



# Defining the Scope of Knowledge Translation Within a National, Patient-Oriented Kidney Research Network

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## Abstract

**Purpose of program:** Integrated knowledge translation (IKT) is a collaborative approach whereby knowledge created through health research is utilized in ways that are relevant to the needs of all stakeholders. However, research teams have limited capacity and know-how for achieving IKT, resulting in a disconnect between the generation and application of knowledge. The goal of this report is to describe how IKT research was achieved across a large-scale, patient-oriented research network, Canadians Seeking Solutions and Innovations to Overcome Chronic Kidney Disease (Can-SOLVE CKD).

**Sources of information:** Resources to facilitate knowledge translation (KT) planning across the network were developed by the Can-SOLVE CKD Knowledge User/Knowledge Translation Committee with reference to established Canadian KT and patient engagement tools and frameworks, review of the published and gray literature, and expertise of committee members.

**Methods:** The Can-SOLVE CKD Knowledge User/Knowledge Translation Committee consisting of patient partners, health care providers, policymakers, and researchers provided oversight of the development and implementation of the network's IKT initiatives. Guided by its strategic framework, the committee developed KT planning templates and review checklists to assist network projects with preparing for dissemination, implementation, and scale and spread of their interventions. The committee has acted in a consultative capacity to facilitate IKT across network initiatives and has supported capacity building through KT activities aimed at network membership and knowledge users more broadly.

**Key findings:** The Can-SOLVE CKD Knowledge User/Knowledge Translation Committee established a nation-wide strategy for KT infrastructure and capacity building. Acting as a knowledge intermediary, the committee has connected research teams with knowledge users across Canada to support practices and policies informed by evidence generated by the network. The committee has developed KT initiatives, including a Community of Practice, whereby participants across different regions and disciplines convene regularly to share health research knowledge and communications strategies relevant to the network. Critically, patients are engaged and contribute throughout the research process. Examples of IKT activities from select projects are provided, as well as ways for sustaining the network's KT platform.

**Limitations:** The KT resources developed by the committee were adapted from other established resources to meet the needs of the network and have not undergone formal evaluation in this context. Given the broad scope of the network, resources to facilitate implementation and knowledge user engagement may not meet the needs of all initiatives and must be tailored accordingly. Knowledge barriers, including a lack of information and skills related to conceptual and practical aspects of KT, among network members provided a rationale for various KT capacity-building initiatives.

**Implications:** The approach described here offers a practical method for achieving IKT, including how to plan, implement, and sustain initiatives across large-scale health research networks. Within the context of Can-SOLVE CKD, these efforts will shorten knowledge-practice gaps through producing and applying relevant research to improve the lives of people living with kidney disease.

## Abrégé

**Objectif du programme:** L'application intégrée des connaissances (AIC) est une approche collaborative à répondre aux besoins de tous les intervenants. Les équipes de recherche ont cependant une capacité et un savoir-faire limités pour réaliser l'AIC, ce qui entraîne un décalage entre la production et l'application des connaissances. L'objectif de cet article est



de décrire comment la recherche sur l'AIC a été réalisée dans le cadre d'un vaste réseau de recherche axée sur le patient, le réseau CAN-SOLVE CKD (Canadians Seeking Solutions and Innovations to Overcome Chronic Kidney Disease).

**Sources:** Les ressources visant à faciliter la planification de l'application des connaissances (AC) dans l'ensemble du réseau ont été élaborées par le Comité des utilisateurs/de l'application des connaissances (*Knowledge User/Knowledge Translation Committee*) de Can-SOLVE CKD en se référant à des outils et des cadres d'AC et de participation des patients établis au Canada, à l'examen de la documentation publiée et de la littérature grise et à l'expertise des membres du comité.

**Méthodologie:** Le Comité des utilisateurs/de l'application des connaissances de CAN-SOLVE, constitué de partenaires patients, de fournisseurs de soins, de décideurs et de chercheurs, a supervisé le développement et la mise en œuvre des initiatives d'AIC du réseau. Guidé par son cadre stratégique, le comité a élaboré des modèles de planification pour l'AC et des listes de vérification pour aider les projets du réseau à se préparer à la diffusion et à la mise en œuvre de leurs interventions, de même qu'à leur élargissement et leur diffusion. Le comité a agi à titre consultatif pour faciliter l'AIC dans l'ensemble des initiatives du réseau, et a appuyé le renforcement des capacités par le biais d'activités d'AC destinées aux membres du réseau et, plus largement, aux utilisateurs des connaissances.

