

# Increasing Capacity in eHealth Benefits Evaluation

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eHealth Benefits Evaluation Knowledge Translation Community  
Final Report and Lessons Learned

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## **1. Background**

The eHealth Observatory at the University of Victoria (UVic) has created several benefits evaluation (BE) products, some in collaboration with Canada Health Infoway. These include evaluation models, the rapid response evaluation toolkit, literature reviews, educational workshop materials, and evaluation studies/projects. In 2012, the eHealth Observatory in collaboration with Canada Health Infoway was awarded a 1-year Knowledge Translation (KT) Grant by the Canadian Institutes for Health Research (CIHR) to conduct a formal KT project to share evaluation knowledge products with key individuals across Canada who are involved with benefits evaluation activities and engage them in sharing their knowledge, experiences and resources as well.

## **2. Purpose of this Document**

This document provides a summary of the project including results of activities and lessons learned. Along with the Survey Results Summary (Appendix 1) and Sustainability Plan (Appendix 2) this report is one of the final deliverables of the project. It will serve to inform future similar projects.

## **3. Virtual Community Setup**

In planning this project, we considered many options for establishing a community of individuals to learn and share knowledge on benefits evaluation. Since the objective of this project was to bring together a large group of professionals across large distances, we decided that the core feature of this project would be a virtual presence that would enable people to take part regardless of location and time constraints. It would be web-accessible and allow participation to occur both synchronously and asynchronously.

The result was the creation of the virtual eHealth Benefits Evaluation Knowledge Translation Community website (hereafter referred to as the KT Community). We were able to leverage the existing eHealth Observatory website hosted at the University of Victoria (UVic) to create a smaller sub-site for the project (<http://ehealth.uvic.ca/kt>). The KT Community site was custom-built in PHP by the technical support team member. All data was stored in a secure back-end MySQL database hosted at UVic.

### **3.1. Operational Features of the KT Community**

The KT Community website had many features to support the management of a large online community. These included:

- **Restricted Access:** All participants had to create a username and password when requesting to participate in the community. This enabled the team to ensure participants were eligible and had agreed to the terms of reference and consent for the research project.
- **Roles:** Three levels of users were defined. Site administrators had full access to edit content and manage accounts or files. The mentor role identified team members and those with known experience and expertise in benefits evaluation. The participant role included all other community members. The mentor and participant roles had the same privileges. All incoming requests for participation were marked with a pending status and had to be approved by an administrator before being granted access to the site. Accounts could also be suspended by administrators if access needed to be blocked.

- **Email Link:** We established a secondary email address for this project and all notifications (e.g. forum postings, survey completions, etc.) were sent to/from that address. Messages through the website from participants were routed to this email address as well.
- **Self-contained Management:** The administration functions were built within the site itself so that no additional software tools were required for operation (except the database). For example, participants signed up and were approved through the site and all content was managed through built-in editors. Plus, participants could self-manage their own information, request their password if they forgot it, and edit their profile if needed.

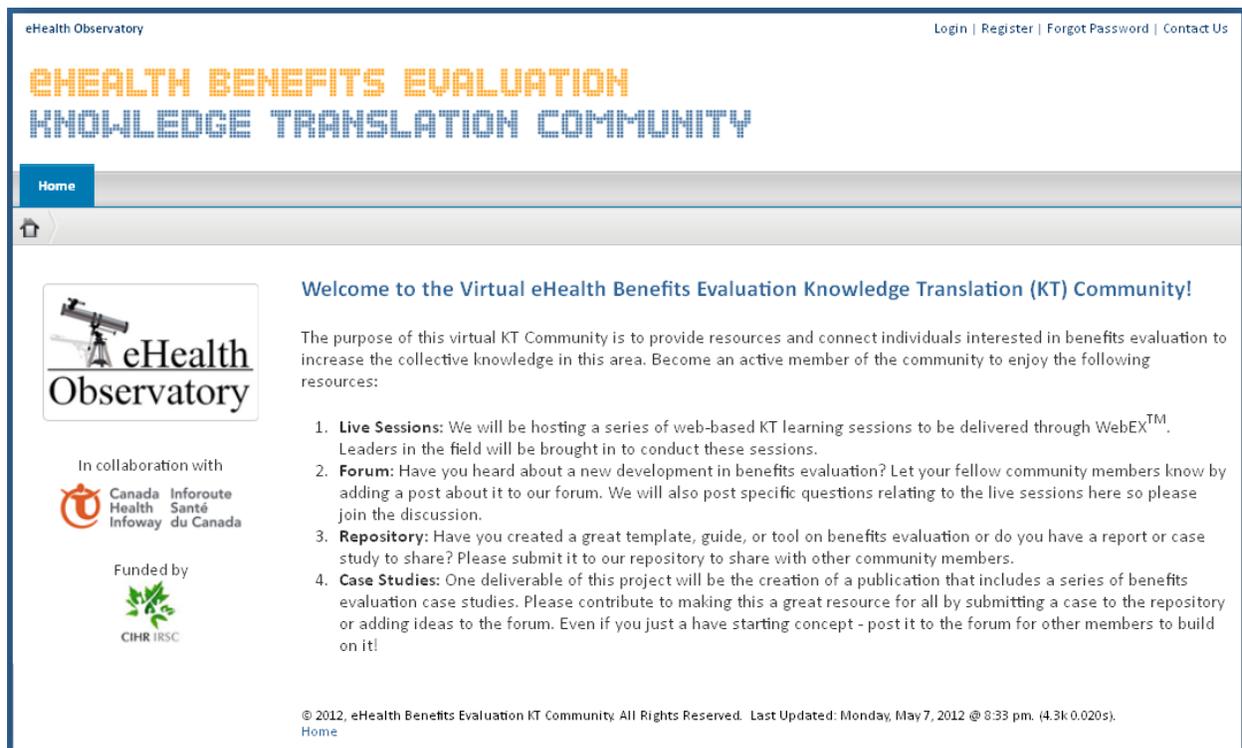


Figure 1 - KT Community Website Home Page

### 3.2. Project Features of the KT Community

We incorporated a few key knowledge translation activities into the KT Community, supported entirely through the website and online tools.

**Live Sessions:** All live sessions were listed on the Sessions page. To sign up, participants simply had to login and click the check-box next to the session to sign-up. When they did this, an attendee list was automatically generated for the administrator to view. Prior to the session, the administrator created an email message within the site with session connection information and sent it out to all attendees with one click. The sessions were conducted through the WebEx web-conferencing software and recorded. The edited recording was then uploaded to the site with a playback link next to the session listing. A feedback survey link also automatically appeared next to the session after it was complete based on the configuration.

Forum: The forum was made up of major topics with sub-threads that could be expanded. The administrator set up the topics and threads. To post, a participant simply clicked on the reply link for the thread, typed in their response, and submitted. All posts were moderated by the administrator before being posted to the forum to ensure no inappropriate content was posted. Each post generated a notification email to the administrator. They would then log in and either accept or reject the post.

Repository: The repository consisted of a hierarchy of files organized into folders. All files were added by administrators to ensure no inappropriate content was added. To submit a file, participants would click on a link, fill out a form which explicitly asked for public viewing permission, and submit. Each submission generated a notification email to the administrator. They would then go in, review the file to ensure it was formatted, check the permissions provided, and upload the file to the repository.

Case Studies: The case studies worked in a similar manner to the repository. Files were submitted using the same form with an indication that the submission was a case study.

In this report, we detail the results and lessons learned from each of the above activities.

### **3.3. Lessons Learned from Community Setup**

The KT Community website and virtual community concept worked very well. Due to the experience of the technical team member, set up of the website took only a few weeks. It also made maintenance easy because the same team member could modify the site as needed. The most challenging part was planning what pages were needed and the requirements for workflows that had to be translated into site functionality. Given that this was a research project, keeping participant data confidential was very important so we had to incorporate features for information hiding.

Creating an operating manual for the KT Community at the start of project was very helpful. It provided instructions for doing each task and was used by the site administrator regularly over the course of the project.

The automated features of the site reduced a large amount of administrative work required to run the community. For example, feedback surveys could be created early on with a deployment date set for the session date so that the survey link appeared on that day and all results went into the database with an email notification automatically sent to the project email. Also, email configurations could be set up with different messages pre-populated so that a large number of emails could be sent quickly to those that needed to receive them. A copy of the email was automatically sent to the project email as well for verification. The email alerts were also helpful for administration because they eliminated the need to constantly check for session sign-ups or forum postings as all activities sent a notification email to the administrator.

One item we added after the site launch was a frequently asked questions page which listed common questions received through the feedback form and also other questions and answers we thought participants may find helpful.

#### **4. Recruitment**

The target population for the community included individuals from health care organizations, government, health authorities, researchers, clinicians, consultants, and vendors. Anyone who was involved with eHealth development, implementation, or evaluation and could benefit from learning about evaluation methods was eligible to participate.

##### **4.1. Recruitment Strategy**

The recruitment strategy was very broad and involved recruiting through word of mouth, in person, phone, and e-mail. We developed an advertisement flyer (see Figure 2) and distributed it widely.

## Are you interested in learning about current knowledge and methods for eHealth benefits evaluation?

### Join the community!

The eHealth Observatory at the University of Victoria in collaboration with Canada Health Infoway is undertaking a research project to establish a virtual eHealth benefits evaluation knowledge translation community of individuals involved with benefits evaluation activities in Canada to enable learning and sharing.

