



**Evaluation of the
National Collaborating Centre for
Infectious Diseases (NCCID)**

Year Two Report on Data Collection Activities

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Prepared for:

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Appendix A – Inventory of NCCID KT/KB approaches and mechanisms

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1.0 Introduction

The National Collaborating Centre for Infectious Diseases (NCCID) has engaged PRA Inc. to conduct an evaluation of its activities over three years, in accordance with the requirements of its funder, the Public Health Agency of Canada (PHAC). The evaluation is examining issues and questions related to the relevance and performance (effectiveness, efficiency, and economy) of the NCCID.

This report summarizes the findings for Year Two of the evaluation (2018-19). The primary aim of this year's evaluation was to gather information on the knowledge translation (KT) and/or knowledge brokering (KB) approaches and mechanisms used by other organizations with similar target audiences to NCCID, and, which, like NCCID, play a role in bridging the knowledge-practice/evidence-to-action gap in public health.

The purpose of this report is to highlight specific approaches that have emerged as potential best practices. This report, therefore, does not provide an overall summary of all information gathered through this year's data collection activities; rather, it provides a more focussed assessment of alternative delivery models that NCCID may wish to consider in its future practice.

In the Year Three summative evaluation (to be completed in 2019-2020), the information gathered will serve as a basis for a comparative analysis of NCCID's KT/KB approaches and mechanisms, and will inform the broader evaluation questions.

1.1 Methodology

Data collection for Year Two was carried out in three stages, as described below.

Stage 1: Inventory of NCCID KT/KB approaches, mechanisms, and target audiences

First, PRA put together a comprehensive inventory of NCCID's KT/KB approaches and mechanisms, as well as the target audiences that NCCID's KT/KB activities were intended to address. This inventory served the following purposes:

- ▶ By identifying the target audiences that each of NCCID's KT/KB activities was intended to address, the inventory helped to guide the selection of organizations to include in the organizational scan (Stage 2).
- ▶ By listing all of NCCID's activities in a concise document and linking these activities to KB categories/activity areas defined in literature, the inventory supported the comparison of NCCID's activities with those of other organizations and facilitated the identification of novel approaches being employed by other organizations in different KB domains (thus, supporting Stages 2 and 3).

See Appendix A for the completed inventory.

Stage 2: Literature review and environmental scan of other KB/KT organizations

A cursory review of literature around the knowledge translation needs of public health audiences was also conducted. The purpose was to determine if there was new research available since NCCID's past reviews of public health and infectious diseases KT (the most recent review completed in 2016) (Clow, 2014; Haworth-Brockman, 2016). The review conducted for this evaluation included a search for academic publications addressing/exploring topics and questions, such as:

- ▶ What sources do public health stakeholders use to access information and evidence (i.e., where do they go)?
- ▶ What knowledge translation strategies are effective in influencing public health decision-making?
- ▶ How do various public health stakeholders use social media and what are their social media preferences for professional purposes?

This literature search confirmed that formal literature in this area is limited. Therefore, this line of evidence was not pursued extensively and the results of the literature search are not the focus of this report.

In consultation with NCCID, PRA then conducted an environmental scan, examining the practices and approaches of organizations or initiatives involved in translating and/or brokering knowledge in a public health context, or with expertise in KT for audiences similar to those that NCCID targets. The scan included the following 17 organizations/initiatives:

- ▶ Innovation York's Knowledge Mobilization Unit (York University)
- ▶ Research Impact Canada (RIC)
- ▶ St. Michael's Hospital Knowledge Translation Program
- ▶ Sick Kids Learning Institute Knowledge Translation Program
- ▶ Evidence Exchange Network for Mental Health and Addictions (EENet) (led by the Centre for Addiction and Mental Health – CAMH)
- ▶ Institute of Population and Public Health (IPPH) (led by the Canadian Institutes of Health Research – CIHR)
- ▶ Scottish Collaboration for Public Health Research & Policy (SCPHRP) (located within the University of Edinburgh)
- ▶ Institute of Health Policy, Management and Evaluation (IHPME) (University of Toronto)
- ▶ Institute for Knowledge Mobilization
- ▶ Ontario Centre of Excellence for Child and Youth Mental Health (CYMH)
- ▶ Institute for Safe Medication Practices
- ▶ Canadian Centre on Substance Abuse and Addictions (CCSA)
- ▶ GET-FACTS Knowledge Translation Project (led by the University of Waterloo, funded by CIHR)
- ▶ Public Health Physicians of Canada

- ▶ Knowledge Translation (KT) Canada
- ▶ Fuse, The Centre for Translational Research in Public Health
- ▶ The Center for Infectious Diseases Research and Policy (CIDRAP) (University of Minnesota)

The completed environmental scan briefly described the organization or KT/KB initiative; summarized each organization/initiative's KT/KB activities, tasks, and outputs; and identified the target audiences addressed. This information was then used to guide the selection of organizations whose practices and approaches would be reviewed in greater depth (Stage 3).

Stage 3: Targeted review of specific organizations and KT/KB practices of interest

Based on the completed environmental scan, NCCID selected five organizations as possibilities for a more in-depth review. In-depth reviews involved key informant interviews with one representative of each organization, as well as a review of publicly-available information. An interview guide was developed, which was tailored for each organization (see Appendix B). PRA contacted representatives of each organization, inviting them to participate in an interview.

Of the five organizations selected, the following three responded positively to the invitation to participate in the in-depth review:

- ▶ Fuse, The Centre for Translational Research in Public Health¹
- ▶ The Ontario Centre of Excellence for Child and Youth Mental Health²
- ▶ The Center for Infectious Disease Research and Policy (CIDRAP)³

Interviews were conducted with a representative from each organization who had substantial knowledge of their organization's KT/KB methods and approaches. Results of this data gathering are summarized in the findings below.

1.2 Brief introduction to the organizations

Fuse

Fuse is one of five UK Public Health Research Centres of Excellence. It is a virtual centre that operates across five universities in northeast England (Durham, Newcastle, Northumbria, Sunderland, and Teesside), which collaborate to deliver on Fuse's mission to "transform health and well-being and reduce health inequalities through the conduct of world-class public health research and its translation into value-for-money policy and practice." Broadly, Fuse aims to deliver world-class public health research, build sustainable capacity for translational research,

¹ <http://www.fuse.ac.uk/>

² <http://www.excellenceforchildandyouth.ca/>

³ <http://www.cidrap.umn.edu/>

and build effective and lasting partnerships among public health stakeholders (Fuse - Newcastle University, n.d.).

Fuse’s KT approaches and mechanisms are similar to those used by NCCID. Fuse fulfills its mission and goals by:

- ▶ conducting research through specific research programs;
- ▶ building capacity for translational research in public health by hosting educational and training events such as workshops, seminars, and masterclasses;
- ▶ facilitating collaboration among public health stakeholders by hosting events such as national and international conferences and meetings, as well as informal international “meet and greet” events with policy and practice partners (which take place four times per year); and
- ▶ fostering direct linkages among academic researchers and policy and practice partners (namely, through the AskFuse service described below).

Fuse’s target audiences are also similar to NCCID’s target audiences, covering a broad array of stakeholders working in public health policy and practice, as well as academics/researchers working in the public health field. Fuse’s policy and practice partners include the following:

- ▶ Local health authorities and public health departments
- ▶ Public health teams
- ▶ National and regional health bodies, including Public Health England and regional centres that do workforce development, as well as research (Fuse has a formal relationship with these)
- ▶ Community organizations that work to develop community provisions around public health and prevention
- ▶ The wider health system, including primary care and general practitioners
- ▶ Health and well-being boards that work toward strategic integration across primary, secondary, and tertiary care
- ▶ Funding bodies to which Fuse applies for project or program funding

Fuse has worked directly and formed relationships with representatives of each of these groups. Each can be considered a primary audience. Additionally, broader “impact targets” for Fuse’s work include members of the media, community members, and the general public.