**Principaux résultats:** Le Comité des utilisateurs/de l'application des connaissances de CAN-SOLVE a établi une stratégie nationale pour l'infrastructure et le renforcement des capacités en matière d'AC. En tant qu'intermédiaire, le comité a mis en relation des équipes de recherche et des utilisateurs des connaissances partout au Canada afin d'appuyer les pratiques et les politiques fondées sur les données probantes produites par le réseau. Le comité a élaboré des initiatives d'AC, notamment une communauté de pratique où les participants des différentes régions et disciplines se réunissent sur une base régulière pour partager les connaissances générées en recherche et les stratégies de communication pertinentes pour le réseau. Il est essentiel que les patients s'engagent et contribuent tout au long du processus de recherche. Des exemples d'activités d'AIC tirés de projets sélectionnés sont fournis, de même que des moyens de maintenir la plateforme d'AC du réseau.

**Limites:** Les ressources d'AC développées par le comité ont été adaptées à partir de ressources établies pour répondre aux besoins du réseau et, dans ce contexte, n'ont pas fait l'objet d'une évaluation officielle. Compte tenu de la vaste portée du réseau, les ressources destinées à faciliter la mise en œuvre et la participation des utilisateurs des connaissances pourraient ne pas répondre aux besoins de toutes les initiatives et devraient être adaptées en conséquence. Les freins à la connaissance parmi les membres du réseau, notamment le manque d'information et de compétences liées aux aspects conceptuels et pratiques de l'AC, ont servi de justification à diverses initiatives de renforcement des capacités en matière d'AC.

**Conclusion:** L'approche décrite offre une méthode pratique pour parvenir à l'AIC, notamment dans la façon de planifier, de mettre en œuvre et d'appuyer des initiatives dans les réseaux de recherche d'envergure. Dans le contexte de CAN-SOLVE CKD, ces efforts permettront de réduire les écarts entre les connaissances et les pratiques, en produisant et en appliquant des recherches visant l'amélioration de la vie des personnes atteintes de néphropathies.

## Keywords

chronic kidney disease, patient-oriented research, knowledge translation, patient engagement, nephrology

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## Introduction

Knowledge translation (KT) refers broadly to the processes by which knowledge is synthesized, shared, and applied in clinical practice or health decision-making.<sup>1</sup> Knowledge translation supports the needs of knowledge users (eg, health care

providers, patients, managers, and decision makers) when implementing health innovations or assessing gaps between research evidence and health care delivery. While KT has often been done by researchers in collaboration with clinicians and policymakers to address the needs and considerations of

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health professionals, in recent years, this approach has expanded to include patients as partners. In this way, KT can promote alignment of research activities with the needs and priorities of patients and encourage the use of relevant knowledge to improve health outcomes.<sup>2</sup>

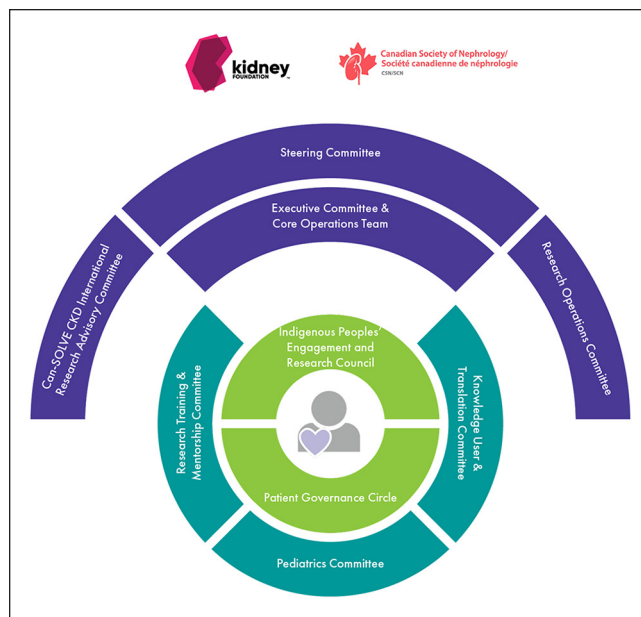
A growing international appreciation of patient-oriented research has led to the establishment of several large-scale initiatives that engage patients and the public in health research and KT (eg, Strategy for Patient-Oriented Research [SPOR] in Canada,<sup>3</sup> Patient-Centered Outcomes Research Institute in the United States,<sup>4</sup> and INVOLVE in the United Kingdom).<sup>5</sup> Canadians Seeking Solutions and Innovations to Overcome Chronic Kidney Disease (Can-SOLVE CKD; www.cansolveckd.ca) is a kidney health research network supported by the Canadian Institutes of Health Research's SPOR<sup>3</sup> that is dedicated to promoting patient-oriented research and accelerating the translation of kidney health knowledge into practice.<sup>6</sup> The organization's vision is that Canadians with or at risk for chronic kidney disease receive the best recommended care, experience optimal outcomes, and have the opportunity to participate in research with novel therapies.<sup>6</sup> The Can-SOLVE CKD Network is organized around patients (Figure 1), who play a central role in informing research direction and processes through leadership roles on all network projects and committees. Eighteen unique research projects spanning a variety of objectives and geographic regions are underway within the network. All have been informed by patient-identified priorities<sup>7,8</sup> and emphasize engagement of patients throughout all stages of the research process.