#### Who can take part?

- ◆ Health care organizations (ministries, health authorities, professional associations)
- ◆ Health informatics or clinical researchers
- ◆ Clinicians (physicians, nurses, pharmacists, etc.)
- ◆ Individuals from the private sector (not as company representatives)

#### Why take part?

- ◆ Opportunity to attend web-based live sessions presented by mentors and leaders in the field
- ◆ Access to a repository of evaluation tools and resources
- ◆ Access to a forum for evaluation topic discussions
- ◆ Contribution to a benefits evaluation case studies publication
- ◆ IT'S FREE!

#### How to take part?

1. Go to the KT Community website: <http://ehealth.uvic.ca/kt>
2. Click on "Register" in the top-right corner to submit a request for membership.
3. Fill in the form. Read and agree to the Terms of Reference and Informed Consent which outline the specific requirements for participation.
4. Click on "Register". You'll receive an email confirmation when your membership request has been accepted.
5. Begin learning and sharing knowledge about eHealth benefits evaluation!

This project is funded by a Canadian Institutes for Health Research Knowledge Translation Grant. For questions or more information, please contact the research project team led by Dr. Francis Lau at [ehealthk@uvic.ca](mailto:ehealthk@uvic.ca).



Figure 2 - KT Advertisement

The poster advertisement was distributed at UVic through the School of Health Information Science listserv. It was also sent out by team members at Canada Health Infoway to relevant peer networks, listservs, and organizations with eligible individuals.

As well, the KT Community was introduced at health informatics conferences including the Infoway Fall 2012 Partnership Conference in Vancouver, the Information Technology and Communications in Health 2013 Conference in Victoria, and the 16<sup>th</sup> International Symposium on Health Information Management Research in Halifax.

In addition to distributing the advertisement, we also employed a snowball strategy whereby individuals could also pass on the advertisement to colleagues.

#### **4.2. Recruitment Results**

In total, there were 139 active participant accounts, defined as those who had completed our initial survey and accessed the site. This group of participants also included individuals seen as mentors in benefits evaluation. Considering the original target number of individuals was 20 participants, this number far exceeded our expectations.

We also had 2 site administrator accounts and 5 team member accounts. Five accounts were suspended due to being spam requests and 1 person left their position so their account was closed. An additional 27 accounts were created but these individuals never completed the initial survey and therefore never accessed the site.

More details of the participant population, i.e. work settings, positions, experience, etc. are reported in the Summary of Survey Results (Appendix 1).

#### **4.3. Lessons Learned from Recruitment**

The wide recruitment strategy used for this project was a success. The team brainstormed early on to identify eligible groups of participants and their networks, upcoming conferences, etc. The 1-page advertisement poster was simple and easy to distribute through email and in-person at conferences. Participant sign-up occurred throughout the entire project, even after our recruitment efforts were done. In the initial survey, most participants indicated that they had heard about the community from a colleague. This supports the snowball approach as an effective method for creating a community. We had originally planned to do advertisements in publications and newsletters but found that the electronic distribution methods worked well because they were targeted to the intended audience so this saved costs associated with advertising fees.

The participant enrollment process was also straightforward and easy to manage as it was all controlled through the site. Interested participants were simply directed to the site where they clicked on a link to register. The registration form required them to acknowledge and agree to both the consent and terms of reference before they could submit. Their acknowledgement of consent was then recorded in the backend database.

### **5. KT Community Site Statistics**

The KT Community site was opened to participants in June 2012 and the final KT activity was held in December 2013. Website statistics were collected for the number of visits and page views. Please note that these statistics include team member accesses for administrative purposes.

Overall, the KT Community site was visited 4,425 times over the 18-month period and the home page was viewed a total of 14,683 times. Figure 3 shows the trends in visits. The most visits in one day occurred on August 27, 2012 (46 visits). Just prior to this we sent out an email to the community

announcing that the first two sessions after the summer break would be starting in September 2012. As shown by the graph, the number of visits was generally higher in the first 12 months of the project.

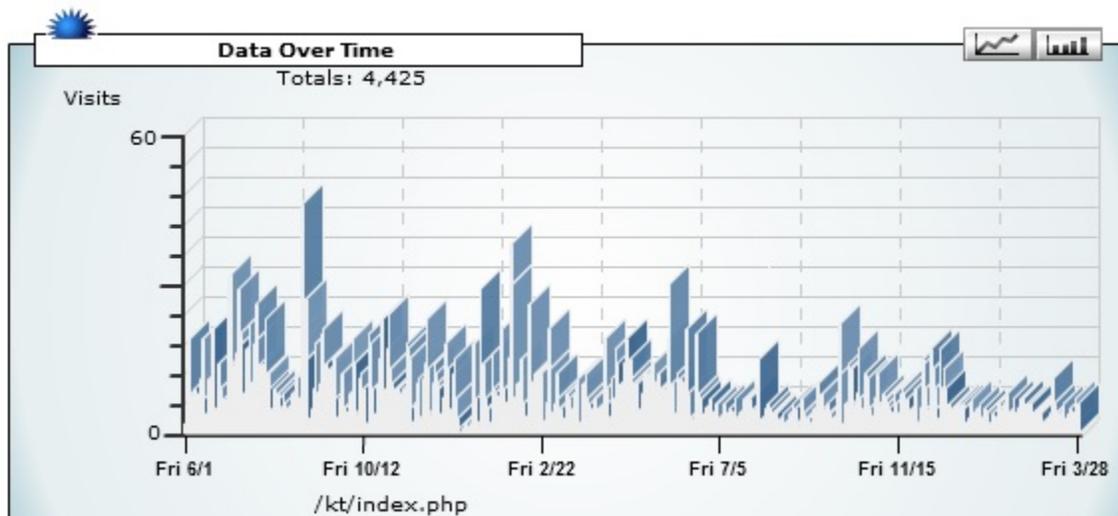


Figure 3 - Visits to KT Community Home Page from June 2012 to December 2013 (Source: Urchin Web Analytics)

In terms of the key KT activity pages, the Sessions page was visited 1,144 times. This was the most visited section of the site followed by forum, repository, case studies, surveys, links, and people.

## 6. KT Sessions

The live online KT sessions were conducted using WebEx web-conferencing software. All presenters conducted their presentations remotely without any face-to-face view. The sessions were recorded and edited to remove participant identifying information before being posted to the KT Community website for later viewing.

### 6.1. Session Results

A total of 28 live sessions were conducted throughout the project. Our original target was 16 sessions to be held over 8 months but the live sessions turned out to be a popular KT activity in the community so we extended the sessions.

Table 1 shows a listing of all sessions offered. Several sessions were offered by team members to share knowledge products reflecting work by the eHealth Observatory and Canada Health Infoway. Mentors from across Canada presented on a variety of topics with some aspect of evaluation.

Table 1 - Completed Live Sessions

Date	Session	Description	Presented By
July 11, 2012	#1 – Overview of Concepts and Literature on Benefits Evaluation	This session will set the context of benefits evaluation for health information systems and present overall frameworks.	Francis Lau & Jes Bassi, <i>eHealth Observatory</i>
July 25, 2012	#2 – Infoway BE Indicators Technical	This session will introduce the latest version of the technical	Simon Hagens, <i>Canada Health</i>

	Report v2.0	report, covering applied indicators in several domains.	<i>Infoway</i>
Sept 12, 2012	#3 – Follow up to Overview of Concepts and Literature on Benefits Evaluation	This will be a follow up to Session 1, with more emphasis on the review of reviews based on feedback received.	Francis Lau & Jes Bassi, <i>eHealth Observatory</i>
Sept 26, 2012	#4 – Follow up to Infoway BE Indicators Technical Report v2.0	This will be a follow up to Session 2, with more emphasis on case studies and examples based on feedback received.	Simon Hagens & Chad Leaver, <i>Canada Health Infoway</i>
Oct 10, 2012	#5 – Evaluation Study Planning	This session will help participants learn how to get started in planning a benefits evaluation project by discussing components of a generic plan and the Infoway BE Template.	Francis Lau, <i>eHealth Observatory</i>
Oct 24, 2012 (PDT)	#6 – EMR Adoption (Part 1)	This will be a two-part session on electronic medical records evaluation. The first part will focus on the EMR Adoption Model and the basic tools for assessing level of adoption in a practice.	Morgan Price, <i>eHealth Observatory</i>
Nov 7, 2012 (PST)	#7 – EMR Adoption (Part 2)	The second part of the EMR Adoption session will delve deeper into areas of EMR adoption.	Morgan Price, <i>eHealth Observatory</i>
Nov 21, 2012	#8 – BE – Different Initiatives/Similar Approaches	Presentation on various BE studies done	Don MacDonald & Pam Elliot, <i>Newfoundland &amp; Labrador Centre for Health Information</i>
Dec 5, 2012	#9 – Infoway’s Clinician Education Campaign – ‘for clinicians by clinicians’	Canada Health Infoway’s Clinical Engagement Strategy brings together clinicians in leadership, practice and education to support achievement of clinical value from information and communication technology (ICT) investments made by the organization and our partners. As part of this strategy and working with our clinical community, the Clinician Education Campaign ‘for clinicians by clinicians’ was developed to generate broad awareness of the benefits of interconnected electronic health record systems in clinical practice and the plan across Canada.	Anna Sherlock, <i>Canada Health Infoway</i>

