Improving Global Knowledge Exchange for Mental Health Systems Improvement

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Improving Global Knowledge Exchange for Mental Health Systems Improvement Abstract

Policymakers globally are paying increasing attention to the challenges of providing more accessible and integrated mental health care. For transformative change to take place, thought needs to be given to the structure and form of evidence-informed change strategies at all levels: individual, organizational, community and complex, large systems. Yet few frameworks specifically consider the transfer of evidence-based programs across jurisdictions at regional and national levels; most are focused on local service implementation. This paper examines how a specific analytical model developed to assess and develop Knowledge Exchange (KE) can be applied to regional and national KE initiatives. It specifically examines the efforts of the International Knowledge Exchange Network for Mental Health (IKEN-MH), and the associated community of interest on change and improvement, to support mental health systems change at these levels. Using a theoretical model, the Promoting Action on Research Implementation in Health Services framework (Kitson, Harvey, & McCormack, 1998, Rycroft-Malone, et al., 2002), we explore systems change efforts according to the constructs of evidence, context and facilitation. By matching some exemplars in the use of KE for mental health best practice against this model, the potential strategies of the IKEN-MH to assist transformational change emerge.

Keywords: Knowledge exchange, Systems change, Implementation, Evidence-Based Programs, Network, Policy

Introduction

The global burden of disease attributed to mental illness and addictions presents the greatest disability burden on the planet (Whiteford et al., 2013). Recent estimates in Europe show that the annual cost of the 14 most common psychiatric disorders amount to about 500-600 billion Euros in total for 30 countries, including direct medical costs as well as non-direct medical costs and patients' productivity losses (Gustavsson et al., 2011).

This challenge has compelled governments across the globe to transform their mental health systems. The World Health Assembly recently directed WHO to identify a global strategy for closing treatment gaps and improving care (World Health Organization, 2013). The "globalization" of mental health as a focus of health policy and public health has uncovered long neglected structural deficiencies—on the capacity of delivery systems to markedly improve access and outcomes. Countries and provincial/state governments have been creating commissions and developing policies and strategies to reduce the burden of illnesses and improve mental health.

Frameworks for systems change in health care often emphasize the need for multi-level approaches (e.g., Ferlie & Shortell, 2001), but mechanisms to improve learning and exchange about such strategies, while important, have largely been lacking. The international mental health policy community could do more to improve learning because: a) countries have placed

limited attention on describing frameworks for planning and designing rational delivery strategies (Belkin et al., 2012), b) the gap between evidence and its implementation within the field of mental health remains a key issue, with many implementation efforts not reaching their full potential (Barwick et al., 2008; Proctor et al., 2009), and c) the adoption of new knowledge into policy and practice is often slow and unpredictable (Nutley, Walter, & Davies, 2007). All these contribute to the 8 to 20 year gap from the time the new knowledge is created to when it is used in practice (Boren & Balas, 1999; Green, 2001).

While creating better opportunities for international exchange could contribute to narrowing this gap, another challenge presents itself: successfully adapting evidence to context. Currently, the processes by which evidence-based interventions are chosen for implementation and adaptation across national borders is often ad hoc (Cuijpers, de Graaf, & Bohlmeijer, 2005). Yet, the transfer and adaptation of evidence-based practices are affected by the context in which they are implemented. Context has been cited as a major enabler or barrier to the success of change efforts in systems (Kitson, 2009). Previous research shows that (mental) healthcare systems are complex entities that require interventions aimed at systematic improvement (Ferlie & Shortell, 2001, Belkin, 2012).

The lack of a shared common language for research and practice relating to systems change is an additional barrier. In the health field alone, over 100 terms have

been identified in the research literature that describe evidence-informed change efforts (McKibbon et al., 2010), and frequency of use varies by country and discipline. Here we use the term "knowledge exchange" (KE) and have adopted the Canadian Foundation for Healthcare Improvement's definition which frames KE as a collaborative problem-solving process between key groups such as researchers, policy makers, clinicians and service users. It involves interactions between these groups and "results in mutual learning through the process of planning, producing, disseminating, and applying existing or new research in decision-making" (Canadian Foundation for Healthcare Improvement. n.d. para 1). We use the term "implementation" to describe active strategies for installing evidence into practice (a sub-category of KE).