To support knowledge user engagement across its national network, Can-SOLVE CKD set about creating new infrastructure and strategies, which include a dedicated KT Committee and Community of Practice. In this report, we describe these efforts to plan, implement, and sustain KT initiatives across our large-scale health research network, which could serve as a useful roadmap for other organizations interested in achieving meaningful engagement of knowledge users, including patients, in health research.

## Foundations of a Robust Integrated KT Approach

### Defining Integrated KT

Knowledge translation refers to the process of putting knowledge into action.<sup>9</sup> Although many terms can be used to describe the process for using research knowledge, all imply movement from sharing or transfer of knowledge to its uptake and use in practice.<sup>10</sup> Whereas KT strategies have been traditionally designed and applied by frontline health care professionals or organizational decision makers, integrated KT (IKT) is a collaborative approach that engages knowledge users, such as patients, clinicians, and policymakers, in the research process itself.<sup>11</sup> As a result, generated knowledge is thought to be more applicable to decision-making and thus better suited to addressing evidence-care gaps.<sup>12</sup> Such an



**Figure 1.** Can-SOLVE CKD organizational chart.

Note. Can-SOLVE CKD = Canadians Seeking Solutions and Innovations to Overcome Chronic Kidney Disease.

inclusive approach to health research has been critical to the success of the Can-SOLVE CKD Network and is in direct alignment with the SPOR vision of integrating evidence to improve patients' health outcomes and care experiences.<sup>3</sup>

### Involving Patients in IKT Research

Within Can-SOLVE CKD, patients are valued as key knowledge users throughout the network's research partnerships, and their involvement is guided by established patient engagement and KT frameworks.<sup>1,9,13</sup> Throughout the network, the term "patient partner" is used inclusively to refer to individuals with personal experience of kidney disease or impacted by kidney disease (eg, informal caregivers, family, friends, living kidney donors) who engage in network research partnerships and/or governance.<sup>3</sup> In addition to improving research relevance, the inclusion of patients in IKT research is thought to promote greater accountability, transparency, and trust in the research process.<sup>14-16</sup> However, the IKT approaches used by health care research teams more broadly are quite variable and tend to be poorly reported and evaluated in the literature.<sup>17,18</sup> One scoping review highlighted this variability in IKT practices, with only 3 of the 13 included health care studies explicitly describing the engagement of patients among stakeholders in the IKT research.<sup>11</sup>

### Knowledge Translation Oversight and Accountability

To facilitate oversight, planning, and inclusivity in KT activities, a Knowledge User/Knowledge Translation (KU/KT) Committee was created soon after the launch of the

Can-SOLVE CKD Network. Membership reflects a balanced representation of knowledge users, knowledge producers, and relevant stakeholders in the adult and pediatric nephrology communities with links to local, regional, and national kidney health regulatory bodies. The 12-person committee is cochaired by a provincial kidney health policymaker, medical director of a provincial renal program, and clinician researcher who are recognized KT leaders. Other committee members contribute extensive research and/or clinical expertise in addition to their KT skillset, and several hold leadership roles in provincial renal programs and organizations committed to improving the quality of care and outcomes for persons living with kidney disease (eg, Canadian Association of Nephrology Administrators, Alberta Health Services Medicine Strategic Clinical Network). These roles held by committee members external to Can-SOLVE CKD will support decision-making and coordinated implementation of the network's health innovations across Canadian kidney care programs. Critically, membership includes 2 patient partners who bridge the network's KT activities with other Can-SOLVE CKD patient-led councils. Building KT capacity among patient partners through focused KT modules and experiential learning opportunities is a priority for the network that will enable patient partners to assume leadership roles within the committee and across Can-SOLVE CKD's various dissemination and implementation activities. A KT broker with expertise in KT theory and practical KT experience within the Canadian nephrology research community oversees the committee's activities. Ad hoc members are included as required to address identified areas of need as they arise. The KU/KT Committee meets in person annually and by teleconference quarterly.