Dec 19, 2012	#10 – Economic Evaluation	This session will introduce approaches to evaluating the economic impacts of health information systems, EMRs in particular.	Francis Lau & Jes Bassi, <i>eHealth Observatory</i>
Jan 9, 2013	#11- Commonwealth Fund Survey and Practice Challenge	This session will discuss the practice challenge and/or the Commonwealth Fund Survey	Simon Hagens & Chad Leaver, <i>Canada Health Infoway</i>
Jan 23, 2013	#12 – Access to Primary Care in Canada : National Physician Survey perspective	The presentation will provide an overview of accessibility of primary care physicians in Canada and the estimated wait times, based on the 2010 National Physician Survey. Impact of several practice attributes (such as use of electronic records) on accessibility and wait times will also be described.	Tara Chauhan, <i>Canadian Medical Association</i>
Jan 23, 2013	#13 – Modeling Medication Communication	This session will present the Circle of Care medication communication model and medication communication conceptual framework that were developed as part of a study on medication communication within an urban community.	Nicole Kitson, <i>eHealth Observatory</i>
Feb 6, 2013	#14 – Evaluating eHealth Solutions for Coordination of Care	This session will provide an overview of two different Benefits Evaluation approaches used in evaluating two eHealth solutions designed to facilitate the coordination of care across healthcare providers and geographic locations (i.e. telehealth and iEHR viewer). Challenges, lessons learned and implications for future evaluations will be discussed.	Michelle Gibbens, Gwendolyne Nyhof, Shelley Irvine Day & Wayne Clark, <i>Manitoba eHealth</i>
Feb 20, 2013	#15 – Does starting an electronic medical record (EMR) affect family physicians' billings?	Several barriers to the adoption of EMRs by family physicians (FPs) have been discussed including the costs of implementation, impact of work flow and loss of productivity. Primary care reform has had an influence on FPs' income in Ontario. Our objectives were to examine the impact of primary care	Liisa Jaakkimainen, <i>Institute for Clinical Evaluative Sciences</i>

		model change versus starting an EMR on FP billings and payments.	
Mar 6, 2013	#16 – Data Quality Assessment	This session will highlight the importance of data quality in HIS and why it needs to be evaluated.	Morgan Price, <i>eHealth Observatory</i>
Mar 20, 2013	#17 – Economic Assessment of Two Home Telemonitoring Programs for Chronic Patients in Quebec	This session will present the results of two evaluative studies which investigated the effects associated with two telehomecare programs for chronic patients in Quebec. Patients in both studies were followed for the period of 21.5 months. We measured the intervention’s effects on consumption of health care services and the overall economic viability of each program.	Guy Pare, <i>HEC Montreal</i>
April 24, 2013	#18 – Understanding, evaluating and enhancing electronic medical record adoption in an incentivized primary care setting	Full service family physicians in British Columbia are claiming financial incentives in return for providing enhanced care for patients with chronic diseases. At the same time, they are being actively encouraged to adopt electronic medical record systems (EMRs) with an expectation that their adoption will, among other things, aid in improved chronic disease management. In this presentation, a mixed methods study that explored the relationship between EMR adoption and incentive utilization will be discussed.	Michael Bowen, <i>University of Victoria</i>
May 8, 2013	#19 – Demonstrating potential value of SNOMED CT	This seminar describes our ongoing work in demonstrating the potential use and value of SNOMED CT in primary care. This seminar has two parts: first we provide a quick review of SNOMED CT as a reference terminology standard; then we describe a study underway to clean/encode EMR data and show how it can add value to quality of care.	Francis Lau & Dennis Lee, <i>University of Victoria</i>
May 22, 2013	#20 – Building performance	PHC clinicians are using Electronic Medical Record (EMR) data to	Patricia Sullivan-Taylor, <i>Canadian</i>

	measurement capacity in primary health care clinical practice	inform quality improvement and performance measurement in their practices. CIHI is collaborating with clinicians and ministries to support PHC performance measurement through indicators, standards, survey tools, and the Voluntary Reporting System, an EMR data collection and feedback reporting system. Clinicians are using CIHI tools and the “Plan, Do, Study, Act” (PDSA) cycle to assess quality dimensions, ask clinically relevant questions, and confirm EMR data validity. PHC performance measurement and quality improvement requires structured and standard data practices. This session will share lessons learned on using EMR data for performance measurement.	<i>Institute for Health Information</i>
June 5, 2013	#21 - An Evaluation of E-Prescribing Adoption in Primary Care	The session will provide an overview of a research study examining e-prescribing adoption by primary care physicians, including the research methodology, results, and key findings. Future directions for e-prescribing adoption research will also be discussed.	Gurprit Randhawa, <i>University of Victoria</i>
June 19, 2013	#22 - myHEALTHPlan: The shareable care plan	myHEALTHPlan is a service available to all family physicians practicing the Fraser Health area who use Intrahealth’s Profile EMR. The service has 2 main components: chronic disease care plan templates that are embedded in the physician’s EMR and a web portal where patients and their care team can view their care plan and access a library of approved health resources. Hear about successes, failures and lessons learned since the launch in 2010.	Joan Rabillard, <i>Fraser Health</i>
October 9, 2013	23 – Using EMR data for QI in practice: implementati	To date, EMR implementation has not led to the expected improvement in quality of	Michelle Griever, <i>North York Family Health Team</i>

	on of the Data Presentation Tool software in a large Family Health Team	care. Possible reasons include problems with data entered during routine care and difficulty using EMRs to measure and monitor quality. In this presentation, I will discuss steps taken to overcome software and organizational barriers to using data for QI in a large Family Health Team.	
October 23, 2013	24 – Designing Information and Communication Technologies (ICTs) to support medication communication	This session presents the medication communication framework and its implications for the design of ICTs. The results of an evaluation of an electronic provincial medication repository will be presented and placed in context.	Nicole Kitson, <i>eHealth Observatory</i>
November 6, 2013	25 – Topic: Diffusion of Personal Health Information Services: Self-determining and Empowering Practices for Manitoba Inuit	This presentation highlights the findings from research conducted with Manitoba Urban Inuit Association (MUIA) with regard to developing culturally safe practices for communicating personal health information (PHI) services to Inuit population groups. The study was considered a needs assessment to identify future best practice considerations for evaluating electronic health program delivery to Inuit citizens who reside in Manitoba and across Canada.	Wayne Clark, <i>Winnipeg Regional Health Authority</i>
November 20, 2013	26 – The neurogenic bladder and telemedicine: urologic history and physical exam development with a movement towards home monitoring	Objectives of the session: 1) Understand the current way in which bladder physical exam and measurements are done with patient's in person, 2) Define near infrared spectroscopy (NIRS), 3) List challenges in telemedicine which are specific to the neurogenic population	Lynn Stothers, <i>University of British Columbia</i>
December 4, 2013	27 – Starting with the end in mind: the unfolding story of Clinician Peer Network Evaluations	An overview of Canada Health Infoway's pan-Canadian Clinician Peer Network initiative and associated Peer Leader evaluation surveys to date.	Anna Fazzalari, <i>Canada Health Infoway</i>
December 11, 2013	28 – A KT Project on EMR-supported Best Practices for EOL Care	This session will present a knowledge translation project in progress focused on best practices in	Jes Bassi & Francis Lau, <i>eHealth Observatory</i>

end of life care that are integrated into the EMR. The project has 4 stages, including an evaluation.

The sessions were attended in real time and also viewed later on the KT Community site. After each session, we asked the presenters for permission to post a PDF version of the presentation slides on the site and all participants agreed. Table 2 shows numbers of live attendees, session length, number of recording views, and number of slide downloads. Please note that the number of attendees does not include team members or presenters.

Table 2 - Live Session Statistics

Session	# Participants Attended (% of how many participants signed up to attend)	Length	# Plays	# Slide Downloads
#1	9 (69.2%)	1:05:41	111	68
#2	13 (68.4%)	1:21:33	61	36
#3	6 (54.5%)	00:59:47	19	28
#4	5 (45.5%)	00:49:50	11	16
#5	5 (33.3%)	1:15:40	23	43
#6	11 (55%)	00:58:50	18	24
#7	7 (33.3%)	1:00:00	8	18
#8	12 (70.6%)	0:57:17	11	18
#9	10 (62.5%)	00:34:30	3	11
#10	11 (55%)	00:59:39	10	20
#11	11 (91.7%)	00:57:08	3	12 (Handout: 12)
#12	6 (75%)	00:27:40	3	8
#13	4 (57.1%)	00:29:00	10	10
#14	7 (58.3%)	1:06:43	16	17
#15	6 (50%)	00:48:30	30	18
#16	11 (64.7%)	00:59:57	31	17
#17	6 (42.9%)	00:54:37	7	14
#18	11 (64.7%)	00:49:06	9	20
#19	7 (70%)	1:02:23	52	14
#20	8 (72.7%)	00:54:32	9	12 (HSU PHC Demo Project Handout: 10; Info Sheet on PHC Indicators: 11)
#21	9 (64.3%)	00:56:00	2	11
#22	6 (46.2%)	00:44:53	7	7
#23	10 (78.5%)	00:58:57	13	7
#24	5 (35.7%)	00:54:46	5	4
#25	1 (14.3%)	00:31:31	2	2
#26	2 (20%)	00:52:12	3	3

#27	4 (40%)	00:38:49	5	4
#28	3 (33.3%)	00:39:20	6	2

The number of live attendees for the sessions ranged from 1 to 13. However, the number of plays for recorded sessions went as high as 111. The sessions were usually between 30 and 60 minutes and were held on Wednesdays at 9:00am PST / 12:00 EST. A participant in the Eastern Time zone commented that they were able to conveniently join the sessions over their lunch break. Responses from the session feedback surveys indicated that this format generally worked well. Full summary results of the feedback surveys are in the Summary of Survey Results (Appendix 1).

