

# Integrating Knowledge Generation with Knowledge Diffusion and Utilization

## A Case Study Analysis of the Consortium for Applied Research and Evaluation in Mental Health

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### ABSTRACT

**Objective:** Knowledge diffusion and utilization (KDU) have become a key focus in the health research community because of the limited success to date of research findings to inform health policies, programs and services. Yet, evidence indicates that successful KDU is often predicated on the early involvement of potential knowledge users in the conceptualization and conduct of the research and on the development of a “partnership culture”. This study describes the integration of KDU theory with practice via a case study analysis of the Consortium for Applied Research and Evaluation in Mental Health (CAREMH).

**Methods:** This qualitative study, using a single-case design, included a number of data sources: proposals, meeting minutes, presentations, publications, reports and curricula vitae of CAREMH members.

**Results:** CAREMH has adopted the following operational strategies to increase KDU capacity: 1) viewing research as a means and not as an end; 2) bringing the university and researcher to the community; 3) using participatory research methods; 4) embracing trans-disciplinary research and interactions; and 5) using connectors. Examples of the iterative process between researchers and potential knowledge users in their contribution to knowledge generation, diffusion and utilization are provided.

**Conclusions:** This case study supports the importance of early and ongoing involvement of relevant potential knowledge users in research to enhance its utilization potential. It also highlights the need for re-thinking research funding approaches.

*La traduction du résumé se trouve à la fin de l'article.*

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Knowledge diffusion and utilization (KDU), also called knowledge transfer, uptake or translation, has become a high priority for the health research community. The recent international review of the Canadian Health Services Research Foundation recommended that “knowledge transfer work that has already begun...should become the highest priority”.<sup>1</sup> Similarly, numerous newsletters, conferences and workshops in Canada and abroad have been dedicated to KDU.<sup>2-9</sup> The simple reason for the current interest in KDU is that despite a wealth of health-related, policy- and practice-relevant research, the transfer of health and medical research into practice is often slow, if it occurs at all.<sup>8,10-12</sup>

One major barrier to KDU is that researchers and potential knowledge users operate in different social systems, which limits knowledge transfer.<sup>13-15</sup> If they connect at all, it is after an issue has become a policy agenda item.<sup>11</sup> This is a less than opportune time to inform policy.<sup>11</sup> Yet as Lomas writes, “The clearest message from evaluation of successful research utilization is that early and ongoing involvement of relevant decision makers in the conceptualization and conduct of a study is the best predictor of its utilization.”<sup>11</sup> If research is treated as an end-point product rather than as a process, potential knowledge users are not given the opportunity to inform the topics to be researched or the approaches to be adopted.<sup>11</sup> The challenge thus becomes: how to involve potential knowledge users into a research program and engage in KDU before studies have been conducted and completed? This qualitative study, using a single-case design,<sup>16,17</sup> of the Consortium for Applied Research and Evaluation in Mental Health (CAREMH) provides an example of the integration of KDU theory with practice.

### METHODS

The context of this study was to examine the strategies and outcomes of integrating knowledge generation with KDU, based on KDU theories, during the first three years of CAREMH. Two data sources were used: direct observation and documentation,<sup>17</sup> which included all CAREMH grant proposals, meeting minutes, quarterly reports, presentations, publications and members’ curricula vitae. Member check-

ing was used to enhance the validity of the findings.<sup>18</sup>

## FINDINGS

In 1999, a team of eight investigators received funding to paint a comprehensive picture of psychiatric de-institutionalization using southwestern Ontario, where two Provincial Psychiatric Hospitals were then slated for closure, as a “natural laboratory”. Using a public health approach, this research program integrated systems and individual outcomes data to provide an understanding of the prevalence and needs of mental illness, factors related to appropriate service provision, methods for system improvement and diffusion of findings.

The initial proposal was developed in response to frustration expressed by local professionals who felt a disconnection between government reform policies and their daily experiences with the mental health system. The research plan was to gather data before the psychiatric hospitals were closed, so that the data could inform mental health reform.

To ensure this research would both tap the relevant community issues, and be useful to and used by the potential knowledge users, this research group built into the original research proposal a series of three colloquia of potential knowledge users, and established an “open-door policy” that brought to meetings other interested researchers and potential knowledge users. This broadening of the original research group led to the formation of CAREMH. Further, a list-serve directory and newsletters were developed for CAREMH as a knowledge transfer vehicle for relevant research findings, news and policy issues.

### Knowledge diffusion and utilization philosophy

Recent research examining KDU methods and processes generated a model where a key element was the development of a “partnership culture”. This culture is to be established at the beginning rather than at the end of the research, so researchers and potential knowledge users develop a partnership of trust, respect, ownership and common ground, as the fundamental first step to successful KDU.<sup>19</sup> Using this model and previous experience in KDU,<sup>19-22</sup>

CAREMH engaged in a number of operational strategies.