Given the current interest globally to create strategies to bridge the gap between knowledge development, policy formulation and service delivery in practice, we contend that it is necessary to create mechanisms that accelerate the sharing of change efforts and innovations across countries using evidence-informed theoretical and practical approaches. One solution is to invest in the development of international KE partnerships that are informed by tools and analytical frameworks that help make international collaboration for systems improvement more systematic. We contend that more explicit use and testing of KE models and change efforts at the systems level are necessary to spread learning and resources across the globe. The evidence base for effective KE is still emerging, and there is a need for continued, rigorous testing of related models and approaches. Sustained transformational change can only occur when systems become better equipped to solve local problems using the best available approach, and guided by the priorities of the community. While we suspect that all transformed systems share some common characteristics, including evidence-informed approaches to care, and a recovery-orientation, our paper does not focus on any particularly described "end state". Instead, our contribution focusses on how systems can improve their capacity to achieve such transformational change once the political direction is

In this paper we focus on one such partnership initiative, the International Knowledge Exchange Network for Mental Health (IKEN-MH), and exemplar efforts at transformational change in the partnership countries. This paper is divided into three sections. The first section introduces the network and the conceptual framework upon which we build: Promoting Action on Research Implementation in Health Services (PARiHS). In the second section we use exemplars of systems level change efforts currently underway across a range of contexts, and explore the application of the PARiHS

framework. In the final section we reflect on the opportunities and challenges that using such a framework presents when attempting to frame system level change initiatives. We conclude by identifying challenges and opportunities for practice, policy and research use that improve the manner in which evidence is implemented in mental health systems.

Overview of IKEN-MH

In early 2012, the Mental Health Commission of Canada (MHCC), in partnership with the International Initiative for Mental Health Leadership (IIMHL), a government-funded collaboration of eight countries (Australia, Canada, England, Ireland, New Zealand, Scotland, Sweden and the United States) sparked the creation of a mechanism to share best practices. knowledge and resources in the field of mental health. IKEN-MH aims to increase capacity for effective KE in mental health by connecting people, ideas, and resources. It works on a global level to improve health systems performance and effectiveness for those living with a mental health problem and their families/caregivers. IKEN-MH is currently supported by a steering committee and a membership of approximately 70 members. An inaugural meeting was held in Canada in 2012, followed by a second meeting in in New Zealand in 2013, where a work plan to foster opportunities for ongoing participation and sharing internationally was developed. The work will continue with a third meeting of IKEN-MH to be held in Sweden in June 2014.

The two primary tasks of IKEN-MH are a) to develop capacity globally to share promising national, regional and local innovative practice and systematic evidence on how to design, manage and transform mental health systems, services, and programs, and b) to create a community of practice for people with strategic roles in KE and systematic improvement to share learnings and collaborate across borders. The focus of this paper is on the latter task.

Building the Network

To support the network's efforts, a small community of practice of active IKEN-MH members (COP) decided to explore the value of using a theoretical framework from the KE research discipline: the PARiHS framework. First identified by Kitson et al., (1998) this framework posits: a) that "successful implementation is a function of the relation between the nature of the *Evidence*, the *Context* in which the proposed change is to be implemented, and the mechanisms by which the change is *Facilitated*" (Kitson et al.), and b) that these three domains are interdependent, need a similar level of attention and should be not be seen as a simplistic, linear causal chain but rather be addressed continuously

and simultaneously. Each of these domains and their sub-elements are placed on a continuum of "high" to "low".

PARiHS provided the IKEN-MH with a common framework from which to explore and understand the systems change efforts within IKEN-MH. According to PARiHS, the *Evidence* domain is comprised of four types of knowledge: research, clinical experience, patient preferences and routine information. The more these sources are combined, the stronger the evidence. However, it is argued that whatever source of knowledge is drawn upon, it must be subjected to scrutiny and found to be credible (Rycroft-Malone et al., 2002).