## 6.2. Lessons Learned from Live Sessions

As mentioned above, the live sessions were the most popular KT activity in this project. Attendance numbers fluctuated throughout the project. While there wasn't a clear trend, contributing factors for peaks and lows may have been topic relevance to participants, holidays and breaks during the year, and other time commitments for projects starting up or deadlines. We tracked attendees and found that there was a subset of participants who attended several sessions.

The overall task breakdown and corresponding time and resource requirements for holding the live sessions are summarized in Table 3. Note that these are the final time approximations and resource requirements that were needed once the process was set. For the earlier sessions, these steps took longer as we had to figure out the needed tasks and try a few programs until we discovered what worked well.

Table 3 - Time and Resource Requirements for KT Sessions

Task	Approximate Time	Resources Required
Arranging presenters: emailing to ask, waiting for reply, following-up to confirm	Few days	Team members, presenters
Adding session to schedule on KT Community Site: entering details, posting, sending out invite email	20 minutes	KT Community site
Scheduling session in WebEx	10 minutes	WebEx
Test session with presenter (if requested)	10-20 minutes	WebEx
Communication with presenter: obtaining short biography, slides, reformatting if needed	1 day	Presenters, Microsoft PowerPoint
Starting the session: starting WebEx, loading slides, welcoming attendees, creating polls, introducing presenter, noting attendees	10-15 minutes	WebEx
Monitoring the session:	1 hour (duration of session)	WebEx

answering chat questions, addressing technical issues, facilitating discussion		
Closing the session: thanking presenter, survey reminder, forum reminder	2 minutes	WebEx
Downloading and converting recording to .wmv to edit	2 hours for 1-hour session	WebEx, Freemake Video Converter
Editing recording: adding title slide, removing identifying information, removing noise or long pauses	2 hours for 1-hour session	Freemake Video Converter, PowerPoint
Posting recording: converting to .flv, uploading to correct folder, adding link in KT Community site	20 minutes	Freemake Video Converter, FileZilla FTP Client, KT Community site
Posting slides (after getting permission) converting to PDF, uploading to correct folder, adding link in KT Community site	5 minutes	Adobe Acrobat, KT Community site
Sending survey reminder: select attendees, send email	10 minutes	KT Community site

The success of the sessions firstly depended on having mentors to present their work. Given the team's experience in this area, we began by brainstorming recent projects and individuals to contact. A large list of potential presenters was generated and team members divided the responsibility for contacting potential presenters. If interested, they were instructed to email the project coordinator for next steps. This ensured no presentation conflicts and all presenters received the same information. It can take time to arrange for presenters. We often didn't receive replies right away and some presenters were unsure of their availability weeks ahead. In some cases, we had to reorganize a few sessions to accommodate presenter availability. Our team members presented a few sessions to share knowledge products so our strategy was to schedule these last in order to allow other presenters to select presentation slots first. Also, we decided to take breaks from holding sessions during common holiday times, recognizing both presenters and attendees would not be available.

A considerable amount of thought went into the planning stage. Choosing the web conferencing software and package required consideration of attendees' workplace restrictions and estimation. Some workplaces do not allow employees to install software and block certain programs so we chose a tool that had been used for previous projects. The service provider offered several packages based on usage and needs. Early on it was difficult to estimate which package would be required but we decided to start with the minimum, monitor attendance, and adjust if necessary. The 25-attendee package turned out to work well but we did add a fixed number of audio minutes per month based on the number of attendees, length of sessions, and number of sessions per month.

An information sheet was created for potential presenters which provided context for the community, description of the audience, and guidelines to help them prepare for the session. We also offered test sessions where presenters could do a short trial run to make sure they could connect to WebEx and advance their slides. For running the sessions, a team member was responsible for moderating which involved starting the session in WebEx, welcoming attendees, recording the session, monitoring sound levels, directing questions, and closing the session. A moderator script was developed which detailed the step-by-step process.

Rather than instructing presenters to load their slides or share their desktop at the start of the session, we asked presenters to send their slides a few days in advance so that the moderator could test them, upload them for the presenter prior to the session, and then simply give the presenter control to advance the slides. This avoided any technical issues due to unfamiliarity with the web conferencing software and ensured the slides were ready to go beforehand. Presenters were then able to focus on their presentation without having to worry about the technical setup as they only had to click one button. The only issue encountered during sessions was background noise and audio feedback which sometimes occurred and was captured in the recording. The moderator had to monitor this and manually mute attendees if necessary. Some attendees couldn't get their microphone working so typing questions into the chat box as a backup method worked well. The moderator read the question aloud on behalf of the attendee.

In terms of attendance, we found that sometimes participants didn't attend after they had signed up resulting in poor attendance rates for some sessions. One measure that helped somewhat was to send the connection information email again the same day of the session about an hour before the session start time. However, even with this reminder some individuals still weren't able to attend. This may have been due to work conflicts or other events that prevented participants from joining live. We also experienced low session feedback survey response rates with some sessions not receiving any feedback. A survey reminder was sent the day after each session which helped in some cases.

Given the realities of other work priorities, offering recordings for later playback made them accessible to more community participants. As indicated by the number of playback for some sessions, this option was certainly used. However, we experienced some technical issues with preparing these recordings. The recording functionality was embedded into WebEx so the recordings were easily recorded and downloaded. The issue was that the recordings were in a WebEx-specific format and could only be played by the WebEx player. They had to be converted to another format for editing and posting to the site. We tried a few programs and were eventually able to use two freely available programs to convert and edit the recordings but it took time to configure the settings to make everything work. Once the videos were posted on the KT Community site, we received messages from a few participants saying that they could not view the recordings. We determined that some browsers did not display the video format and had to create another option link for playback. As well, the original player on the site didn't allow the video to be paused, forwarded, etc. which some participants requested. In response, we moved the videos to a video server which allowed for playback controls.

## 7. Repository and Case Studies

The repository was designed to provide a collection of knowledge resources such as reports, tools, and guides that participants could refer to for benefits evaluation. The case studies were a special type of resource that described completed benefits evaluations, focusing on methods so that they participants could learn about methods that have been applied.

### 7.1. Repository and Case Study Results

23 tools were added to the repository and 4 case studies were added. Three were on past Electronic Medical Record evaluations and one was on a drug information system. Table 4 shows the number of downloads for each file in the repository. Three resources were downloaded over 20 times: the Infoway System and Use Assessment Survey, the eHealth Observatory's Usability Benchmarking Toolkit, and a Data Quality Assessment Guide.

Table 4 - Repository Downloads

No	Repository File	Downloads
1.	System & Use Assessment Survey with Methodology	32
2.	Complete Usability Benchmarking Toolkit	29
3.	Data Quality Assessment Guide	26
4.	Sample EMR Evaluation Plan - Community-Based Practice	19
5.	Change Management Assessment Interview Script	17
6.	Sample EMR Evaluation Plan - Ambulatory Care Clinic	15
7.	EMR Adoption Model Survey	13
8.	Usability Benchmarking Study Planner	13
9.	User Assessment Interview Script	13
10.	ePrescribing Workflow Survey	12
11.	ePrescribing Workflow Analysis Data Sheet	11
12.	ePrescribing Workflow Scenarios	10
13.	Practice Reflections Focus Group Interview Script	9
14.	EMR Adoption Model Handbook	9
15.	ePrescribing Workflow Analysis Handbook	9
16.	Case Study Template	9
17.	Change Management Assessment Interview Data Sheet	9
18.	EMR Adoption Survey Scoring Sheet	8
19.	User Assessment Interview Data Sheet	7
20.	Practice Reflections Focus Group Interview Data Sheet	7
21.	ePrescribing Workflow Walk-through	6
22.	Vendor Interview Data Sheet	3
23.	Vendor Interview Script	2

### 7.2. Lessons Learned from the Repository and Case Studies

The lack of contribution from participants may be due to participants' perceived lack of knowledge in this area as some indicated in the final survey that they had nothing to contribute. However, in the initial survey almost 50% of participants stated that they had conducted a benefits evaluation before. And when asked what activities they intended to participate in, many did indicate contributing resources, case studies, etc. Unfortunately this didn't happen.

At one point in the project, a benefits evaluation challenge was launched, giving participants an opportunity to contribute a complete case study paper if they wished. Submitters received feedback on their submissions that they could use to revise their papers for publication if they wanted to. Four submissions were received for the challenge.

Having a repository in the KT Community was a good mechanism for sharing resources but it didn't receive many contributions. Some ideas that may work in the future would be to ask live session presenters to contribute tools or resources they mentioned in their presentations if possible.

## 8. Forum

The forum was set up as a typical online forum with a few major topics and threads under each topic. The forum was another way for participants to contribute knowledge on benefits evaluation. As well, each live session presenter was asked to include 2-3 discussion questions based on their presentation. These were discussed during the session and then posted on the forum for further discussion. All participants received an email notification each time a forum posting was made.