### *Viewing Research as “Means” and Not As “End”*

A major challenge to KDU is that the research enterprise is more concerned with creating knowledge than whether it actually gets used.<sup>10,23</sup> Moreover, public access to research findings is rarely addressed.<sup>24-26</sup>

For CAREMH, the conduct of high quality research is not an end in itself. Rather it is the means to enhance the well-being of persons with serious mental illness. This philosophy shapes CAREMH’s research approach and methodology, as investigator-driven questions are moderated by questions from the potential knowledge user community. The first colloquium set the stage for researchers to listen to potential knowledge users about mental health reform issues. The researchers’ agenda was to identify health care service gaps and needs. However, the issues identified by potential knowledge users were much more fundamental. A major concern was the loss of a “home” for many with mental illness.<sup>27,28</sup> Participants emphasized that poverty could make it difficult to access safe and affordable housing and needed medications.<sup>27,28</sup> With de-institutionalization, clients also faced the need to navigate complex and sometimes contradictory, federal, provincial and local bureaucratic systems.<sup>27,28</sup> These and other findings were presented to a regional task force drawing up plans for mental health service restructuring. The task force flagged their importance, and the issues were referred to a sub-committee to be addressed.<sup>29</sup>

Despite research not being an end in itself, CAREMH members secured funding for 11 additional spin-off projects. Public and academic dissemination has included hospital, community and task force presentations, two op-ed articles,<sup>30,31</sup> press releases, a TV information talk show, plus numerous international conference presentations and eight academic publications.<sup>32-39</sup>

### *Bringing the University and Researcher to the Community*

Potential knowledge users who do not primarily conduct research were encouraged to join CAREMH. Many had specific questions of direct relevance to local men-

tal health reform. Mentoring by CAREMH researchers and the use of research grant money to pay for a research assistant were key to knowledge generation and KDU.

For example, policy planning for de-institutionalization is predicated on the assumption that family physicians will address the health needs of people with serious mental illness and direct them to appropriate individuals or agencies in the social services system. This policy piqued the interest of two CAREMH members (a family physician and a psychiatrist). Through a key informant study, they and colleagues determined that family physicians were comfortable with the idea of caring for people with mental illness but at times felt overwhelmed by the complexities of their needs or unsupported by their psychiatrist colleagues.<sup>32</sup> Because of other changes in the health care system, they felt unable to take on the extra load – findings of importance to the regional implementation task force.

Another community-university project identified that many with mental illness were presenting at emergency departments (ED) with non-medical problems. In response, the local hospital implemented a double triage with referral of non-medical problems to an on-site mental health crisis worker empowered to deal with legal, financial or housing issues.<sup>40</sup> Additionally, based on a needs assessment, a pro bono legal clinic for psychiatric in-patients (the first in Canada) was established in partnership with The University of Western Ontario’s Faculty of Law. These demonstrations are being evaluated with support from the Change Foundation.

### *Using a Participatory Research Approach*

The purpose of participatory research is “to empower participants by increasing their research skills, and producing information that will enhance their capacity to strengthen and improve their programs and take collective action on key issues affecting them.”<sup>41</sup> For example, a key CAREMH academic question was to identify the prevalence of mental illness and needs in various settings, including homeless shelters. Local homeless shelters wanted to assess the needs of their clients in order to reassess their resources.

CAREMH researchers guided shelter staff with instrument identification, the ethics proposal, the conduct, analysis and interpretation of the research. This collaboration not only provided the shelters with the planning information they needed, but also provided CAREMH with important data to complement their hospital, outpatient and corrections data sets.<sup>42</sup>

### *Embracing Trans-disciplinary Research and Interactions*

A key predictor of KDU is “homophily”: the degree to which individuals who interact share similar attributes, knowledge and beliefs.<sup>14</sup> Vingilis and Lindsay<sup>19</sup> found that successful KDU was predicated on researchers and potential knowledge users from different disciplines working closely together. Time was required to build mutual respect and shared knowledge, thus creating greater homophily and potential for KDU.

CAREMH includes individuals from the disciplines of business, correctional services, economics, education, epidemiology, family medicine, law, nursing, political science, police science, psychiatry, psychology, social work and sociology working as researchers, health care practitioners, policy analysts, administrators and managers, in district health councils, acute care and psychiatric hospitals, private practice, social services, housing, police and correctional services. In addition, consumers and their families are part of the larger network.