Context is the broadest and least well-theorized domain (Kitson et al., 1998, Rycroft-Malone et al., 2002). McCormack and colleagues' (2002) concept analysis of PARiHS points to three aspects of *Context* critical to successful KE: culture, leadership and evaluation. Culture is understood as the way things are done in a service or system. Leadership is understood to encompass style (command and control vs transformational), as well as the approach to teaching and learning (didactic strategies vs empowering strategies). The evaluation element is described as a reflexive practice that includes different types of information preferably considered together. Contexts with a "strong" evaluation are marked by their production and use of feedback at several levels, acceptance and use of many different sources of types of information and the variety of evaluation methods and focuses (e.g. clinical outcomes, performance, economic and experiential).

The third domain, *Facilitation* is seen as a process whereby someone (i.e., the facilitator) undertakes action to make it easier for others to implement evidence into practice (Harvey et al., 2002). Which roles, skills and knowledge are needed under different conditions of *Evidence* and *Context* and when to help individuals, teams, organizations or higher-order system actors is then a focus for understanding facilitation.

PARiHS as a Framework to Describe System Level Change Initiatives

We first reviewed the PARiHS framework for its potential as a conceptual framework to determine whether it is suitable to apply to change at the systems level (Kitson et al., 1998; McCormack et al., 2002; Harvey et al., 2002; Rycroft-Malone et al., 2002; Rycroft-Malone, 2004). We then explored the degree to which it applied and added value to describing and problem-solving large-scale KE efforts across a range of jurisdictions and contexts. Four examples in which

the authors have first-hand experience are analyzed with the help of the PARiHS framework and are presented here as exemplars.

Exemplars

Evidence

For the past decade, the Substance Abuse and Mental Health Services Administration (SAMHSA) of the U.S. Department of Health and Human Services has fostered the growth of the National Registry of Evidence-based Programs and Practices (NREPP – www.nrepp.samhsa.gov). An exemplar of *Evidence* in the PARiHS framework, NREPP is a searchable online registry of independently rated and reviewed mental health and substance abuse interventions. The purpose of NREPP is to assist the public in identifying scientifically based approaches to preventing and treating mental and/or substance use disorders that can be readily disseminated to the field.

Since its launch in 2007, NREPP has been increasingly recognized and used by international audiences. The registry currently contains over 300 interventions, with an additional 58 interventions under review or accepted for review. An average of 30,520 unique visitors access the NREPP Web site each month, with more than 37,210 total visits, on average, logged each month.

At the time of this review, more than half (157) of the 300 interventions in NREPP have been implemented internationally. A total of 113 countries are represented among the implementation sites, with 27% of these countries located in Europe, 27% in Asia and the Middle East, 18% in North America and the Caribbean (excluding the United States), 16% in Central and South America, and 8% in Africa. This suggests that there has been some success in adapting the interventions based on context, although to our knowledge, no research has specifically investigated the success of NREPP interventions as a whole across different country contexts or using the model presented by PARiHS.

To improve the applicability of NREPP across a diverse array of contexts, officials from SAMHSA have been working closely with IKEN-MH as well as the IIMHL to promote additional submissions from international sources, and discuss potential collaborations with IKEN-MH members that might expand the content of the registry to include information highlighting the emerging global evidence-base for systems change efforts in mental health.

NREPP illustrates the active role that government can play in improving access to quality, reviewed evidence. However, its success in spreading NREPP programs to other countries and in other languages, suggests future

attention needs to be paid to the *Context* domain and how well these programs translate across different cultural and political contexts.

Context

In Sweden, the 5-year national coordination strategy for mental health takes a multi-sectoral approach that joins up national and relatively autonomous regional and local levels of service delivery. Its vision is to develop a more coherent service system that can deliver better outcomes with a better use of current resources. According to the PARiHS framework, strengthening the culture for evaluation and improvement and promoting transformational leadership can be seen as active strategies to improve the context for uptake of evidence (McCormack et al., 2002).

Active engagement of senior decision-makers has been demonstrated to be a necessary ingredient for success in quality improvement efforts (for a review see Kaplan et al., 2010). The program on Social Investments targets these decision-makers by introducing the question of how resources can be allocated to achieve the highest level of strategic efficiency. In line with recent thinking in human capital economics (for a review see Heckman, 2008) the Social Investments program identifies active approaches to prevent future cost escalations when problems are addressed too late. One innovation is social investment funds where investment capital can be raised to support new and preventative intervention models, processes and strategies. The funds are channeled toward interventions and programs that could prove to have long-standing positive effects and positive cost-benefit calculations. A first achievement of this innovation has been to strengthen the active involvement of top management and politicians in requesting evidence and evaluation of mental health outcomes as well as understanding the need to achieve implementation success of funded mental health programs.