### 8.1. Results from the Forum

Overall, there were not a large number of contributions to the forum. The majority of the posts were made by team members. As shown in Table 5, some of the earlier topics garnered some views but not many posts.

Table 5 - Forum Posts and Views

Topics	Posts	Views
1. General eHealth Benefits Evaluation Topics	15	88
2. Benefits Evaluation Case Studies	1	33
3. KT Session 1/3 Discussion	9	93
4. KT Session 2/4 Discussion	1	9
5. KT Session 5 Discussion	0	7
6. KT Session 6 Discussion	4	17
7. KT Session 7 Discussion	2	5
8. KT Session 8 Discussion	0	1
9. KT Session 9 Discussion	1	11
10. KT Session 10 Discussion	1	1
11. KT Session 11 Discussion	0	0
12. KT Session 12 Discussion	0	0
13. KT Session 13 Discussion	0	0
14. KT Session 14 Discussion	1	1
15. KT Session 15 Discussion	0	0
16. KT Session 16 Discussion	0	14
17. KT Session 17 Discussion	0	1
18. KT Session 18 Discussion	0	0
19. KT Session 19 Discussion	0	1
20. KT Session 20 Discussion	1	3
21. KT Session 21 Discussion	0	0
22. KT Session 22 Discussion	0	0

23. KT Session 23 Discussion	2	4
24. KT Session 24 Discussion	0	0
25. KT Session 25 Discussion	0	0
26. KT Session 26 Discussion	0	0
27. KT Session 27 Discussion	0	0
28. KT Session 28 Discussion	0	0

## 8.2. Lessons Learned from the Forum

The forum functioned well from a technical perspective. It used a basic structure of topics and threads. Having all posts come first to the moderator for approval ensured that no spam or inappropriate postings appeared on the forum. Also, participants received copies of postings by email notification so it's possible there were many more views of postings outside of the site.

However, similar to the repository, there was little contribution from participants. For the live sessions, the same questions were posed during the session so most of the discussion happened during the session itself and not afterwards.

When signing up for the community, each participant was able to choose a username and this is what appeared in the forum. We thought providing this anonymity would encourage open sharing of thoughts. However, in several instances throughout the community we found that individuals didn't mind disclosing who they were to others in the community, especially during the live sessions. Perhaps knowing who else was in the community would have provided more incentive to use the forum for discussion. Having active leaders or champions in the forum could have also helped drive discussions rather than just setting up the topics and threads. Perhaps having a weekly question based on topics in the news or recent articles would have driven more participants to share their thoughts.

## 9. Project Outputs

There were several knowledge translation outputs of this project and observations made with respect to impact.

### 9.1. Presentations

During the project, three presentations were done at conferences across Canada.

Conference: Infoway Fall 2012 Partnership Conference

Location: Vancouver, BC

Date: November 29, 2012

Title: Increasing the Collective Knowledge in eHealth Benefits Evaluation to Facilitate Progress

*This presentation introduced the main components of the virtual community (live online sessions, forum, repository, case studies, and links) and examples of the types of knowledge products it contained. The key discussion points were the potential of such a community to expand knowledge in this field, interest and suggestions for future related projects and expected impacts.*

Conference: Information Technology and Communications in Health (ITCH) 2013 Conference  
Location: Victoria, BC  
Date: February 22, 2013  
Title: Knowledge Translation in eHealth: Building a Virtual Community

*This presentation described the application of the Knowledge-to-Action Framework and concept of a virtual community to create the KT Community for eHealth benefits evaluation. It described the KT activities incorporated into the community.*

Conference: 16<sup>th</sup> International Symposium on Health Information Management Research (ISHIMR)  
Location: Halifax, NS  
Date: June 27, 2013  
Title: Examining the Current State of eHealth Benefits Evaluation – Views of a Virtual Community

*This presentation introduced the concept of benefits evaluation for eHealth and also shared some feedback collected from the KT Community at that point regarding current needs and challenges for benefits evaluation.*

## **9.2. Poster**

The presentation at the ISHIMR conference was a poster presentation. Please see above for description.

## **9.3. Papers**

The four main deliverables of this project are as follows:

- KT Community Team Self-Assessment: self-assessment done at the start of the project to outline our objectives and expected outcomes
- KT Community Final Report: presents the results and lessons learned (this report)
- KT Community Survey Results Summary: a summary of the responses collected from the initial survey, final survey, and session feedback surveys (Appendix 1)
- KT Community Sustainability Plan: a description of the resources required to sustain the community or create a similar community in the future (Appendix 2)

In addition, the ITCH 2013 presentation above was based on a conference paper of the same title published in *Studies in Health Technology and Informatics* (volume 183, pages 257-262).

## **9.4. Other**

While not tangible deliverables, we did note a few other outcomes of this project. In one session, a comment was made by the presenter that doing the presentation served as a catalyst to have more discussions within their organization. This demonstrates there were also benefits for the presenters as well.

Also, in a few instances, session attendees expressed a desire to connect with presenters afterwards. Most presenters provided contact information in their presentations so with permission we added presenter emails to the People page on the KT Community site.

Our main expected impact for this project was to build human capacity in eHealth evaluation expertise, hopefully leading to improved evaluation studies and results. It is difficult to measure this impact but given the level of participation seen in terms of session attendance, session views, repository downloads, etc. we believe that participants did obtain knowledge in eHealth benefits evaluation.

## **10. Overall Reflection**

The key findings and lessons from this project can be summarized as follows:

1. Upfront planning for a project like this is very important. The manual created at the start of the project during site set-up proved to be a valuable resource for the project coordinator. It ensured consistency and provided instructions for tasks that were done less frequently.
2. Electronic recruitment (emails, listserv postings) and the snowball approach were effective recruitment strategies. The KT Community generated wide interest. We had many more participants than initially expected.
3. The main resource required to drive a virtual community is people. A team member needed to check the site and email on a daily basis for new participants, forum postings, survey completions, and file submissions. Mentors and presenters were essential for the live sessions as they had the knowledge to share. Most participants joined the community to obtain knowledge from others who have experience in this area. Given the virtual nature, there was little direct interaction except for the live sessions so it's even more important to keep the community present in people's minds by driving participation and having team members provide a human presence through facilitation of KT activities. For example, the KT session moderator hosted the sessions by welcoming participants and the presenter, facilitating discussion, and inviting participants to speak up.
4. Simply setting up online activities like forums and repositories isn't enough to generate participation. While there was a large group, we experienced a lack of active participation in terms of contributions to the repository, case studies, and forum. Additional strategies are needed to foster participation in these types of KT activities in a virtual setting recognizing that participants are busy working professionals with limited time. Perhaps having team members lead relevant discussions requiring input on the forum would help e.g. focused discussion on a common challenge for benefits evaluation that members need assistance with. The original thought that anonymity would encourage open discussion may need to be reconsidered as participants didn't seem to mind identifying themselves in several instances. In fact, perhaps knowing who else is in the community to talk to might encourage more participation. This is something that could be explored for future projects along with other barriers for participation.
5. Live online sessions are a popular and feasible KT activity in a virtual community. This may be due to the real-time interactive nature of the activity but participants also viewed the recorded sessions often. Therefore, the draw may have been the opportunity to learn about the experiences of others and learn lessons from their work that could be applied in the participant's work context.

6. Documenting lessons learned throughout the project and collecting data continuously is important. The continuous monitoring of participation, feedback, and collection of observations allowed us to improve the community throughout the project. For example, we were able to address technical issues for session recording playback when they occurred so that participants could continue to watch them. Without mechanisms to collect formative feedback, easily fixed issues can go unresolved. Noting these occurrences also helped to write this document.

Despite a lack of active participation for some activities and a few technical issues along the way, we experienced many successes in creating a large virtual community of healthcare professionals including a well-designed format and structure, the completion of 28 live sessions on a variety of benefits evaluation topics, and the application of knowledge translation in eHealth. We hope the results and lessons described in this report will help inform similar future initiatives for knowledge translation. A description of resources required to extend the community or establish a similar new community is included in the Sustainability Plan (Appendix 2).

## Appendix 1 – Summary of Survey Results

# Increasing Capacity in eHealth Benefits Evaluation

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eHealth Benefits Evaluation Knowledge Translation Community  
Summary of Survey Results

April 9, 2014 – v1.0

This project was funded by a Canadian Institutes for Health Research Knowledge Translation Grant.



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## **1. Background**

The eHealth Observatory at the University of Victoria (UVic) has created several benefits evaluation (BE) products in collaboration with Canada Health Infoway. These include evaluation models, the rapid response evaluation toolkit, literature reviews, educational workshop materials, and evaluation studies/projects. We were awarded a 1-year Knowledge Translation (KT) Grant by the Canadian Institutes for Health Research (CIHR) to carry out a formal KT project to share our current products with key individuals across Canada who are involved with benefits evaluation activities and engage them in sharing their knowledge, experiences and resources as well.

## **2. Purpose of this Document**

At several points during the project, we collected feedback from community participants through web-based surveys. This document provides a summary of the survey results and is one of the final deliverables of the project.

## **3. Acknowledgement**

We would like to sincerely thank all participants for being part of the KT Community and for providing the survey responses which are summarized in this report. All comments were greatly appreciated.

## 4. Initial Survey

Upon first access to the KT Community website, participants were required to complete a short initial survey to help us understand who our participants were, their backgrounds, and their expectations for joining. This survey also asked questions about their views on benefits evaluation.