Fuse’s work is supported through a national infrastructure grant.

Ontario Centre of Excellence (OCE) for Child and Youth Mental Health

The OCE for Child and Youth Mental Health is an organization dedicated to pursuing continuous improvement in the quality of child and youth mental health services in Ontario. It does this by promoting evidence-informed service planning and delivery, and supporting research that is focussed on closing knowledge and service gaps (Ontario Centre of Excellence for Child and Youth Mental Health, 2019).

The OCE's KT/KB role is somewhat narrower in focus than NCCID's, as the organization gears most of its KT/KB efforts towards community-based child and youth mental health service providers (the OCE's primary audience), as well as young people and families (its secondary audience).

With these target audiences in mind, the OCE works to:

- ▶ build capacity within communities and agencies working in child and youth mental health to improve their services by offering knowledge brokering services free of charge and, more recently, through the development of provincial standards;
- ▶ connect child and youth mental health agencies with up-to-date information and evidence (namely, through the Evidence In-Sight service described below); and
- ▶ develop KT tools and resources, including policy papers and a KT toolkit, which assists organizations in developing and implementing knowledge mobilization plans.

The Centre is funded by the Ontario Ministry of Children and Youth Services as part of the Moving on Mental Health Initiative, which aims to transform child and youth mental health services at the community level (Ontario Centre of Excellence for Child and Youth Mental Health, 2019).

Center for Infectious Disease Research and Policy (CIDRAP)

Like NCCID, CIDRAP is an organization dedicated to advancing the understanding and use of infectious disease research and evidence. CIDRAP's mission is "to prevent illness and death from targeted infectious disease threats through research and the translation of scientific information into real-world, practical applications, policies, and solutions" (CIDRAP, 2019).

CIDRAP carries out its mission by leading or participating in a number of ongoing programs related to current and emerging infectious disease topics and issues. Programs led by CIDRAP include the following:

- ▶ the Antimicrobial Stewardship Program (ASP) – a knowledge translation initiative that provides current, comprehensive information and works to build an online community to address antimicrobial resistance (AMR) issues;⁴
- ▶ the CIDRAP Comprehensive Influenza Vaccine Initiative (CCIVI) – a two-phased project that works to “address the significant policy, investment, leadership, and organizational barriers that must be overcome to develop the next generation of influenza vaccines that can protect those most at risk of serious illness and death and reduce the global impact of the next influenza pandemic;” and
- ▶ the Ebola Vaccine Team B initiative, which CIDRAP launched jointly with Wellcome Trust in 2014 to assist international efforts to develop a safe and effective Ebola vaccine.

CIDRAP also serves as an advocate for public health agencies in the federal BioWatch program and participates in the Centers of Excellence for Influenza Research and Surveillance (CEIRS) Network Pandemic Research Response Planning project,⁵ which is led by the National Institute of Allergy and Infectious Diseases.

CIDRAP’s primary target audiences include those with whom CIDRAP works directly and those with decision-making authorities who may be using CIDRAP resources to inform decisions.

More specifically, these include:

- ▶ policy makers, business leaders, and medical and public health communities with whom CIDRAP consults;
- ▶ researchers, experts, and academic institutions with whom CIDRAP works to conduct and facilitate targeted infectious diseases research; and
- ▶ philanthropic groups and foundations with which CIDRAP works to develop and support new initiatives.

In addition to these direct relationships, CIDRAP also has a broad mandate to communicate information and make information available to a broad array of public health stakeholders. CIDRAP’s KT efforts target healthcare providers, public health professionals, business leaders, students, opinion leaders, policy makers, the media, and others interested in infectious diseases information—both nationally and internationally.

CIDRAP’s KT/KB approach includes the following activities:

- ▶ facilitating collaboration among public health stakeholders by hosting workshops, focus groups, and meetings in relation to its work in specific programs;

⁴ The work of the ASP is guided by an advisory committee whose members represent various universities and medical schools, as well as the Centers for Disease Control and Prevention (Division of Healthcare Quality Promotion).

⁵ The CEIRS Network Pandemic Research Response Planning project is a cross-center collaborative initiative designed to inform the U.S. Department of Health and Human Services’ public health response to an influenza pandemic or pre-pandemic situation.

- ▶ conducting targeted research on specific infectious disease topics and issues at the request of particular partners/stakeholders;
- ▶ reviewing and synthesizing available information on infectious disease topics and generating knowledge products and web-based content in relation to these topics; and
- ▶ offering educational and training opportunities on infectious disease topics to university staff, students, and public health professionals.

While CIDRAP’s KT/KB approach is similar to NCCID’s approach in many ways, CIDRAP is unique in terms of the substantial efforts that the organization devotes to news publishing. CIDRAP aims to function as an essential resource to public health professionals and other stakeholders and does this, in part, by “serving as a clearinghouse for infectious disease content” from around the world. The work of CIDRAP’s news publishing division and news-sharing efforts is described in greater detail in the findings sections of this report.

Like NCCID, CIDRAP is situated within a university environment. As part of the University of Minnesota’s Office of the Vice President for Research, CIDRAP receives a small amount of direct funding from the university to support its operations; however, the center relies heavily on financial support from individuals, corporations, and foundations to deliver on its mission (CIDRAP, 2019).

2.0 Findings

Findings are organized according to the main lines of inquiry pursued in the interviews with organization representatives. Therefore, this section:

1. describes the novel KT/KB approaches used by the three organizations that were reviewed in depth;
2. discusses each organization’s use of social media and any lessons learned that have emerged from their experiences in using social media to reach public health stakeholders;
3. describes methods used by each organization to evaluate/assess the reach/success of their knowledge translation activities and social media strategies; and
4. identifies other organizations named by key informants as major influences/inspirations to their organization.

2.1 Novel KT and/or KB approaches

The organizations selected for in-depth reviews were chosen because of their implementation of unique or novel approaches to KT/KB for public health stakeholders—approaches that may be of interest as the broader NCCID evaluation considers alternative organizational or delivery models for NCCID’s current and future activities. These approaches include the customized knowledge brokering/consultation services offered by Fuse (through the AskFuse initiative) and the OCE (through Evidence In-Sight), which actively link researchers with end users, as well as the news

publishing services offered by CIDRAP, which aims to offer “one stop shopping” for those seeking up-to-date information related to infectious diseases. These approaches are described below.

Customized knowledge brokering/consultation services

AskFuse

Launched in June 2013, AskFuse is a responsive research and evaluation service that "helps to find research solutions to address pressing local needs." Through AskFuse, academic researchers associated with Fuse respond to requests made by policy, practice, and third sector partners, helping them to access existing knowledge to address local issues or develop new research tailored to their needs (AskFuse, n.d.). The AskFuse service has been described as functioning like a “portal” or “dating service” for policy and practice researchers, where AskFuse, in essence, sets up “dates” between policy and practice partners working in public health, and academics working in the research centres across the five universities involved in Fuse.