Sweden's Social Investments approach to mental health system improvement targets efforts to the *Context* domain of PARiHS, in part because of the strong emphasis on local communities directing the investments in ways that address their local needs.

Facilitation

Methods that can actively facilitate the uptake of evidence is the third and final dimension of the PARiHS framework. SPARK (Supporting the Promotion of Activated Research and Knowledge) is a training approach developed by the Mental Health Commission of Canada (MHCC) that seeks to bridge the knowledge-to-practice gap and enhance capacity to understand and implement effective mental health-oriented KE initiatives. SPARK focuses on the

knowledge and skills associated with KE by enhancing the capacity of knowledge users or brokers across Canada to effectively implement KE activities.

The goal of SPARK is to improve capacity for implementing effective KE practices in mental health, substance use, and addictions. Specific objectives include: providing foundational knowledge required to develop the KE plan; providing a simple and easy-to-use framework for conducting KE; and increasing cross-sectoral collaboration among researchers, policy experts, family caregivers, practitioners, and people with lived experience.

There are two essential components of the SPARK training approach: the Innovation to Implementation Guide (I2I) and the SPARK Institute training. The I2I is a step-by-step guide for driving change using KE activities and forms the basis of the training. The I2I Guide is built around the concept of innovation: products, actions, services or relationships that have the potential to enhance health outcomes. The Guide illustrates how to move from innovation to implementation to achieve the desired outcomes of a project or initiative. The I2I Guide is not meant to replace KE frameworks, but rather to facilitate their application through the development of a practical, action-oriented guide (Lavis, Robertson, Woodside, McLeod, & Abelson, 2003; Stetler, et al., 2011).

The SPARK Training Institutes have been held annually since 2012, and have hosted 119 Canadian participants to date, from a range of sectors, including researchers, practitioners, policy/decision-makers, and mental health and addiction fields.

Integrating Evidence, Context and Facilitation

Evidence Exchange Network (EENet) is an example of an initiative that has an equal emphasis on *Evidence*, *Context* and *Facilitation*. In order to address the evidence needs of the mental health and addictions system (broadly defined) in Ontario Canada, the Centre for Addiction and Mental Health and their partners have developed an innovative provincial KE network. EENet brings together researchers, policymakers, service providers, system planners, persons with lived experience, family members and others to build a more evidence-informed system.

The network defines "evidence" as having four components: research; expertise and tacit knowledge based on professional experience; lived experience of people and their families; and culture. This view of evidence aligns with the PARiHS framework, but has been broadened to include culture, which is of particular importance to indigenous communities. Further work is needed to elucidate how culture can be used as a form of evidence, although some research has

begun (e.g., Smylie et al., 2004). Currently, the network uses a range of tools and resources to capture these forms of evidence and encourage dialogue across them.

To understand *Context* in the application of evidence, EENet uses a menu of KE products and tools to capture local context and describe how evidence is adapted to local context, as well as providing supports for organizations to assess their inner and outer contexts to determine how they might improve the use of evidence. Finally, and perhaps the most important element of EENet, is Facilitation. The network employs a team of knowledge brokers and communication specialists (n=14) located across the province who are trained to support individuals, organizations and systems to cogenerate, exchange and implement evidence (for a description of knowledge brokers, see Meyer, 2010). They bring a range of skills and tools to their work, including KE planning, partnership building, implementation support, clear language writing, and knowledge synthesis. They also employ communication vehicles to support them, including on and off-line strategies, such as social media (689 followers on Twitter), websites (eenet.ca and eenetconnect.ca), webinars, and in-person events.

Currently, EENet has approximately 1460 members. It has produced 267 knowledge products and tools, there are 293 Ontario researchers linked to the network, and network members have produced 34 blogs on topics of relevance to the evidence needs in Ontario. The website receives an average of 1664 unique visitors per month. EENet's online community (www.eenetconnect.ca) was launched in February 2013 and there are 1763 members, with 646 discussion threads and 397 calendar entries.