In total, we had 179 requests for participation in the community. Of these, 139 completed the initial survey. The following is a summary of the responses.

### 4.1 Recruitment

We used a broad approach to advertise the KT Community including email mailing lists, conferences, our eHealth Observatory website, etc. From the responses collected, most participants heard about the community from a colleague who had joined themselves and suggested they join (Figure 1). This accounted for approximately 66% of participants. A few heard about it from our website and conference advertisements.

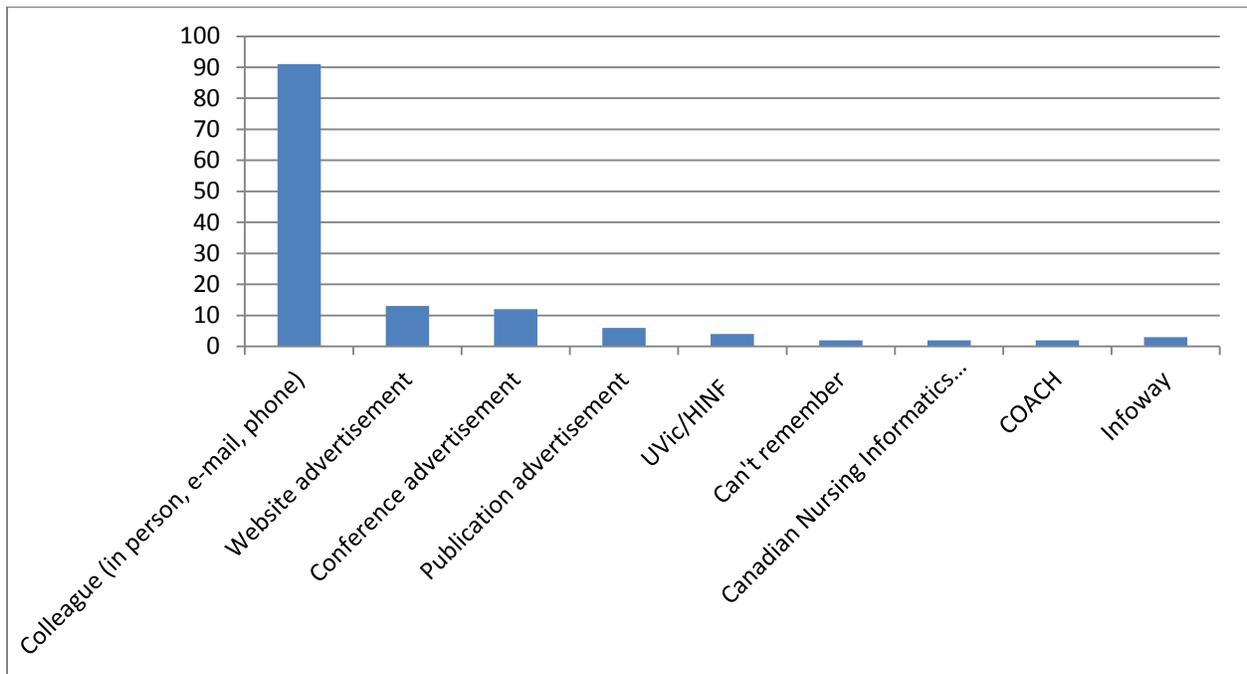
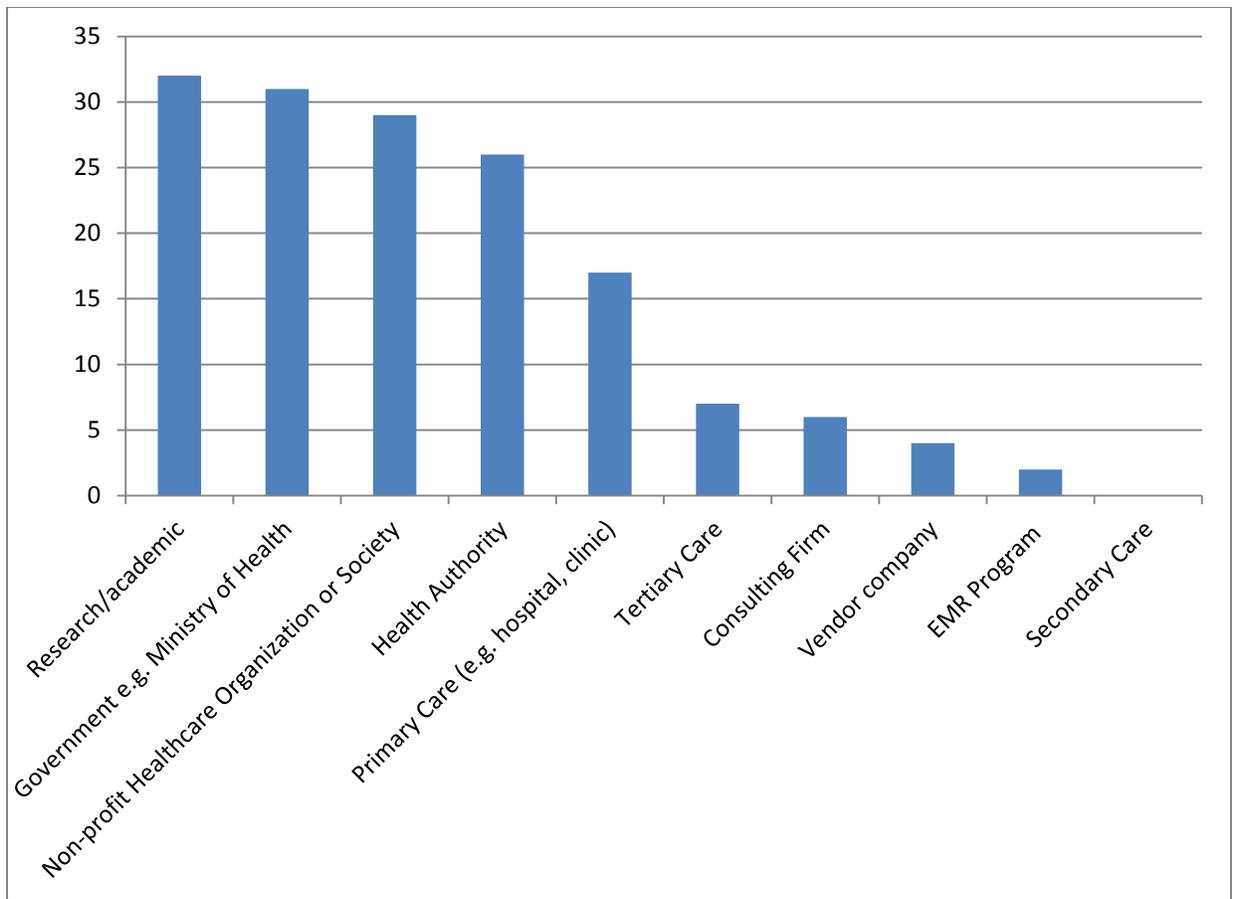


Figure 4 – How participants heard about the eHealth benefits evaluation KT community

(Note: Participants could select more than one if they heard about it from two sources.)

### 4.2 Work Settings and Positions

The KT Community attracted a wide range of professionals. The top five categories were research/academic (29 participants), government (31 participants), non-profit healthcare organization or society (29 participants), health authority (26 participants), and primary care (17 participants) (Figure 2).



**Figure 5 – Work settings of KT Community participants**

(Note: Participants could select more than one if they worked in more than one applicable setting.)

Within these settings, the participants held a variety of positions which covered the spectrum of stakeholders in the health care industry (Figure 3). The top two roles were that of manager or administrator and researcher. Participants could select more than one if they held more than one role. We also had several clinicians in the group including physicians and nurses as well as information technology professionals such as developers and consultants. We also had specialists in evaluation, change management, and project management.