The overarching objectives of the Can-SOLVE CKD KU/KT Committee are to (1) provide KT expertise, guidance, and direction to the network; (2) ensure KT strategies and activities are aligned with the voices of patient partners; (3) facilitate the translation of knowledge into practice and policy; (4) cultivate ongoing interactive relationships with relevant end-users across Canada, including patients, their caregivers, and clinicians; (5) provide guidance on how to engage with policymakers; and (6) advance the science and practice of KT to improve patient outcomes and ensure efficient use of health care resources.

### **Knowledge Translation Infrastructure**

To meet these objectives, the Can-SOLVE CKD KU/KT Committee draws on several principles summarized in its guiding KT Framework (Figure 2). This framework was developed in consultation with committee members to summarize the key pillars of the network's KT platform and could be relevant for other research collaborations. The committee provides support for both evidence generation (theme 1) and evidence dissemination and implementation (theme 2) in an interactive fashion, depending on the stage of a given

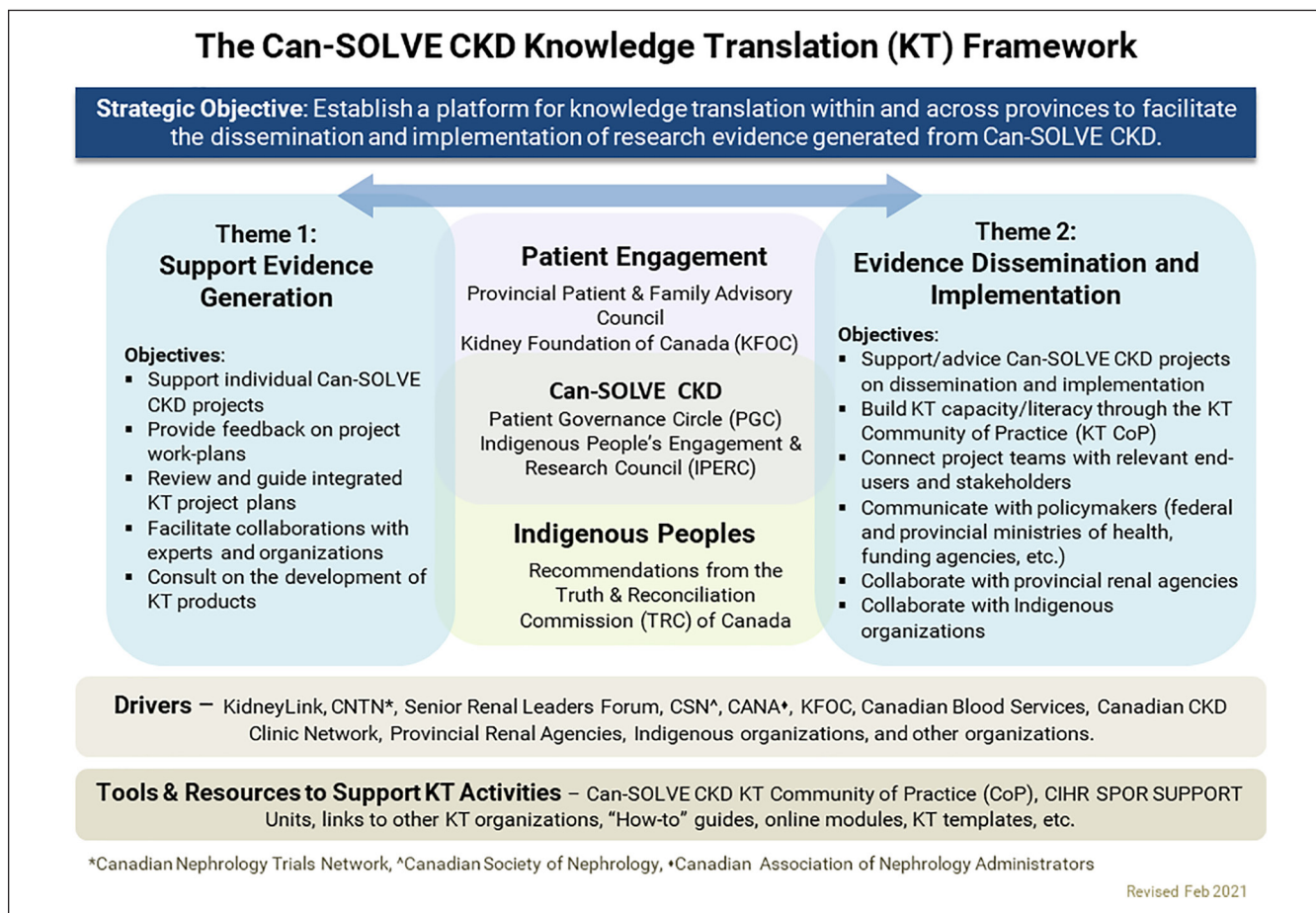
research project. In this way, the framework allows for refinement and tailoring of Can-SOLVE CKD project KT plans as new knowledge is gained or contextual factors influencing KT change over the course of the research. The patient voice remains central to the strategic objectives of the KU/KT Committee, as the committee strives to respect principles of patient engagement and integrate the perspectives of Indigenous communities in KT.