Through its activities, the network strengthens the evidence base by incorporating the knowledge needs of decision-makers in the system into evidence-generating activities. It also facilitates access to existing knowledge in ways that are tailored and accessible to its stakeholders. IKEN-MH allows EENet access to a global community that can support its evidence and implementation efforts.

Discussion

The role of evidence in transforming mental health systems has mainly focused on the point of delivery to the end-user, i.e., evidence-based practices and programs (EBPs). While more people now have access to EBPs by this strategy, the success of the approach has been questioned since few programs get implemented in the way they are intended and thus, unsurprisingly, the effects shown in the efficacy trials are most often not reached in real-world practice. This underscores the need to consider the systems that

underlie the practices themselves, and their role in transformational change. In addition to improving the research on how EBPs can be transferred and scaled across settings, we advocate for a broader rethinking of what it takes to implement and share knowledge on how to manage delivery and systems change in mental health. This is work that all authors/COP members are currently engaged in, in their roles at an overarching systems and policy level in their respective countries.

Using PARiHS For This Exercise - Opportunities and Challenges

Because large-scale implementation efforts are relatively uncommon in any one country (particularly smaller countries), efforts such as the IKEN-MH provide the opportunity for systems leaders across countries to take advantage of the global community and thereby improve the quality of implementation efforts in their own countries. Still in its infancy, IKEN-MH has already begun to confer some benefits to its members. The COP members from the founding countries have been meeting regularly and sharing experiences and challenges with various aspects of implementation, along the domains of *Evidence*, Context and Facilitation (as described above), to more rigorously describe and learn what aspects of these early examples and attempts at KE are in fact doing. and how well. Using PARiHS to structure that discussion and sharing around the work that goes on in and between the member countries in IKEN-MH has proven to be helpful. It brings a shared language and set of categories with which to understand the uses of KE to successfully share policy and practice experiences across the different countries.

The use of PARiHS has, however, also pointed to some methodological challenges within the framework, and the limits of such frameworks for describing and supporting work at the systems level. First, our experience suggests it is problematic to rely on the strong-weak continuum when there is at least another force at work – resistance to attempts to transform systems. It is easy to see that practice environments identified as "strong" can be highly resistant to change as a result of introducing new evidence since they have arranged their well-functioning system around another understanding of what works. It is possible that those settings scoring "weak" on the different elements could be more inclined to accept a new way of doing things. Thus issues of organizational 'fit' and adequate resources require more attention in line with what is known about resistance to change in practices and systems.

Another question concerns the driving forces behind the use of new evidence. This is addressed in the work on research utilization (Nutley, Walter, & Davies, 2007). If

a multi-level systems view is taken, it is clear that successful uptake of evidence is somewhat dependent on the perception held by those in power about the need and/or value of "evidence" for system improvement, as well as how aligned the new evidence is with their own values, beliefs or policy stance. Certainly, both leadership at a strategic level and an evaluative culture are important. But the priorities of public and private commissioners of services may create either an important driver or obstacle for progress in this area. The current structural situation within the respective countries and sub-sectors, in terms of those who fund and direct the systems should be better understood to guide decision-making. At the level of the organization, these are contextual factors that need to be identified and taken into consideration when planning for change. However, at the systems level, these are critical points to address for any viable strategy to improve the uptake of evidence.

Thus we circle back to some of the initial observations and debate about PARiHS identified at the outset, and highlight limitations of the field of KE to guide actionable efforts for network improvement and exchange of knowledge for mental health care. Namely, the degree to which the PARiHS model (and modeling in general) describes rather than solves the challenges presented by the key element of *Context*, the tensions between local and generalizable knowledge and *Evidence*, and the lack of detail around the *Facilitation* domain and how (or if) it helps overcome these challenges. These limitations highlight the need to consider KE itself as a process of knowledge creation, not merely a conveyer or storehouse of knowledge.

But it is precisely these limitations of the model that point to shared problems that should also be a focus of KE. Some of these include: better characterizations of contextual features for implementation and effective management, how to broker and prioritize, when to apply local and generalizable evidence, and methods for facilitation that help accomplish both. One might see the active discussion of these issues as a sign of a vital mental health system able to transform to better cater to the actual and negotiated understanding of needs of individuals and appropriate interventions to address these given the local context.

