits and developing relationships with front-line staff to understand what is being studied. This means the coordinating centre staff will have to earn the trust of the front-line staff, and these relationships will be important when the data are analyzed and interpreted. Because of its bird's-eye view of all the programs, the coordinating centre will also be called upon to identify commonalities and differences and assist in measuring the activities of each of the evaluated programs. This understanding of the programs helps to avoid what Brandon (1998) refers to as construct misrepresentation, that is, when the data collected are irrelevant or incompletely address the intended construct.

In many ways, the coordinating centre also serves as the intermediary between the world of research and stakeholder groups. To be successful in this role, the coordinating centre must gain the trust of, as well as learn to trust, their partners. In essence, this involves building relationships with representatives from each of the groups. As with any healthy relationship, this involves learning to communicate in a common language and working through misunderstandings until that common language is achieved. As with any language, fluency takes practice that entails face-to-face meetings and discussions. The challenge is magnified when the representatives from the stakeholder groups (i.e., the Ministry) change and force the process to begin anew. It is also difficult when the partners are not convinced that the time investment is worth the effort; it requires that much more conviction and persistence on the part of the coordinating centre to engage the reluctant stakeholders.

One of the best arguments for participation is the offer of having access to early study results. On the other hand, the success of the knowledge transfer requires the researchers to be flexible, to step out of the academic mindset and be willing to share preliminary data. It also means being willing to develop plain language statements that are clear and not necessarily cluttered with caveats. This is most effectively done as a group creating a common set of messages. Because of its vantage point, the coordinating centre is often in the best position to lead the development of these common messages. Once again, this means filling the role of coach — helping everyone find the balance between a useful message without compromising scientific rigour or precision.

The CMHEI served as a great adventure for a new set of partners: researchers and programs. Together, we have learned a great deal about developing cohesion among often disparate groups. Most importantly, we have seen the great things that can happen when that cohesion is achieved.

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Appendix A
Detailed Description of the Sub-Studies

CMHEI Sub-Studies Research Study	Study Design
An Evaluation of Intensive Case Management for Persons with Serious Mental Illness Who Are Homeless This study evaluated intensive case management[1] services provided by the Ottawa Branch of the Canadian Mental Health Association to persons with serious mental illness living in the community who are homeless or at risk of being homeless, relative to standard care in the community.	Randomized Controlled Trial
Variations on Assertive Community Treatment: A Study of Approaches and Client Outcomes of Four Teams in South Eastern Ontario This study examined four community mental health programs in the Kingston and Brockville area that had adapted critical features of the assertive community treatment (ACT)[2] model for local needs. The purpose of the study was to determine whether the ACT model can be modified and still be effective.	Observational Study
A Randomized Controlled Trial of Assertive Community Treatment in a Canadian Inner City Setting This study evaluated two case management models in downtown Toronto. An assertive community treatment (ACT) program and an	Randomized Controlled Trial

[1] Intensive Case Management. Key features of this program include development of caring, supportive relationship between practitioner and client; emphasis on providing support as long as needed across service and program settings; flexibility in provision of supports to meet client's perceived needs and changing needs over time.

[2] Assertive Community Treatment. Key features of this model include assertive outreach; time unlimited individual support available 24-hours/day, 7 days/week delivered in a team approach; services predominantly provided in the community; provision of flexible support tailored to individual need.

intensive case management (ICM) program partnered with home care were assessed to determine if they could meet the needs of people with serious mental illness living in a Canadian inner city. The study also compared program costs and evaluated how program participation affected clients and staff.

A Longitudinal Study of the Consumer/Survivor Initiatives in Community Mental Health in Ontario This study evaluated the impact of Consumer/Survivor Initiatives (CSIs)[3] on their members and communities. The researchers gathered both quantitative and qualitative data to examine individual-level activities and impacts on new members, and system-level activities and impacts related to systemic change.	Observational Study
A Longitudinal Evaluation of Family Initiatives in Ontario This study examined the impact of self-help and mutual aid organizations on families of people with mental illness[4] and on the mental health system, in terms of their experiences of such things as coping, empowerment, care-giving burden and support. It also examined the impacts of family initiatives systems-level activities such as education, advocacy and outreach.	Observational Study
Evaluation of Crisis Occurrence and Resolution in Patients with Severe and Persistent Mental Illness The study examined crisis occurrence and resolution in individuals with SPMI and the effectiveness of intensive case management in preventing crises. The influence of ongoing support in predicting crisis occurrence was studied and the essential elements of the hospital based psychiatric emergency service as part of the crisis response system[5] were articulated.	Observational Study
Explaining Outcomes: Developing Instruments to Assess the Clinical Characteristics of Community Support Programs for People with Serious Mental Illness This complementary project focused on understanding what aspects of community support programs are effective for people with a serious mental illness. The project has worked to develop data collection tools that would be useful across a wide range of community support models and practices, and which could identify and evaluate critical ingredients of community support programs.	Methods Study

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[3] Consumer/Survivor Initiative. Key features of these non-service models include engaging consumers in mutual support, advocacy, knowledge development and skill training, public education, economic development, and educating professionals.

[4] Family Self-Help Initiatives. Key features of these non-service models include engaging consumers in mutual support, advocacy, knowledge attainment, public education, and educating professionals.

[5] Crisis Response System. Key features include providing timely and accessible aid to persons experiencing psychiatric and psychosocial crises; stabilizing persons in crisis as soon as possible and assisting them to return to their pre-level of crisis functioning.

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