The Can-SOLVE CKD Network leverages existing critical KT infrastructure external to the network and is building key tools and resources to enable KT and facilitate scale and spread of interventions on a national scale. National renal organizations (eg, Canadian Society of Nephrology, Canadian Association of Paediatric Nephrologists, Canadian Association of Nephrology Administrators, Canadian Association of Nephrology Nurses and Technologists, Kidney Foundation of Canada) are well positioned to broadly support dissemination and implementation of knowledge generated by network projects, whereas provincial renal agencies can help tailor implementation strategies to address regional needs and challenges. Other recently established KT infrastructure includes a Senior Renal Leaders Forum, the Canadian CKD Clinic Network, and the Canadian Nephrology Trials Network, which engage administrative, clinical, and research leaders across the country to harmonize practices, develop essential connections, and drive innovative change in kidney care and research. The KU/KT Committee relies on key resources to support patient-oriented aspects of the network's research (eg, provincial SPOR Support for People and Patient-Oriented Research and Trials [SUPPORT] Units) and ensure alignment of activities with the Truth and Reconciliation Commission of Canada and Ownership, Control, Access, and Possession principles for research involving Indigenous communities. Other resources that foster KT capacity building within the network, such as the Can-SOLVE CKD KT Community of Practice, are described further below.

## **Planning and Implementing IKT Strategies**

### **Facilitating KT Planning**

Within the first year of the Can-SOLVE CKD Network grant, the principal investigators of all 18 projects identified a KT champion for their project teams and drafted a KT plan that complemented their respective research proposals. Given the wide scope of research projects and their varied KT needs, the KU/KT Committee developed 2 KT planning templates based on established KT resources that all research teams in the network were requested to complete.<sup>1,19</sup> The principal investigators were asked to consider their research aims, target audiences for their findings, and potential KT strategies and communication channels to engage research partners and disseminate research findings. Whereas 1 template



**Figure 2.** Can-SOLVE CKD KU/KT committee strategic framework.

Note. Can-SOLVE CKD = Canadians Seeking Solutions and Innovations to Overcome Chronic Kidney Disease; KU/KT = knowledge user/knowledge translation.

focused on general KT questions broadly applicable across research project types, the other addressed more detailed KT questions relevant to projects using an IKT approach (templates available in Supplemental Material Item S1).

Completed KT plans were reviewed alongside the corresponding research protocols and discussed at an in-person meeting of the KU/KT Committee within the first year of the network's operations to ensure that avenues for KT had been thoroughly explored and to identify relevant resources to support KT activities. Committee members, including the patient partners, received training on KT principles and the application of standardized checklists developed by the committee with reference to existing, national KT resources for evaluating research projects' KT plans (Supplemental Material Item S2).<sup>1,19</sup> The committee assessed each KT project plan and discussed potential gaps, synergies between Can-SOLVE CKD projects, and relevant KT drivers and tools to support research activities. An individualized feedback letter was sent to the principal investigators of each project summarizing the committee's discussion. This provided all teams with the opportunity to revise and enhance their KT plans based on the feedback received.

### Supporting KT Practice

The KU/KT Committee has remained available to the Can-SOLVE CKD Network in a consultative capacity to help research teams and other core committees address questions about the practical application of KT as their initiatives progress. This includes identifying relevant stakeholders and linking them to important targets for dissemination and implementation of the knowledge generated through Can-SOLVE CKD. For example, the committee acts as a knowledge intermediary connecting research teams with the Canadian CKD Clinic Network of multidisciplinary CKD clinicians and clinic managers, as well as the Senior Renal Leaders Forum of provincial renal agency leads to support collaborative, evidence-informed change in kidney care practice and policy across Canada. The KU/KT Committee directs research teams to relevant regional and national resources, such as those available through provincial SPOR SUPPORT Units and KT organizations, to support their KT activities and help foster partnerships with knowledge users. For projects working with Indigenous communities, KT resources developed with and for these communities are invaluable for