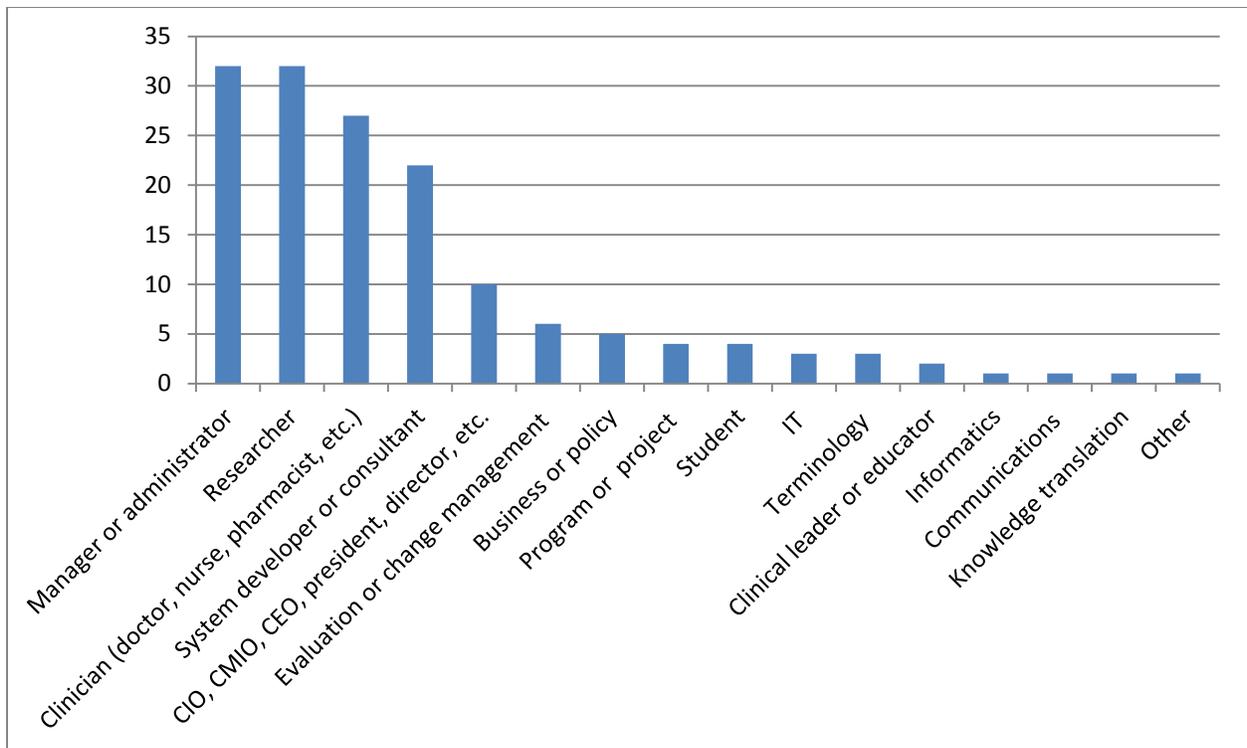


Figure 6 – Positions held by KT Community participants

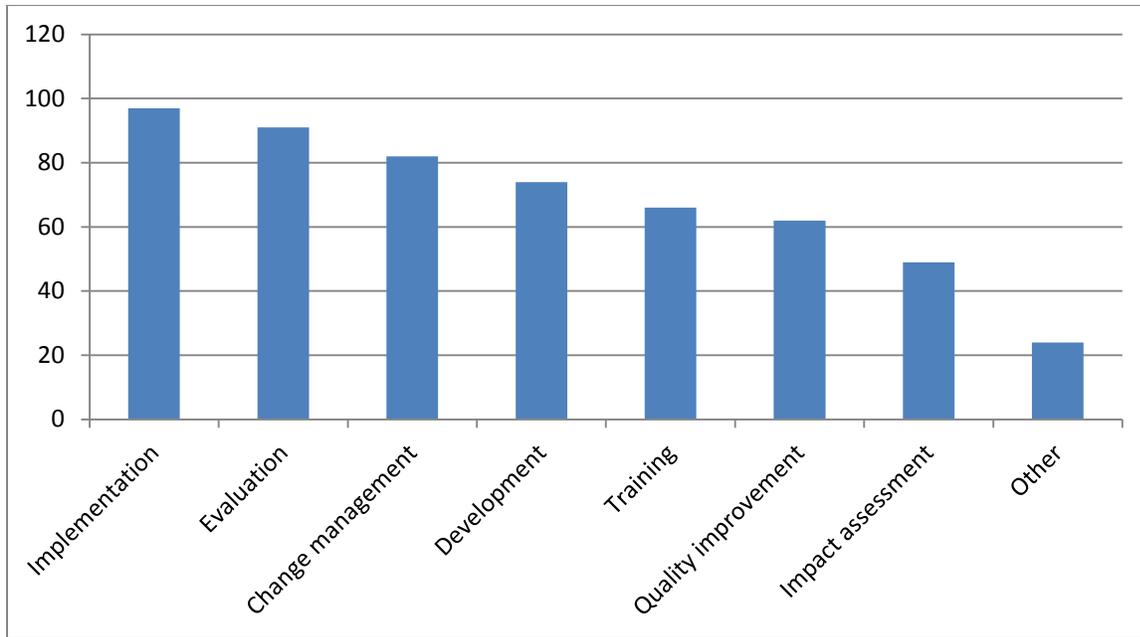
(Note: Participants could select more than one if they held more than one position.)

### 4.3 Length of Experience in Healthcare

The responses from this question indicated community members had been working in the healthcare field for a long time. 80% of members had been working in the field for more than 6 years, with 55% having more than 11 years of experience. Only 7% were relatively new, having been in the field for less than 1 year.

### 4.4 Types of Prior eHealth Projects

In addition to asking how long they had been working in healthcare, we specifically asked participants to indicate what types of eHealth projects they had been a part of in the past. We had a total of 545 responses from 132 participants, indicating individual participants have been part of many types of projects (Figure 4). The top three types were implementations, evaluations, and change management.



**Figure 7 - Types of eHealth projects KT Community participants have been a part of**

(Note: Participants could select more than one if they had been part of many types of projects.)

Since the intent of this community was to learn about benefits evaluation, we specifically asked participants if they had conducted a benefits evaluation before. The responses were almost evenly split, with slightly more (54%) of participants responding that they had not conducted a benefits evaluation before.

#### **4.5 Views Towards eHealth Benefits Evaluation**

We wanted to know about participants initial views towards benefits evaluation before they joined the community and had been exposed to the resources. We wanted to know what they initially thought benefits evaluation was all about.

The majority of participants rated benefits evaluation as important (24%) or very important (71%). A few participants rated it as neutral but no one felt that it was not important.

In addition to the rating, we asked participants to explain, in their own words, their rationale behind their rating. We coded the content of the responses to identify some key items mentioned. We identified 28 distinct reasons that participants described. The top items included a need for benefits evaluation to justify investments in eHealth, to enable future improvements, to determine outcomes and impact, and to ascertain value. Other notable comments included that benefits evaluation is needed to increase adoption and justify use of a system, to inform future implementations, and to ensure project success.

## 4.6 Reasons for Joining the KT Community

Each participant had their own reasons for joining the community and we wanted to know what they were so that we could do our best to address their expectations. We provided a few options for them to choose from but also left an open response option. Participants could select more than one option if they had multiple reasons to join. We received 593 responses from 132 participants. There was a three-way tie for the top three responses, with 103 participants selecting each (Figure 5). These were to learn about evaluation tools, to learn about evaluation methods, and to learn about the experiences from individuals who have done benefits evaluation.

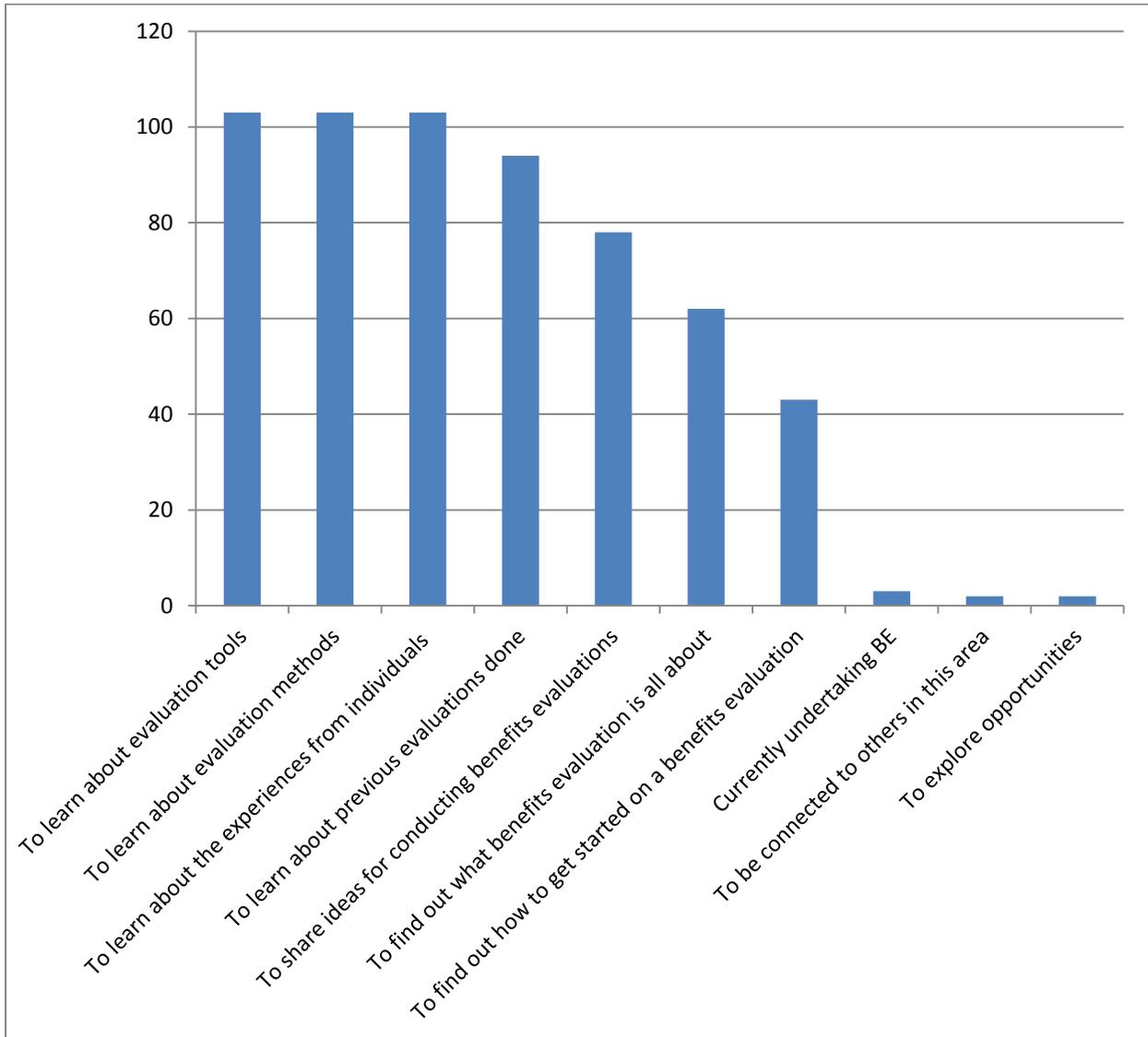


Figure 8 - Reasons KT Community participants joined the community

(Note: Participants could select more than one if they had joined for several reasons.)