The AskFuse service works as follows:

- ▶ Policy and practice partners with public health research questions may approach Fuse in a number of ways; they may contact the AskFuse Research Manager by phone or in person, or they may fill out a “quick inquiry” form on Fuse’s website, which triggers an email to the AskFuse Research Manager.
- ▶ Fuse has a standard in place where the AskFuse Research Manager aims to respond to each inquiry within 24 hours. The initial response confirms receipt of the inquiry and also confirms that the request is related to translational research in public health (and, therefore, within the scope of what Fuse researchers can do).
- ▶ Once it has been confirmed that the request relates to Fuse’s work, the AskFuse Research Manager engages in conversation(s) with those making the request to define what they are looking for and how they want to use the information they receive, and to discuss how Fuse can help. Often, the original inquiry changes and is refined over the course of these conversations.
- ▶ After the scoping conversations have taken place, AskFuse prepares a research brief, which outlines (in three to four pages) the needs of the research partner who made the inquiry. The research brief outlines the research question, desired methodology, availability of data to support the work, and desired outputs and outcomes.
- ▶ The research brief functions as a “conversation starter” with academics; the AskFuse Research Manager circulates the research brief to academics/researchers within the five universities that are part of Fuse, focussing on those with relevant expertise related to the research question. Those with interest in the research question, as well as the capacity to

carry out the research, then engage in conversations with the AskFuse Research Manager to discuss how they can become involved in the research.

- ▶ Because Fuse is a collaborative centre, where possible, AskFuse aims to engage at least two universities (and two areas of expertise) in each inquiry. If multiple academic/research teams express interest in the research, AskFuse works with the research teams to develop a proposal outlining how they wish to be involved. Proposals are given to the research partner who made the inquiry. The research partner decides which research team(s) they would like to carry out the research and details are worked out through a formal agreement.
- ▶ Once clear plans for the research and research funding are in place,⁶ the project is turned over to the academics, who carry out the research in collaboration with the research partner. However, the AskFuse Research Manager checks in occasionally as the research is carried out to see if additional assistance is needed.

AskFuse is primarily a regional initiative (i.e., most requests are from public health stakeholders working at the regional level). Part of the work of the AskFuse Research Manager involves visiting different organizations in the region to promote the work that Fuse is doing (including AskFuse) and to gather information on what Fuse can be doing to support those working in public health policy and practice. There is no formal process in place to direct these organizational visits; rather, the AskFuse Research Manager makes an effort to seek and act on these opportunities when they arise informally. In general, raising awareness about all of Fuse's work (including AskFuse) is an important aspect of Fuse's work model. (For more information on Fuse's work model, see the text box on page 9.)

Current status of initiative

Currently, two Fuse staff members handle all AskFuse requests: the AskFuse Research Manager and an additional staff member. To date, the AskFuse initiative has served over 150 partners (including local authorities, NHS, general practices, voluntary and community organizations), and supported over 300 inquiries ranging in size and scope (from simple requests to be put in touch with particular academics, to initiatives to develop and evaluation a new intervention over several years).

The Fuse representative interviewed identified that, in the earlier days of the AskFuse service, it was sometimes difficult to obtain strong commitment or buy-in from academics. Given the strong pressure placed on academic faculty to focus their research efforts on things like peer-reviewed publications and obtaining research grants or fellowships, not all academics have

⁶ An estimated 50% of the requests made to AskFuse are for things that Fuse can do at no cost to the inquirer (i.e., the work can be done on the back of existing research projects already being carried out, or the research evidence that is being requested already exists and can simply be made available to the inquirer). The other half of AskFuse requests have cost implications; however, as needed, AskFuse also offers inquirers assistance in applying for research funding from external organizations.

viewed collaborative research efforts with policy and practice partners as beneficial. Over the years, Fuse has had ongoing conversations with universities and academics to understand the barriers they face and help them understand the value of the collaborative model promoted through AskFuse. The Fuse key informant summed up the situation as follows:

In academia in particular, there's strong push for publications and big research grants, etc. This kind of work is not always seen as beneficial toward that. It's not really incentivized by the university. We had some issues where we had a collaborative research project on the back of an AskFuse inquiry which involved some junior researchers and we thought they were signed up and ready to go, but then some senior investigators stepped in and said, "No, this is not a good use of their time. They should be working on a fellowship application or a publication. This is not good for their career." We had to have a conversation within the wider research organization/university to say, "This is really essential to the work that you're doing at the university. If you want to really have impact of your research... this is really important work that you need to do."

The Fuse key informant noted that there is evidence of a cultural shift within the universities with which Fuse works. Researchers, as well as the broader institutions, are beginning to recognize the importance of considering how information can and will be used early on in the research process, and the value of moving away from a linear model of translational research.

Fuse has developed a four-step model of work.

- ▶ **In Step 1 (raising awareness)**, the organization makes efforts to ensure that public health stakeholders are aware of Fuse's products and services, and understand how Fuse can serve them. The work of the Fuse Communications Officer, Fuse's social media strategy, and tools and products for communicating Fuse's work (such as Fuse briefs) factor largely into this.
- ▶ **In Step 2 (knowledge sharing)**, Fuse brings together various public health stakeholders, including academics, through events (conferences, meetings, seminars, etc.) and services (namely, AskFuse) to explore the evidence base and its meaning for different stakeholders.
- ▶ **In Step 3 (making evidence fit for purpose)**, Fuse works to understand the context in which public health stakeholders operate; how decision making processes work; the contextual pressures in health policy, practice, and academia; and at what point research evidence can effectively be inserted into decision-making. Fuse works with public health practitioners and policy makers to localize and tailor evidence, and to ensure that research and knowledge products fit their purposes. In addition to developing more conventional knowledge products (such as research briefs), Fuse has worked with media professionals to develop animations, stand-up comedy sessions, and theatrical plays. Fuse is also experimenting with embedding Fuse researchers into local public health authorities to build relationships and reframe research with a better understanding of the decision-making context and the way that research can be used.
- ▶ **In Step 4 (supporting uptake and implementation of evidence)**, Fuse develops long-term relationships with policy and practice partners to co-create evidence, build capacity, and change practice and policy.

These four steps do not occur linearly, but are "fluid and dynamic" and linked to one another

Evidence In-Sight

The OCE for Child and Youth Mental Health’s Evidence In-Sight is a free service that connects Ontario’s child and youth mental health agencies with up-to-date knowledge to support them in planning and delivering services in their communities. The service was first introduced in 2010-2011 as an approach for assisting organizations in their efforts to use an evidence-informed approach in making improvements to service delivery.

Evidence In-Sight works similarly to AskFuse in that practitioners approach the OCE with particular questions and an OCE representative works with requestors to provide them with a knowledge product that meets their needs; however, unlike AskFuse, Evidence In-Sight is primarily focussed on summarizing and repackaging existing evidence and does not endeavour to connect end users with researchers at an early stage in the research process.

Current status of initiative

The Evidence In-Sight approach has been successful at improving the overall comfort level among organizations in evaluating their services, as well as the capacity of organizations to implement change and engage in evidence-informed service delivery. However, partly as a result of this success,⁷ the OCE is moving away from offering on-demand services for organizations; going forward, the organization plans to phase out both the Evidence In-Sight and the OCE’s customized knowledge brokering services.⁸ Instead, the OCE is shifting its focus toward systems-level efforts to improve the quality of the child and youth mental health system, including the development of provincial quality standards to address major issues in Ontario’s child and youth mental health system.