One future opportunity within IKEN-MH is to build and test systems level approaches to facilitation. There is a need to improve the "fit" between problem, context and facilitation method, and thus to learn which model works, when and where. One early IKEN-MH example of how an organization has successfully adapted a systems level change initiative in a new context is SPARK. The New Zealand organization Te Pou (www.tepou.co.nz) was interested in SPARK

(described above). The MHCC supplied Te Pou with all of the resources for SPARK, and supported contextual adaptation of the materials, as long as the I2I guide was not altered, and the original intent of SPARK wasn't significantly altered where it was no longer recognizable from its original intent, efficacy, or purpose. The MHCC also worked directly with Te Pou to contextualize, shape, and deliver the SPARK Training.

SPARK New Zealand consisted of presentations by national and international experts in KE and small group breakout sessions where fellows were able to discuss and develop their innovation plans with a mentor and their colleagues. The 19 fellows were various health professionals involved in universities, mental health, addiction and disability national and local health service providers. While the first SPARK New Zealand is just concluding, all indications are that this was a successful adaptation that resulted in additional capacity building for KE in New Zealand.

Another promising, and well-established, set of facilitation methods is Quality Improvement (QI) tools, a set of proven tools that are widely accessible to a range of individuals and health care systems actors. Each of our exemplars has included QI tools. The suite of OI tools draws on operations research and management science, statistics, psychology, systems engineering, and iterative learning and uses features of traditional research methods (hypothesis testing and formulation, measurement construction). QI tools avoid such features of research (e.g., randomization, noniterative design, constraints on variation) that actually hinder adaptation to local contexts and environments. Instead, OI rests on other methods of measurement and tests of change that rely on more iterative, rapid, sequential small sample-testing, driven by the knowledge of participants. These methods lead users to use local knowledge and describe the key context drivers to focus on in order to meet explicit aims. These tools have been applied to the purpose of healthcare improvement and spread of evidence-based interventions and designs for over 30 years (Berwick, 2008; Perla, Provost, & Parry, 2013). QI should be seen as a critical part of facilitation for mental health systems transformation. This is reiterated in a recent report that argues effective change requires quality improvement models to be based on networking structures (Health Foundation, 2014).

The PARiHS framework, applied to efforts to network and leverage KE at national and regional levels for mental health systems improvement have helped illustrate a few core principles that can guide attempts to achieve sustainable capacity for transformational change. In order to help systems in our respective

countries be better equipped to undertake such change the KE network should be sure to deliver on:

- Evidence: Broadening the evidence concept and understanding what works to create transformative change. This includes strengthening the consideration of practice-based evidence and lived experience as contributing to high quality, usable evidence, and effectively capturing qualitative and informal experience of systems changes initiatives.
- Context: Developing systems at relevant levels to become the drivers of their own transformation.

 This can be supported by investing in effective vehicles to share proven tools that increase the capacity of participating systems to evaluate and monitor implementation and attend to similarities and differences in local and regional context.
- Facilitation: Documenting different models of systems level approaches to facilitation, and what model works best for the transformational need. This can be supported by identifying new interventions or testing of methods successfully applied to other fields (e.g., QI), that are effective at increasing capacity for organizations and systems to use data and methods for improvement, and creating a better understanding of what methods are most effective and when.

Conclusion

The IKEN-MH, and particularly its COP, is becoming an important vehicle to facilitate dialogue and learning between countries on how mental health systems change can be driven forward by developing new practice and policies that can test out new innovations, or adapting what is working elsewhere. In this we welcome a close dialogue with colleagues in policy, practice and research. In our view the way forward needs to address a few critical challenges, and the field of KE may need bolstering to help us in our efforts toward transformative change in mental health.

While we discovered limitations to PARiHS, those limitations, as well as the framework itself, substantially clarified and re-positioned the way this network is being designed, and its efforts and metrics of success, defined. This includes IKEN-MH embarking on an initial step to create a way to produce country or regional level reports about the state of support systems for implementation of evidence within the field of mental health among network participants. As global networking for mental health services knowledge and best practices increases, it would be valuable for that emerging work to refer to and evolve more detailed and useful KE frameworks with which to align and describe the expectations, goals, and success of such efforts.

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