**Table 1.** Examples of KT From Research Projects Across Can-SOLVE CKD's 3 Research Themes.*Theme 1: Earlier diagnosis*

**Kidney Check:** A screening initiative in Indigenous communities across Canada to identify risk factors for kidney disease (such as high blood pressure and diabetes) and provide treatment plans tailored to an individual's risk of CKD

<b>KU audience</b>	<b>KT strategies</b>	<b>Expected KT outcomes</b>	<b>Patient engagement in KT</b>
Indigenous patients and caregivers Indigenous communities Indigenous leaders Health care providers (nephrology and primary care) Provincial renal program decision makers Provincial and federal organizations and partners	Community engagement in project development and implementation Webinars and in-person colloquiums Formal training programs Patient-facing educational materials Presentations to senior leadership, community leaders, and policymakers Community champions Peer-reviewed publications Conference presentations	Increased awareness among Indigenous peoples Early detection and prevention of CKD Increased funding for CKD screening and treatment in Indigenous communities Increased capacity for sustained CKD screening and referral pathways	Planning and guiding screening events to suit community needs Development of patient tools in Indigenous languages Design of logo, Web site, and social media content Engagement with Indigenous communities to discuss outcomes Creation of communication materials with person-centered messaging Presentation at scientific meetings Program advocacy at local, national, and international events Coauthorship on peer-reviewed publications

*Theme 2: Better treatments*

**EMPATHY:** A cluster RCT evaluating the impact of routine use of PROMs in hemodialysis care on patient-reported experience and outcomes, clinical outcomes, and health care utilization

<b>KU audience</b>	<b>KT strategies</b>	<b>Expected KT outcomes</b>	<b>Patient engagement in KT</b>
Hemodialysis patients and caregivers Health care providers (nurses, nephrologists, primary care, allied health professionals) Hemodialysis unit administrators Provincial renal program decision makers Provincial and federal organizations and partners	Stakeholder engagement in tool development and implementation Training webinars and workshops Local champions Patient-facing and provider educational materials Peer-reviewed publications Conference presentations	Enhanced communication between patients and health care providers Positive care experience for patients and providers Evidence-informed decision-making about integrating PROMs into routine hemodialysis care Improved health outcomes and health care utilization for hemodialysis patients	Development of research question and study design Selection of PROMs Patient champions at program level Review of all patient-facing study materials Adaptation of symptom handouts to address local/regional needs Presentation at scientific meetings and patient advocacy forums Coauthorship on peer-reviewed publications

*Theme 3: Innovative care*

**STOP Med-HD:** A project seeking to identify potentially inappropriate medications for hemodialysis patients and develop, validate, and implement a toolkit of evidence-informed deprescribing algorithms

<b>KU audience</b>	<b>KT strategies</b>	<b>Expected KT outcomes</b>	<b>Patient engagement in KT</b>
Hemodialysis patients and caregivers Health care providers (nurses, nephrologists, pharmacists, other frontline providers) Local/regional renal program and formulary decision makers Hemodialysis unit administrators Provincial and federal organizations and partners	Stakeholder involvement in drug identification and algorithm development and implementation Patient advisory group meetings Toolkit dissemination in a variety of formats Patient and provider tools Media release Peer-reviewed publications Conference presentation	Optimization of prescription medication use in hemodialysis patients Reduced adverse effects from medication overuse Improved quality of life and patients' health perceptions Reduced prescription drug costs and mortality among hemodialysis patients	Identification of candidate drugs Involvement in process to validate deprescribing algorithms Cocreation of patient educational tools on deprescribing (eg, videos, bulletins) Qualitative interview data collection Presentation at scientific meetings Coauthorship on peer-reviewed publications

Note. CKD = chronic kidney disease; KT = knowledge translation; KU = knowledge user; PROM = patient-reported outcome measure; RCT = randomized controlled trial; Can-SOLVE CKD = Canadians Seeking Solutions and Innovations to Overcome Chronic Kidney Disease.

addressing their unique KT challenges and ensuring their voices are included in the sharing and application of research knowledge.<sup>20-22</sup> Table 1 provides examples of KT activities across 3 sample Can-SOLVE CKD projects.