News publishing

One of CIDRAP’s guiding principles is to “leverage its expertise at web-based publishing to identify and reach targeted audiences for maximum health benefit” (CIDRAP, 2019). The work of CIDRAP’s News Team aligns well with this guiding principle. As mentioned above, in addition to conducting its own research on infectious disease topics and issues, CIDRAP aims to provide a single location where visitors to the site can access expertise and information on infectious diseases—including information produced by CIDRAP, as well as by other organizations and infectious disease experts from around the world—thereby offering a “global picture” and

⁷ The OCE feels that they have reached a plateau in terms of topics that can be investigated through Evidence In-Sight. The organization is moving away from Evidence In-Sight’s on-demand research service, and will, going forward, be limiting Evidence In-Sight efforts to updating information contained in the over 60 reports (resulting from requests to the service) that are published on the OCE’s website.

⁸ The OCE has, in the past, offered customized services in which OCE knowledge brokers have worked directly with community agencies to help them evaluate and improve their service delivery, based on evidence around best practices.

“one-stop shopping” for those seeking information related to infectious diseases. CIDRAP’s news publishing operations began in 2001.

CIDRAP’s News Team carries out a number of tasks, including the following:

- ▶ operating a daily news service (accessible on the website and available by subscription), which provides daily updates on emerging infectious diseases and other “hot topics” related to infectious diseases (e.g., pandemic influenza, bioterrorism, food safety, etc.);
- ▶ maintaining up-to-date overviews on various infectious disease topics;
- ▶ producing “roundup” publications, which highlight best new information that is being published on a particular topic (examples include a food safety roundup and a biosafety roundup); and
- ▶ populating a “featured literature” section on CIDRAP’s homepage, which highlights recently-published literature from a variety of sources.

CIDRAP also offers an online journal club, as well as a weekly news subscription service as part of its ASP.

Each news article or topic overview that the News Team publishes is accompanied by a list of other articles and selected literature relevant to the topic, including those produced by government health departments and subject-matter experts from around the world. CIDRAP’s editorial team checks daily to ensure that all links on its website are live and that the information provided continues to be relevant and current.

Current status of initiative

The News Team has a core staff of seven who are involved in all of CIDRAP’s news publishing operations. The daily news service currently has over 7,300 subscribers and 5,800 Twitter followers. The ASP weekly newsletter has more than 6,000 subscribers and 8,000 Twitter followers.⁹

2.2 Use of social media

What platforms are used and how they are used

All three organizations use Twitter as their main social media platform. Although all have Facebook accounts, for the most part, these are linked to the organizations’ Twitter profiles; little effort is put into updating Facebook separately.

Whereas the OCE and CIDRAP use social media primarily to push out information, the practices of Fuse differ in that Fuse uses social media for two-way communication to engage in dialogue with its audiences. Fuse makes an effort to use Twitter in a way that provokes a response (for

⁹ By comparison, NCCID has 1,768 Twitter followers. NCCID primarily serves Canada’s population (37.06 million) while CIDRAP aims to reach followers in the United States (327.2 million), as well as international audiences.

example, by asking questions in tweets). While not all tweets generate conversation, when they do, the Fuse communications team makes an effort to respond and keep the conversation going.

Perhaps Fuse’s most innovative practice in this area is the Fuse Open Science Blog. The Open Science Blog works as follows:

- ▶ Anyone involved in public health is invited to submit blog posts of 500-700 words, writing about their experiences in doing public health research. Blogs are intended to reflect personal views and experiences, as opposed to reading like a research report or news story. Those submitting blog posts are asked to introduce themselves and their blog topic in a 20 second video.
- ▶ Blog submissions are overseen and edited by the Fuse Communications Officer and a team of Fuse members. Posts are published once per week.
- ▶ The blog is used for two-way information exchange with stakeholders. Policy and practice partners, in particular, are encouraged to leave comments in response to blog posts. For example, if Fuse organizes an event with policy and practice partners in relation to Fuse research, organizers may produce a blog about that event and ask participants to reflect on their experiences or suggest changes going forward.

Fuse representatives have noticed that the blog has sparked both online and in-person discussions among interested stakeholders.

Representatives of the OCE and CIDRAP identified particular limitations to their use of social media for two-way communications with stakeholders. For the OCE, the main barrier to their use of social media is that the OCE’s primary target audience (practitioners from community agencies that provide services to children and families) are “not hugely social media savvy;” however, as younger practitioners take over from retirees, the OCE anticipates that social media will become a larger focus for the organization in the future. For CIDRAP, considering the organization’s broad, international audience and its high volume of social media communications, social media conversations would be difficult to manage. In addition, CIDRAP typically does not invite stakeholders to comment on its articles or other knowledge products that it releases online, primarily to prevent the spread of misinformation about infectious disease topics (such as vaccination and treatment methods).

Time and resource requirements for maintaining the social media presence

Key informants from all three organizations acknowledged that maintaining their organization’s social media presence requires substantial time and resources.

- ▶ For Fuse, managing the blog, Twitter, and other social media efforts takes up approximately half the time of Fuse’s full-time Communications Officer. The Communications Officer is supported by a wider communications group, which includes

representatives and interested staff from each of the five universities united by Fuse. The communications team meets monthly.

- ▶ For the OCE, a communications team, which includes three communications specialists and a communications manager, is responsible for the OCE’s social media communications. A communications specialist is “attached” (i.e., assigned) to each report or knowledge product that the OCE produces. The communications specialist is responsible for deciding how best to mobilize the information. Tweets are updated daily.
- ▶ For CIDRAP, an editorial team handles all aspects of the website, which includes webpage design and management. The news division and the ASP each have their own Twitter accounts. Multiple team members are involved in management of both the website and social media communications.

Table 1 below offers a comparative view of the resources dedicated to social media functions within the three organizations and NCCID.

Table 1: Organizations’ social media efforts and resources dedicated to social media functions				
	Organization			
	NCCID	Fuse	OCE for CYMH	CIDRAP
Resources and audiences				
Size of organization (total number of staff)	Total staff of 9, including 5 full-time and 4 part-time staff, which amounts to 7.2 full-time equivalents (FTE)	Total staff of 27, including senior investigators, academics, and support staff. The Fuse Knowledge Translation Programme includes 10 “Programme Investigators,” including the Fuse Communications Officer.	Total staff of 34, including: <ul style="list-style-type: none"> ● 3 Executives, ● 11 staff providing support services for organizations ● 8 staff focussed on program and product development 12 administrative staff	Total staff of 16, including: <ul style="list-style-type: none"> ● 5 Executives 11 staff members – including 7 involved in the News Team, and 8 involved in the ASP (with some overlap)
Staff involved in social media communications	NCCID has one half-time staff member in a communications-specific role (Communications Manager)	Fuse has one full-time Communications Officer who is supported by a communications team (exact number of members unknown).	OCE administrative staff includes 4 communications specialists, plus a website administrator.	CIDRAP’s editorial team includes 3 staff members: an Editorial Director, an Editorial Consultant, and a News Editor. Other News Team and ASP program staff may assist with social media communications.
Target audiences	Primary audiences:	Primary audiences:	Primary audience:	Primary audiences: <ul style="list-style-type: none"> ● Policy makers