### *Using Connectors*

The worlds of researchers and potential knowledge users are social systems defined and identified by their own sets of rules, values, languages and communication patterns.<sup>13,19</sup> Knowledge gaps occur when there is a lack of shared values, common perceptions, and inter-system communication patterns. KDU models imply that the gap can be bridged if persons, groups or resources are interposed between the two systems.<sup>5,11,13,14,19,25,43,44</sup> The role of these intermediaries or “connectors” is to assist potential knowledge users in identifying knowledge needs and to assist researchers in translating, influencing and initiating knowledge diffusion.<sup>13</sup> Connectors can have roles of conveyor, consultant, trainer, leader, innovator, defender, knowledge builder, practitioner and user.<sup>13</sup> They con-

centrate on creating awareness of new knowledge, and on the persuasion-decision steps for KDU.

CAREMH members fulfill the role as connectors with non-CAREMH potential knowledge users regionally and internationally. For example, in 2000 a partnership called the London Mental Health Alliance with the support of the Ontario Ministry of Health and Long-Term Care and the local District Health Council, which includes conventional health care facilities, community-based services and providers, consumers and families, was formed to identify and address system issues and to ensure quality mental health care on an ongoing basis.<sup>45</sup> Some CAREMH members belong to the Alliance and act in various connector capacities, bridging the knowledge gap between CAREMH and non-CAREMH potential knowledge users.

## DISCUSSION

CAREMH puts into practice the findings of KDU research that early and ongoing involvement of potential knowledge users in the conceptualization and conduct of research is important for knowledge utilization.<sup>5,46</sup> CAREMH was able to implement KDU operational strategies because they received a large research program grant. Yet a serious challenge for integrating KDU with knowledge generation research is funding. As Lomas emphasizes, “Grant funding agencies, particularly traditional biomedical and clinical ones, have inadvertently perpetuated the inappropriate idea that single studies are worthy units of transfer and dissemination. This is because of their major focus on funding project-based assessments rather than issue-based programs of research and/or relevant summaries and syntheses.”<sup>11</sup> Moreover, because KDU by its very nature is non-linear, participatory and evolving, the research designs of programs including KDU cannot be specified with the exactitude required by traditional funding agencies.<sup>19</sup> Few such agencies support programs of research that include resources to involve potential knowledge users in defining and answering policy- and practice-relevant questions. The availability of a research assistant for CAREMH, in addition to the mentoring offered by senior

CAREMH researchers, has been indispensable in this respect. The effort and time required for submission and review of grant proposals by traditional funding agencies is a barrier to the development of issue-based, research programs that embrace and encourage the type of partnership needed between researchers and potential knowledge users to facilitate KDU and subsequent evidence-based policies. Clearly as research agencies, governments and other potential knowledge users promote KDU as a critical component of the research enterprise, greater creativity and flexibility will need to be built into the funding and support of applied health research.

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## RÉSUMÉ

**Objectif :** La diffusion et l'utilisation des connaissances sont devenues des orientations clés pour les chercheurs médicaux, car jusqu'à maintenant, les politiques, programmes et services de santé ne s'inspirent pas beaucoup des résultats de recherche. Certains indices portent cependant à croire qu'une diffusion et une utilisation efficaces des connaissances dépendent souvent de la participation précoce des utilisateurs éventuels des connaissances à la conceptualisation et à la conduite de la recherche, ainsi que de l'avènement d'une « culture de partenariat ». Notre étude décrit l'intégration, dans la pratique, de la théorie de la diffusion et de l'utilisation des connaissances, par le biais de l'analyse d'une étude de cas du CAREMH (un consortium pour la recherche appliquée et l'évaluation en santé mentale).

**Méthode :** Étude qualitative fondée sur un cas et faisant appel à plusieurs sources (les propositions, procès-verbaux, présentations, publications, rapports et curriculum vitæ des membres du CAREMH).

**Résultats :** Le CAREMH a adopté les stratégies opérationnelles suivantes pour accroître sa capacité de diffusion et d'utilisation des connaissances : 1) considérer la recherche comme un moyen plutôt qu'une fin; 2) amener l'université et le chercheur dans la collectivité; 3) utiliser des méthodes de recherche participatives; 4) profiter de la recherche et des interactions transdisciplinaires; et 5) utiliser des « connecteurs ». L'étude donne des exemples du processus itératif entre les chercheurs et les utilisateurs éventuels des connaissances pour que ces derniers contribuent à la création, à la diffusion et à l'utilisation de savoirs.

**Conclusions :** L'étude de cas confirme l'importance, pour la recherche, de la participation précoce et continue des utilisateurs éventuels des connaissances, ceci pour améliorer l'utilisation des résultats. Elle souligne également le besoin de repenser les méthodes de financement de la recherche.