### **Supporting Patient Partners in IKT**

As a patient-oriented research network, patient engagement is emphasized across Can-SOLVE CKD's KT activities, and conversely, KT principles are embedded in its patient engagement strategies. The annual reports submitted by project teams to the Research and Operations Committee require project-specific reporting on both patient engagement and KT activities. Annually, a check-in call is organized among project teams and their patient partners to discuss KT competencies, KT activities and products, and KT support needs. Similarly, the KU/KT Committee consults with research teams on appropriate dissemination strategies to reach beyond the research community that may resonate with patient and public audiences better than traditional media of academic publication or conference presentation. Roles for patient partners have expanded into coproducing KT products, such as brochures, scientific posters, and manuscripts. The Can-SOLVE CKD project teams applied KT communication principles they learned via a virtual workshop at the network's 2019 Annual General Meeting, where all projects in collaboration with their patient partners provided a project status update in the form of a rapid-fire-style oral presentation and "visual project summary."<sup>23</sup>

### **Building KT Capacity**

Recognizing the importance of not only facilitating KT activities but also increasing research teams' KT understanding, skills, and confidence, the KU/KT Committee has worked toward increasing KT capacity among researchers and knowledge users in 2 principal ways: (1) establishing a KT Community of Practice and (2) developing an interactive KT Principles module.

### **Community of Practice**

Communities of Practice are informal learning groups that have been used increasingly in the health care sector as a means for sharing knowledge.<sup>24</sup> As a KT tool, the use of Communities of Practice can improve an organization's capacity to develop and share new knowledge that is relevant to the community's unique context.<sup>25</sup> The Can-SOLVE CKD KT Community of Practice is a virtual colearning forum comprising more than 50 patient partners and research staff across almost all research projects. The group convenes in a series of videoconference-based workshops to address gaps in KT literacy and enhance KT skills, including the development of KT materials specific to their projects.<sup>26</sup>

### **KT Training**

An online "KT Principles" module currently under development is supported jointly by members of the KU/KT Committee and the Can-SOLVE CKD Training and Mentorship Committee; it is expected to launch in early 2021. This interactive, self-paced module will introduce learners to key principles of KT and patient engagement as they relate to kidney health research and will provide examples from relevant Can-SOLVE CKD projects to highlight KT concepts and solidify their learning. It will also serve as an onboarding tool for any new patient partners and research team members joining the Can-SOLVE CKD Network.

### **Sustaining KT Capacity and Growth**

As knowledge is generated from the network's 18 research projects, promoting dissemination of findings and their adoption in kidney care will become an increasingly important role of the KU/KT Committee. Given the geographic and cultural diversity of Canada, implementation strategies must be tailored to the unique needs and challenges of each community. In addition, the wide range of project types across Can-SOLVE CKD's 3 research themes (ie, *earlier diagnosis*, *better treatments*, and *innovative care*) means that a one-size-fits-all KT approach will be insufficient to meet the KT needs of all research projects. Ongoing consultation by the KU/KT Committee with research teams will help guide KT planning, link researchers with contextually relevant KT tools and stakeholders, and optimize the implementation of health innovations across the country.

Evaluation of KT intervention outcomes, including patient- and system-level impact, will be crucial for understanding the effectiveness of interventions and promoting their sustainability. Many Can-SOLVE CKD projects will engage anticipated end-users of their interventions (eg, patients, providers, policymakers) in the evaluation process through an IKT approach. In addition to rigorously evaluating *if* an intervention works, project teams will use multiple methods to capture *when*, *how*, or *where* an intervention is successful. Understanding the local or regional contextual factors that influence implementation will support intervention tailoring and adoption more broadly across Canadian renal programs. Intervention sustainability, which relies on adaptability of the innovation and the system,<sup>27</sup> is an important aspect of implementation that should be anticipated from the outset of a given project. This is in line with the concept of a learning health system, where areas for improvement are continuously identified, evaluated, and addressed; this creates a health care system that is continuously evolving and improving.<sup>28,29</sup> However, despite its importance for continued use of a health innovation over time, few studies have reported on sustainability of KT interventions for chronic disease management.<sup>27</sup> Evaluation of both KT processes (eg, end-user feedback, uptake of KT products) and impact (eg, health outcomes) will provide insight into the

**Table 2.** Testimonial From Patient Partner on the KU/KT Committee.

Name: Mary Beaucage

Role: Cochair of the Can-SOLVE CKD Patient Governance Circle and patient partner on the Indigenous Patient Engagement Research Council (IPERC) and KU/KT Committee

My experience on the KU/KT committee has been enlightening. I quickly realized that not everyone understands research terminology and that KT helps get the message out to stakeholders in the right way. With patient engagement in all the Can-SOLVE CKD Network's research activities, patient partners are also embedded in the KT process. The KT Community of Practice is a great example of how patient partners can directly participate in translating research knowledge to different audiences.