	<ul style="list-style-type: none"> ● Public health practitioners ● Researchers ● Students ● Public health policy advisors and policy makers ● Governmental and non-governmental organizations working in public health ● Other National Collaborating Centres (NCCs) <p>Secondary audiences:</p> <ul style="list-style-type: none"> ● Community members ● General public 	<ul style="list-style-type: none"> ● Local health authorities and departments ● Public health teams ● National and regional health bodies ● Community organizations ● Primary care and general practitioners ● Health and well-being boards ● Funding bodies <p>Secondary audiences:</p> <ul style="list-style-type: none"> ● Media ● Community members ● General public 	<ul style="list-style-type: none"> ● Community-based child and youth mental health service providers <p>Secondary audience:</p> <ul style="list-style-type: none"> ● Young people and families who use child and youth mental health services 	<ul style="list-style-type: none"> ● Business leaders ● Medical and public health communities ● Academic institutions, researchers, students ● Philanthropic groups and foundations ● Healthcare providers and practitioners <p>Secondary audience:</p> <ul style="list-style-type: none"> ● General public
Social media efforts and achievements				
Social media platforms used	Twitter Facebook YouTube	Twitter Open Science Blog Facebook	Twitter Facebook	Twitter Facebook YouTube
Frequency of social media communications	Frequent (not daily) Twitter posts.	Daily Twitter updates. Facebook linked to Twitter accounts.	Frequent (not daily) Twitter posts. Facebook linked to Twitter account.	Daily Twitter and Facebook updates for both News Team and the ASP.
Twitter following	Joined: June 2011 Tweets: 2,978 Followers: 1,768 Likes: 871	Joined: June 2011 Tweets: 9,533 Followers: 4,134 Likes: 1,947	Joined: February 2011 Tweets: 3,437 Followers: 4,134 Likes: 282	<u>News Team</u> Joined: April 2009 Tweets: 17.7K Followers: 8,811 Likes: 24 <u>ASP</u> Joined: July 2016 Tweets: 6,379 Followers: 2,823 Likes: 2,879

Lessons learned

Key informants identified a few lessons that have emerged from their organizations’ use of social media. Fuse recently hosted a social media training workshop for its staff members, led by social media experts Dr. Graham Mackenzie and Andy Tattersal. These experts highlighted the importance of reaching a “critical mass” of retweets and estimated that it takes a minimum of

1,500 retweets for any Twitter message to have a real impact on decision-making. The workshop highlighted strategies for increasing the reach and successfulness of Twitter. Key strategies include:

- ▶ identifying the big social media influencers within target audiences (i.e., those with decision-making authority who themselves have a lot of social media followers) and ensuring that Twitter messages are reaching them so that they might retweet the messages, spreading them to a larger audience; and
- ▶ creating a storyline and using tweets to unfold the story over time (which helps to personalize the message and sustain ongoing interest).

While the Fuse key informant did not provide an example of how Twitter can be used to unfold public health “stories” over time, workshop materials,¹⁰ as well as academic and grey literature on social media use in public health, highlight the benefits of certain “storytelling” techniques, such as adding original images or infographics to tweets (focussing on images that add value to what is being said and that followers would not find elsewhere); expressing personal reactions to, or perceptions of, content being shared through tweets; and live-tweeting public health conferences and other events to offer those not in attendance the opportunity to experience the events in real time (Freeman, Potente, Rock, & McIver, 2015; Goff, Kullar, & Newland, 2015; Mackenzie, 2018; Mitchell, Russo, Otter, Kiernan, & Aveling, 2017; Ventola, 2014; Würz, Rirdance, & Stryk, 2016).

The OCE key informant highlighted the importance of knowing how target audiences use social media, so that social media efforts are aligned with target audience needs and preferences. Recognizing that the OCE’s primary audience currently does not use social media to a great extent, the organization’s current social media efforts are somewhat limited. However, anticipating that social media will become increasingly important to community-based service providers (as younger practitioners take over from retirees), the OCE is exploring different kinds of KT vehicles which lend themselves well to social media communication and can be mobilized more easily on social media (such as infographics, podcasts, video learning series containing two to three minute videos, etc.).

The CIDRAP key informant highlighted that, for those working in the field of infectious diseases, it is important to have structures in place that facilitate rapid and far-reaching communication of information. While not all messages are of critical importance, investing in a

¹⁰ One of the main handouts used in the Fuse social media workshop was a guide to using social media for public health communication published by the European Centre for Disease Prevention and Control (ECDC). This technical document is publicly available at: <http://www.fuse.ac.uk/media/sites/researchwebsites/fuse/social-media-strategy-guide-for-public-health-communication.pdf>.

Other workshop materials can be downloaded at: <http://www.fuse.ac.uk/events/othereventswhichmaybeofinterest/fusesocialmediatrainingworkshop.html>

strong social media presence on a daily basis will help to ensure that, when crises do arise, critical messages can be relayed quickly and effectively.

2.3 Evaluating the success of knowledge translation-related activities in reaching intended audiences

Methods used by the three organizations for evaluating the extent to which initiatives are reaching, relevant to, and used by intended audiences are primarily informal ones. In tracking the reach of social media efforts, all three organizations look at web analytics (likes, retweets, replies to events announced through social media platforms, etc.). However, none of the three organizations reviewed have more formal mechanisms for assessing the extent to which the messages relayed through social media are reaching intended audiences. Key informants acknowledged that they do not have an in-depth understanding of the impact of their social media efforts and have limited information about how different audiences may be using social media differently.

Mechanisms for assessing the impact of other KT products and services on target audiences are similarly informal. Fuse keeps basic performance data for the AskFuse service, tracking a variety of statistics (including number of inquiries, who is making inquiries, the types of questions being asked, how quickly and in what manner Fuse has responded to requests for service, how many people were involved in responding to requests, whether money was involved, etc.), but aside from this tracking, has no formal systems currently in place to measure the impact of services provided.¹¹

For Fuse, knowledge of the extent to which its KT-related activities are reaching target audiences comes largely from the direct, ongoing relationships that these organizations cultivate with their audiences. For the most part, Fuse gauges the relevance of its work by the direct feedback it receives from its partners and the extent to which its partners continue their engagement with the organization. Somewhat similarly, CIDRAP considers factors such as unsolicited requests from stakeholders for CIDRAP's involvement in their projects, and its large number of social media followers and newsletter subscribers as indicators of the relevance of its work. While these informal mechanisms are certainly important sources of information about the value and usefulness of KT products and services to stakeholders, the feedback received pertains only to primary audiences and says little about the broader impacts of these organizations' work or impacts beyond primary audiences.

The OCE has somewhat more formal mechanisms in place to gather information about the success of its KT methods and approaches in reaching the organization's secondary audience. All

¹¹ However, it is perhaps worth noting that Fuse has recently been involved in the development of knowledge sharing principles to guide the work of all UK Clinical Research Centres of Excellence in Public Health. These principles include consideration of how the impacts of the Centres' activities can be evaluated. Adherence to these principles is intended to lead to more systematic collection of data and assessments of the long-term impact of the work of the Centres (including Fuse).

of the OCE's advisory boards over the years have included youth and family representatives, which provides a direct platform for young people and families to voice their opinions about their service needs. In addition, a youth advisory committee involving young people from across the province has recently been created. Through this committee, youth will have the opportunity to shape the OCE's work to ensure that it responds to their needs. The OCE has also worked with service delivery organizations to help them engage young people and families directly at all levels of operation, such as program evaluation, treatment planning, and program development, as well as at an organizational level through representation on boards.

As well as engaging directly with primary and secondary audiences, the OCE collects performance information through evaluation methods. For example:

- ▶ OCE conducts an annual survey of the community-based child and youth mental health service providers and agency leaders with whom OCE works.
- ▶ In addition, OCE develops an evaluation plan for all products and services; for example, if OCE hosts a meeting with agency representatives, it will evaluate the meeting to determine the extent to which the meeting achieved its goals/delivered on expected outcomes.

This is similar to NCCID's practice of requesting that participants at KT events (webinars, workshops, and presentations) complete post-event evaluations and follow-up surveys.

Achieving and measuring impact of public health knowledge and public health KT

This year's evaluation has sought information on methods used by other organizations to assess the reach and impact of their KT efforts; however, related to this is the question of how public health research itself can be impactful in the first place. As the discussion of AskFuse in Section 2.1 illustrates, if public health research is to have an impact, the needs of public health stakeholders must be considered and incorporated at the outset of research endeavours. Obtaining the necessary buy-in from academics and university institutions to support more participatory kinds of research requires a cultural shift.

There are indications that a similar cultural shift may be on the horizon with regard to KT, as the limitations of linear knowledge translation are well recognized in academic literature (Cooper & Driedger, 2018; Dagenais, Laurendeau, & Briand-Lamarche, 2015; Haworth-Brockman, 2016; Lazo, 2018; McAteer, Di Ruggiero, Fraser, & Frank, 2018); if KT/KB efforts are going to have an impact, it is important to understand and incorporate stakeholder needs and perspectives into the design of KT/KB initiatives. What the above discussion of the impact measurement practices (or lack thereof) employed by organizations suggests is that efforts to engage and obtain feedback directly with audiences beyond primary ones are limited. This may limit not only assessment and understanding of the reach of these initiatives, but may also undermine the extent

to which KT/KB efforts are capable of having an impact. Unfortunately, neither the literature nor the organizational models examined for this report offer much in terms of best practices for measuring reach and impact on audiences beyond primary ones.

2.4 Influential organizations

The three key informants were asked to identify other organizations or initiatives that have influenced, inspired, or contributed substantially (through formal or informal partnerships or in other ways) to their organization’s knowledge translation work.

Partnership development for Fuse has been an “organic,” rather than a formalized, process, but Fuse has developed formal and informal partnerships with a variety of groups. Those named during the interview include the following:

- ▶ The [Michael Smith Foundation for Health Research](#) – a health research funding agency in British Columbia that co-hosted the 4th Fuse International Conference in 2018
- ▶ Other UK Public Health Research Centres of Excellence, which include the [Centre for Diet and Activity Research \(CEDAR\)](#), the [Centre of Excellence for Public Health Northern Ireland](#), the [Centre for Development and Evaluation of Complex Interventions for Public Health \(DECIPHer\)](#), and the [UK Centre for Tobacco Control and Alcohol Studies \(UKCTAS\)](#)
- ▶ The [Bronfenbrenner Center for Translational Research](#) at Cornell University
- ▶ The National Institute for Health Research’s (NIHR) [School for Public Health Research](#)

For OCE, influential organizations include [Parents for Children’s Mental Health \(PCMH\)](#), the [Canadian Centre on Substance Use and Addiction \(CCSA\)](#), the [Mental Health Commission of Canada](#), and the [Provincial Systems Support Program \(PSSP\)](#) at CAMH. The OCE and PCMH co-developed a model for family engagement, which they are now working to implement across Ontario. CCSA, the Mental Health Commission of Canada, and the PSSP each have knowledge brokers on staff who work with stakeholders to understand their knowledge needs and help to fulfill those needs. Although the OCE’s approach to knowledge brokering differs to some extent, the OCE has learned from the experiences of knowledge brokers in these organizations.

The CIDRAP key informant did not identify any organizations that have influenced CIDRAP’s work, noting that CIDRAP’s work is unique and they are a leader in what they do.

3.0 Conclusion

This year's evaluation activities examined some unique KT/KB approaches that may be of interest to NCCID, as NCCID considers alternative organizational or delivery models for future activities. Considering the similarities between Fuse and NCCID in terms of both target audiences and organizational model, Fuse's approaches to KT/KB—in particular, the AskFuse service and the Fuse Open Science Blog models—may be of most interest.

While AskFuse is similar to the OCE's Evidence In-Sight service (in that both offer an on-demand service for accessing existing research evidence/knowledge and translate that knowledge to end users in a manner that is tailored to them and suits their needs), the AskFuse model has a couple of advantages. First, AskFuse goes beyond linear knowledge translation; rather than simply packaging existing evidence to make it more useable, AskFuse endeavours to actively connect researchers and users of research so that they can engage in collaborative research efforts. Second, the connections made through AskFuse link researchers and policy and practice partners at an early stage in the research process, which allows end users to be actively involved in research design. As the Fuse key informant pointed out:

The key lesson that we've learned over the years is that effective knowledge translation depends on personal relationships. We need to understand who they are and the context in which they work – how the decision-making processes work. That starts very early on. If you produce the research and then, afterward, ask the question of how can the research be useful, you're too late. The research is only one piece of the puzzle. Understanding decision-making processes and what your partners need is helpful in developing the research in a way that it can be used.

The Fuse Open Science Blog offers an interesting model for social media communications, as it also facilitates dialogue between public health researchers and policy and practice partners.

One of the main questions that NCCID aimed to answer through this year's evaluation activities was: Is NCCID taking advantage of the most current information and evidence about where public health audiences receive their information for policy and practice? This question has been more difficult to address. Not only is the literature on this topic limited, but the organizational representatives interviewed also had limited knowledge of their target audiences' needs and preferences in terms of accessing information and evidence. Methods used by the organizations to assess the reach and impact of their KT efforts are primarily informal and apply mostly to primary audiences with which the organizations have direct contact.

This year's evaluation activities confirmed that NCCID is not alone in questioning how best to assess operational impact and stakeholder uptake/implementation resulting from its KT efforts. It is clear that true measures of "impact" may be elusive, but that the post-event evaluations, as well as NCCID's habit of keeping track of all anecdotal comments, are not out of line, nor inconsequential. NCCID should continue with these evaluation efforts and also continue to

reflect on the methods that the organization uses to determine the broader impact of its work (beyond NCCID’s primary audiences). NCCID, like the OCE, has a strong practice of forming direct relationships with primary audiences and collecting stakeholder feedback through post-event evaluations; however, assessing the impacts of NCCID KT/KB activities beyond primary audiences may require that NCCID find ways to engage more directly with secondary audiences—both to aid measurement of impact and also so that these audiences may shape NCCID’s KT/KB efforts in a way that increases their relevance to, use by, and impact on all target audiences. While the OCE has a smaller and more localized overall target audience than NCCID, its practice of formalizing a process for obtaining stakeholder engagement and feedback in its governance model (through stakeholder advisory committees) may be of interest.

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Appendix A – Inventory of NCCID KT/KB approaches and mechanisms

Inventory of NCCID Knowledge Translation Approaches, Mechanisms, and Target Audiences

Activity areas ¹²	Description of NCCID activities	Examples of NCCID tasks and outputs	Stakeholders involved/target audiences addressed ¹³	KB activity domain	
				Knowledge management	Linkage & exchange
Engage, and with others	NCCID makes efforts to identify and connect with stakeholders/ organizations with relevant expertise that can support and participate in NCCID's knowledge translation objectives.	NCCID activities include: <ul style="list-style-type: none"> Seeking out and directly engaging experts and other stakeholders at conferences and events Maintaining a list of stakeholders and partners, as well as an information system (which is searchable by jurisdiction and area of expertise), that allows for the identification of experts who can speak to different infectious disease topics 	<ul style="list-style-type: none"> Target audiences include researchers and public health practitioners 		X
Collaboration efforts to forums/ inities for ation, and e dialogue ationship among olders	NCCID plays an active role in leading/hosting a variety of knowledge exchange events (e.g., meetings, workshops) and participating in stakeholder meetings that bring together and facilitate discussion and collaboration among public health stakeholders.	NCCID activities include: <ul style="list-style-type: none"> Convening and/or hosting knowledge exchange and networking events (e.g., <i>Toward TB Elimination in Northern Indigenous Communities</i> – January/February 2018; <i>The Two Faces of Syphilis: A call for sustained, national and coordinated responses to syphilis</i> – November 2016) Convening and/or hosting meetings on behalf of government representatives, expert groups, and other stakeholders Participating in meetings led by other public health stakeholders, including: <ul style="list-style-type: none"> Public health and infectious disease committees and working groups Meetings of other NCCs 	<ul style="list-style-type: none"> Knowledge exchange events and stakeholder meetings target public health practitioners and policy makers 		X