As we near the end of our grant cycle, I look forward to disseminating findings from the research projects, applying interventions more broadly, and comparing KT strategies with the projects' original KT plans. Completing the circle is an important concept to our patient partners.

Note. Can-SOLVE CKD = Canadians Seeking Solutions and Innovations to Overcome Chronic Kidney Disease; KT = knowledge translation; KU = knowledge user.

network's receptivity to KT, effectiveness of KT interventions, and sustainability of the network's KT infrastructure.

## Critical Reflections

### Strengths of the KU/KT Committee

The main strength of the KU/KT Committee is the diverse expertise and commitment to KT of all of its members. The Canadian kidney health community comprised a close-knit group of researchers and stakeholders with the shared goal of advancing the science and practice of evidence-informed kidney care. As such, the KU/KT Committee and other Can-SOLVE CKD core infrastructure are able to leverage their connections with provincial renal agencies and national organizations described above to effect impactful change in the kidney care landscape. The committee is committed to increasing KT literacy throughout the network and building KT capacity within project teams to identify and apply the KT strategies most appropriate to their needs. Moreover, the committee is responsive to the needs of the communities it serves and is continually evolving in structure and function as the network's research initiatives progress.

The inclusion of patient partners' perspectives in KT planning has offered important insights into avenues for sharing and implementing knowledge that individuals without lived experience of kidney disease might otherwise overlook (Table 2). Canadians Seeking Solutions and Innovations to Overcome Chronic Kidney Disease patient partners are well positioned to participate in KT through their direct links to the broader patient community and appreciation of the traditions of Indigenous communities. For example, in 1 network project (*Living Donor Kidney Transplantation*), patient partner "ambassadors" are providing education and mentorship to patients with kidney failure to help overcome barriers to living kidney donor transplantation; in another (*Kidney Check*), patient partners are facilitating the uptake of a CKD screening initiative in Indigenous communities across Canada.

### Challenges and Limitations of the KU/KT Committee

Given the broad scope of the Can-SOLVE CKD Network's objectives and membership, identifying appropriate resources

to suit the network's KT needs was an early challenge for the KU/KT Committee. As such, the committee referred to existing resources to develop its own KT templates for project teams to complete alongside their protocol development at the outset of their work. In addition, as KT is incorporated into many aspects of the network, the committee has had to ensure its role is clearly defined while maintaining synergies in KT activities across other network committees and projects. The committee has supported KT in a primarily consultative capacity and refers to its strategic framework to ensure KT issues are addressed consistently across network projects. Another important challenge identified by the committee in its early phases was the perceived lack of skills in KT among some network researchers and patient partners, particularly related to conceptual frameworks and implementation science best practices. The committee has strived to address this critical gap in KT competency through initiatives such as the KT Community of Practice. Finally, anticipating future KT needs has proven difficult for some projects using multiphase IKT approaches due to their iterative nature and the fact that the most appropriate implementation strategies are often not known initially. The committee works with the project teams throughout all phases to ensure their KT plans reflect their evolving needs.

These challenges are inherently linked to the unique limitations of the KU/KT Committee's approach to KT within a national, patient-oriented kidney research network. The fact that KT resources were developed or adapted for use by the network means that they have not been formally tested in this context. Furthermore, because the KT resources were intended for broad use across network projects, they may not adequately address the particular needs of individual project teams without additional tailoring. Ongoing assessment and adaptation of the committee's KT approach, including its KT capacity-building initiatives, highlights the network's commitment to moving research knowledge into practice and to bolstering partnerships between researchers, patients, and those involved in implementing health innovations. As projects move toward implementation and sustainability planning, evaluation of process measures and impact of the network's KT activities will be critical for understanding their utility and informing future applications.



## Conclusion

Within the Can-SOLVE CKD Network, application of KT is critical for ensuring that the generated research is relevant to knowledge users and for facilitating the uptake of knowledge in practice and policy. The network's KU/KT Committee supports KT planning, practices, adaptation, and capacity building through a variety of activities, all of which maintain a focus on the patient as a key stakeholder and engaged partner. The strategies and lessons learned here could prove useful as a blueprint for other large-scale research organizations seeking to build an effective and sustainable IKT platform, with the ultimate goal of improving health outcomes for patients.

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Not applicable.

## Consent for Publication

All authors read and approved the final version of this article.

## Availability of Data and Materials

No primary data are presented in this publication.

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## Supplemental Material

Supplemental material for this article is available online.

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