¹² The knowledge brokering activity areas highlighted in this column stem from literature related to knowledge brokering in the public health domain – in particular, categories identified by Bornbaum, Kornas, Peirson, and Rosella in their systematic review and thematic analysis, published in 2015: <https://implementationscience.biomedcentral.com/track/pdf/10.1186/s13012-015-0351-9>

¹³ Overall, NCCID's target audiences generally fall into three broad categories: public health practitioners, researchers, and policy makers. More specifically, target audiences include, but are not limited to, Chief Medical Officers of Health, Medical Officers of Health, public health nurses, provincial epidemiologists, public health inspectors, public health program managers, public health policy advisors, governmental and non-governmental organizations working in the field of public health, other NCCs, students, and researchers.

<p>to obtain information efforts to mental needs stay with evidence, her new e to fill gaps</p>	<p>NCCID reviews issues related to infectious diseases for public health. This includes direct efforts of NCCID staff to identify and obtain information, as well as research overseen or commissioned by NCCID.</p>	<p>Information-gathering activities carried out by NCCID staff include:</p> <ul style="list-style-type: none"> • Review of departmental authorities responsible for monitoring disease vectors in Canada (led to development of an entomology database) • Scan of tuberculosis (TB) performance measurements • Case studies on specific public health strategies or issues related to infectious diseases management and treatment <p>Upcoming plans to identify and obtain relevant information include:</p> <ul style="list-style-type: none"> • Exploring opportunities and gaps for public health surveillance of health needs for internally displaced persons • Exploring known evidence and information on possible drivers of syphilis outbreaks among Indigenous women <p>NCCID has engaged students to:</p> <ul style="list-style-type: none"> • review literature related to public health for asylum seekers and public health roles for long-term evacuees • compile a list of international resources related to multi-drug resistant TB 	<ul style="list-style-type: none"> • Initiatives involve collaborations with other NCCs and academic institutions/researchers • Products target public health personnel/practitioners and policy makers 	<p>X</p>	
<p>development and skills</p>	<p>Working independently and in partnership with other organizations, NCCID develops and delivers tailored training and educational sessions to enhance the skills and knowledge of public health stakeholders.</p>	<p>NCCID activities include:</p> <ul style="list-style-type: none"> • Developing and leading a variety of webinars on topics related to infectious diseases for public health • Co-hosting of a Continuing Medical Education (CME) event in support of AMS programming in one Regional Health Authority (RHA) • Developing and co-hosting a pre-conference workshop on STBBIs • Preparing and hosting expert panel sessions for public health conferences 	<ul style="list-style-type: none"> • Production of both webinars and educational events have involved partnerships with other NCCs, government representatives, and public health NGOs (Canadian Public Health Association [CPHA]) • Target audiences include public health personnel, policy makers, academics/researchers 		<p>X</p>
<p>ored products s both n of products, as efforts to oducts to ar older needs ocal contexts</p>	<p>NCCID develops and disseminates a wide range of knowledge translation products both independently and in partnership with other stakeholders.</p> <p>Products are disseminated via NCCID's website, Alerts newsletters, and social</p>	<p>NCCID's knowledge translation products include:</p> <ul style="list-style-type: none"> • Podcasts (Infectious Questions, TB Talk, others developed in partnership with other organizations¹⁴) • Plain language "backgrounders," Disease Debriefs, Quick Links • Entomology database on provincial and territorial responsibilities and practices re: disease vector surveillance • Online interactive relational map illustrating journey of a TB patient 	<ul style="list-style-type: none"> • Production involves engagement of infectious diseases experts, other NCCs, and academic institutions/researchers • Products target public health personnel/practitioners, policy makers, and media 	<p>X</p>	<p>X</p>

¹⁴ NCCID identifies podcast topics and seeks out/engages relevant experts who can speak to these topics.

	<p>media accounts (Twitter, LinkedIn, YouTube). Some are also made available through other websites (partner organizations, EvidenceNetwork.ca), and at conferences and other public health events.</p>	<ul style="list-style-type: none"> • Algorithm/flow chart: public health decision points for STBBIs • Glossary of AMR terms • Poster: HPV vaccine recommendations • Video: infectious disease modelling • Background paper: role of human and animal health in AMR • “Roadmap” for improving Antimicrobial Stewardship (AMS) in Canada • Notifiable Diseases Database • Translation of TB materials into Indigenous languages • Case studies 			
Coordination	<p>NCCID has played a leadership role on projects led by other organizations.</p>	<ul style="list-style-type: none"> • NCCID is leading the NCC Population Mental Health Project and, in this leadership role, has contributed to planning, promotion, and dissemination of materials and resources in support of the project. 	<ul style="list-style-type: none"> • Target audience for resulting products (papers) include public health practitioners and policy makers 	X	X
Communication sharing	<p>NCCID has been directly involved in the dissemination of knowledge pertaining to infectious diseases for public health, as well as supporting knowledge sharing among public health stakeholders.</p>	<ul style="list-style-type: none"> • Developing and delivering presentations at academic and public health conferences • Leading/hosting knowledge exchange events and stakeholder meetings (mentioned above) 		X	X
Development of products or	<p>In addition to developing knowledge translation products directly, NCCID supports and promotes the knowledge translation initiatives of others/other organizations working in the field of infectious diseases for public health.</p>	<p>NCCID’s activities include:</p> <ul style="list-style-type: none"> • Assisting PHAC in launching tools for outbreak management and responses on their website and promoting the website • Maintaining AMS Canada’s database of members • Supporting KT activities of the Canadian Tuberculosis Elimination Network 			

Appendix B – Interview guides

Evaluation of the National Collaborating Centre for Infectious Diseases (NCCID)

Interview Guide for Fuse the Centre for Translational Research in Public Health

The National Collaborating Centre for Infectious Diseases (NCCID) is conducting an internal evaluation of its activities over three years, in compliance with the Public Health Agency of Canada (PHAC) requirements. Overall, the evaluation is examining issues related to NCCID's relevance and performance (effectiveness, efficiency, and economy). The evaluation is currently in its second year. Data collection activities for this year are focussed on gathering information about the knowledge translation approaches and mechanisms used by other organizations which, like NCCID, play a role in bridging the knowledge-practice gap in public health.

Your participation in this interview is voluntary. The information you provide will be handled in accordance with the applicable privacy laws. The personal information gathered will remain confidential to PRA. You as an individual will not be identified in any reporting that follows; although, with your permission, the knowledge translation approaches that you discuss may be highlighted as examples and best practices in reporting to NCCID.

With your permission, we would like to digitally record the interview to ensure the accuracy of our notes.

1. To start, please tell me a bit about yourself. What is your role with Fuse?
2. As you know, Fuse's mission is to "transform health and well-being and reduce health inequalities through the conduct of world-class public health research and its translation into value-for-money policy and practice." Please briefly describe the main activities that Fuse undertakes to carry out this mission.
3. Who are Fuse's intended audiences (including primary and secondary audiences)? In your view, how effectively do Fuse's knowledge translation-related activities reach these audiences?
 - a. How does your organization determine the extent to which its knowledge translation efforts are reaching and meeting the needs of intended audiences?
4. NCCID would like to know more about the customized research services provided through AskFuse. Please tell me a bit about how this service works.
 - a. What are the main outcomes of this service?
 - b. In your view, to what extent has this service helped to bridge the academic and practice/policy gap in public health? Please explain.

5. How does your organization use social media to reach stakeholders/intended audiences?
 - a. What social media platforms are used and for what purposes? How do you know if these media platforms are effective in reaching your audiences (i.e., how do you measure your reach and influence)?
 - b. What time and resources are required for maintaining Fuse’s social media presence? In your response, please consider factors such as how frequently content is updated and the extent to which social media platforms are used for two-way communications and information sharing with public health stakeholders.
 - c. What, if any, lessons learned have emerged from Fuse’s use of social media to reach public health stakeholders? *Probe: Can you tell me more about Fuse’s Social Media Training Workshop? What are the key messages offered through this workshop?*

6. NCCID is interested in hearing about other organizations or initiatives that have influenced or contributed to Fuse’s knowledge translation work. Does Fuse draw inspiration from any particular organizations in carrying out its work? What, if any, partnerships (formal or informal) has Fuse formed with other organizations or individuals for the purposes of professional development and skills exchange? Please explain.

7. Do you have any other comments?

Thank you for your time.

Evaluation of the National Collaborating Centre for Infectious Diseases (NCCID)

Interview Guide for the Ontario Centre of Excellence for Child and Youth Mental Health

The National Collaborating Centre for Infectious Diseases (NCCID) is conducting an internal evaluation of its activities over three years, in compliance with the Public Health Agency of Canada (PHAC) requirements. Overall, the evaluation is examining issues related to NCCID's relevance and performance (effectiveness, efficiency, and economy). The evaluation is currently in its second year. Data collection activities for this year are focussed on gathering information about the knowledge translation approaches and mechanisms used by other organizations which, like NCCID, play a role in bridging the knowledge-practice gap in public health.

Your participation in this interview is voluntary. The information you provide will be handled in accordance with the applicable privacy laws. The personal information gathered will remain confidential to PRA. You as an individual will not be identified in any reporting that follows; although, with your permission, the knowledge translation approaches that you discuss may be highlighted as examples and best practices in reporting to NCCID.

With your permission, we would like to digitally record the interview to ensure the accuracy of our notes.

1. To start, please tell me a bit about yourself. What is your role with the Ontario Centre of Excellence for Child and Youth Mental Health (the Centre)?
2. As you know, the Centre aims to “drive high-quality child and youth mental health services,” in part by closing knowledge gaps which affect the effectiveness or accessibility of these services. Please briefly describe the main activities that the Centre undertakes to close knowledge gaps related to child and youth mental health services.
3. Who are your organization's intended audiences (including primary and secondary audiences)? In your view, how effectively do the knowledge brokering activities of the Centre reach these audiences?
 - a. How does your organization determine the extent to which its knowledge translation efforts are reaching and meeting the needs of intended audiences?
4. NCCID would like to know more about the Evidence In-Sight service and any other customized knowledge brokering services offered by the Centre. Please tell me a bit about how these services work.
 - a. What are the main outcomes of Evidence In-Sight and other customized knowledge broker services?

- b. In your view, to what extent have these services helped to bridge the academic and practice/policy gap in public health? Please explain.

5. How does your organization use social media to reach stakeholders/intended audiences?
 - a. What social media platforms are used and for what purposes? *Probe: Centre blog, Twitter account.* How do you know if these media platforms are effective in reaching your audiences (i.e., how do you measure your reach and influence)?
 - b. What time and resources are required for maintaining the Centre's social media presence? In your response, please consider factors such as how frequently content is updated and the extent to which social media platforms are used for two-way communications and information sharing with public health stakeholders.
 - c. What, if any, lessons learned have emerged from the Centre's use of social media to reach public health stakeholders?

6. NCCID is interested in hearing about other organizations or initiatives that have influenced or contributed to the Centre's knowledge translation work. Does the Centre draw inspiration from any particular organizations in carrying out its work? What, if any, partnerships (formal or informal) has the Centre formed with other organizations or individuals for the purposes of professional development and skills exchange? Please explain.

7. Do you have any other comments?

Thank you for your time.

Evaluation of the National Collaborating Centre for Infectious Diseases (NCCID)

Interview Guide for the Center for Infectious Disease Research and Policy (CIDRAP)

The National Collaborating Centre for Infectious Diseases (NCCID) is conducting an internal evaluation of its activities over three years, in compliance with the Public Health Agency of Canada (PHAC) requirements. Overall, the evaluation is examining issues related to NCCID's relevance and performance (effectiveness, efficiency, and economy). The evaluation is currently in its second year. Data collection activities for this year are focussed on gathering information about the knowledge translation approaches and mechanisms used by other organizations which, like NCCID, play a role in bridging the knowledge-practice gap in public health.

Your participation in this interview is voluntary. The information you provide will be handled in accordance with the applicable privacy laws. The personal information gathered will remain confidential to PRA. You as an individual will not be identified in any reporting that follows; although, with your permission, the knowledge translation approaches that you discuss may be highlighted as examples and best practices in reporting to NCCID.

With your permission, we would like to digitally record the interview to ensure the accuracy of our notes.

1. To start, please tell me a bit about yourself. What is your role with the Center for Infectious Disease Research and Policy (CIDRAP)?
2. As you know, CIDRAP's mission is to work “to prevent illness and death from targeted infectious disease threats through research and the translation of scientific information into real-world, practical applications, policies, and solutions.” Please briefly describe the main activities that CIDRAP undertakes to carry out this mission.
3. Who are CIDRAP's intended audiences (including primary and secondary audiences)? In your view, how effectively do CIDRAP's knowledge translation-related activities reach these audiences?
 - a. How does your organization determine the extent to which its knowledge translation efforts are reaching and meeting the needs of intended audiences?
4. NCCID would like to know more about how CIDRAP leverages its expertise at web-based publishing to identify and reach targeted audiences for maximum health benefit. Can you describe CIDRAP's expertise in this area? What strategies does CIDRAP use to leverage this expertise and how does your organization measure their success?

Probe: In what way (if any) does the work of CIDRAP's News Team align with this guiding principle?

5. How does your organization use social media to reach stakeholders/intended audiences?
 - a. What social media platforms are used and for what purposes? How do you know if these media platforms are effective in reaching your audiences (i.e., how do you measure your reach and influence)?
 - b. What time and resources are required for maintaining CIDRAP's social media presence? In your response, please consider factors such as how frequently content is updated and the extent to which social media platforms are used for two-way communications and information sharing with public health stakeholders.
 - c. What, if any, lessons learned have emerged from CIDRAP's use of social media to reach public health stakeholders? *Probe: CIDRAP's former Public Health Practices (PHP) project involved a study of social media outreach efforts undertaken as part of the PHP. To what extent, if any, have the findings of this study, or CIDRAP's overall experience with the PHP project, influenced CIDRAP's ongoing social media outreach strategies?*

6. NCCID is interested in hearing about other organizations or initiatives that have influenced or contributed to CIDRAP's knowledge translation work. Does CIDRAP draw inspiration from any particular organizations in carrying out its work? What, if any, partnerships (formal or informal) has CIDRAP formed with other organizations or individuals for the purposes of professional development and skills exchange? Please explain.

7. Do you have any other comments?

Thank you for your time.