## 4.7 Planned Participation

In the KT Community we set up several online activities reflecting different knowledge translation strategies that participants could take part in to learn and share knowledge about benefits evaluation. We asked participants which activities they planned to participate in over the duration of the community. They could select more than one. Each planned activity had interest from the participants (Figure 6). The web-based live KT sessions generated the most interest with 40% of participants indicating that they intended to take part in these, followed by 30% indicating they would like to take part in forum discussions.

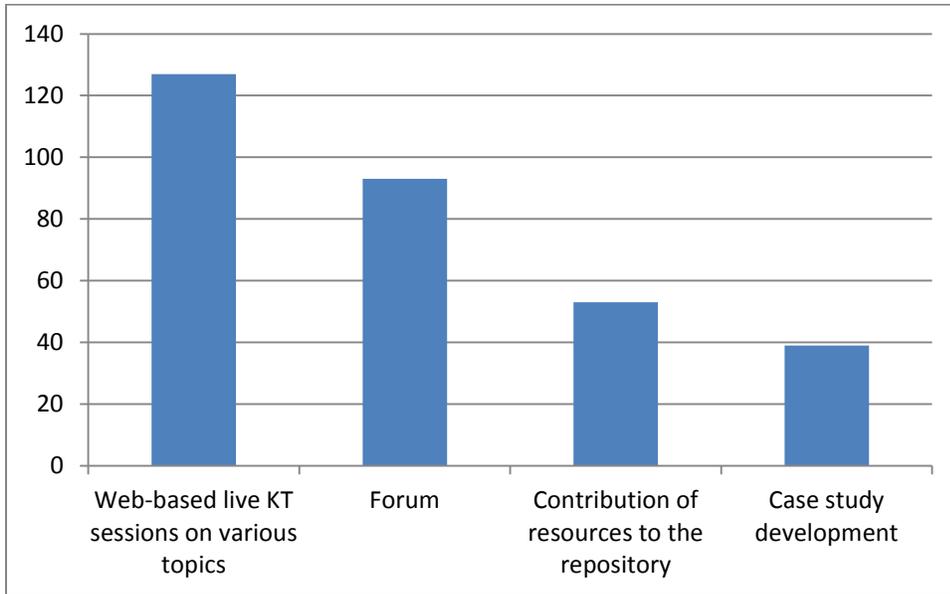


Figure 9 - Activities KT Community participants initially planned to take part in

(Note: Participants could select more than one if they planned to take part in several activities.)

## 4.8 Additional Comments, Questions or Suggestions

The final question in the survey asked for any comments, questions or suggestions. Most participants didn't have any at this point but 12 participants indicated that they were happy about this project and looked forward to participating. A few offered suggestions regarding the activities and content that they'd like to see. For example, some commented that they want to know about evaluation, recent evidence on benefits, and resources. Others commented on the format of delivery, with one person saying they'd like sessions to be booked a month in advance and another saying that they like it is web-based.

## 5. KT Live Session Feedback Surveys

Participants either joined the live sessions or watched the recordings afterwards. Either way, we asked participants to provide feedback on each session they viewed.

In total, there were 84 feedback surveys completed for the 28 sessions held.

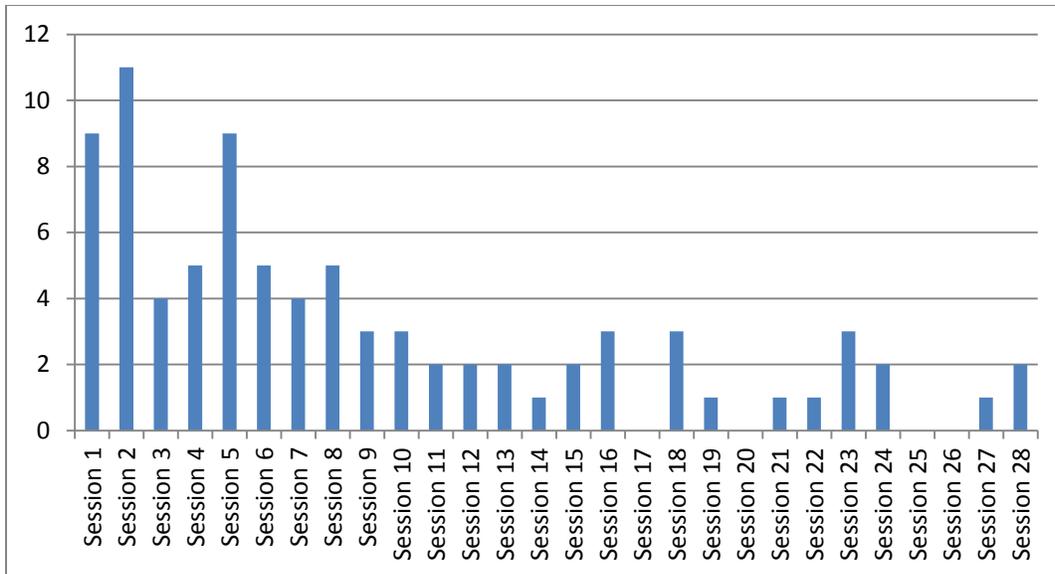


Figure 10 - Number of feedback surveys completed for each session

As Figure 7 shows, the number of feedback surveys completed generally tended to decline as time went on. The number of attendees was also higher for some of the earlier sessions. Due to the low numbers of responses received for many sessions, it is difficult to conduct an analysis at the session level. Therefore we combined results across all surveys to determine a general sense of what attendees thought about the entire series (numbers reported are aggregated across all survey responses).

## 5.1 Respondents

In terms of work settings, the respondents for the sessions came from government (n=19), other (n=18), health authorities (n=19), research/academic (n=14), and primary care settings (n=11). For positions, the largest numbers were for researchers (n=19) and evaluation specialists (n=18) but the respondents also included clinicians (n=10), managers or administrators (n=9), information architects (n=9), and process or change management consultants (n=7). It is important to note that many of the same individuals attended several sessions and completed the surveys for each session.

## 5.2 Reasons for Watching Sessions

An open-ended question asked respondents why they chose to attend or watch the session. Many interesting comments were offered. While many responses indicated a general interest in the topic (n=24) or desire to learn about the topic (n=17), 19 responses specifically explained how the topic had direct relevance to a current or upcoming project in the workplace of the attendee. For example, several respondents mentioned that they were in the planning stages of an evaluation. Related to this, 15 responses described a desire to specifically learn about evaluation tools and methods that they could apply to their own work.

## 5.3 Satisfaction

When asked about quality of the content and presentation, the responses were mostly good (48/84 and 42/84) or excellent (31/84 and 38/84) across all sessions. As well, the majority of responses indicated

that the length of the sessions (typically about 1 hour) was just right (65/84) and the Wednesday 9:00am PST time slot was generally good. A few sessions went a bit longer and there were comments that they were on the long side.

Overall, respondents indicated that they were satisfied (47/84) or very satisfied (28/84) with the sessions. When asked if they would recommend the session to colleagues, 78/84 responses showed they would. The individual reasons for why they would or would not recommended were session-specific but when grouped into themes, some of the common reasons for recommending were because the session provided a good overview or introduction to the topic (n=27), the session had relevant content for certain roles and people (n=14), the session raised awareness of evaluation methods or resources (n=13), and the session had good content (n=12). Other reasons mentioned to a lesser degree were that they appreciated the open sharing of experiences and examples. For the few responses where the attendee indicated they would not recommend the session, the reasons were mostly linked to the content e.g. too high level.

We also asked respondents for suggestions to improve the content or presentation of sessions. Again, the responses were session-specific but some general themes emerged. In terms of content, many had no suggestions (n=36) but some attendees suggested having more detail on examples presented (n=7) and the use of tools or methods (n=4). However, other respondents felt certain sessions had too much content or detail (n=4). A few felt more discussion would have been good in some sessions (n=4).

For presentation suggestions, most had no suggestions (n=42) or thought they were good (n=6) but a few people mentioned technical issues with not being able to control recording playback for some of the earlier sessions (n=3). This was fixed after receiving the feedback. Some other individual suggestions included ideas to improve slide quality and making sessions more interactive.

We included a general comments question in the survey as well. A few respondents offered suggestions for future session topics. For example, 4 responses indicated they would like to see applications of tools.

## **6. Final Survey**

At the end of the KT Community project, we asked all participants to complete the final survey to give us feedback to assess the impact of the community on participants.

We received 12 survey responses. The following is a summary of the responses.

### **6.1 Work Settings and Positions**

Of the 12 respondents, 4 worked in government positions and 4 were in the research or academic setting (Figure 8). The rest were with health authorities, non-profit healthcare organizations, primary care, and consulting.

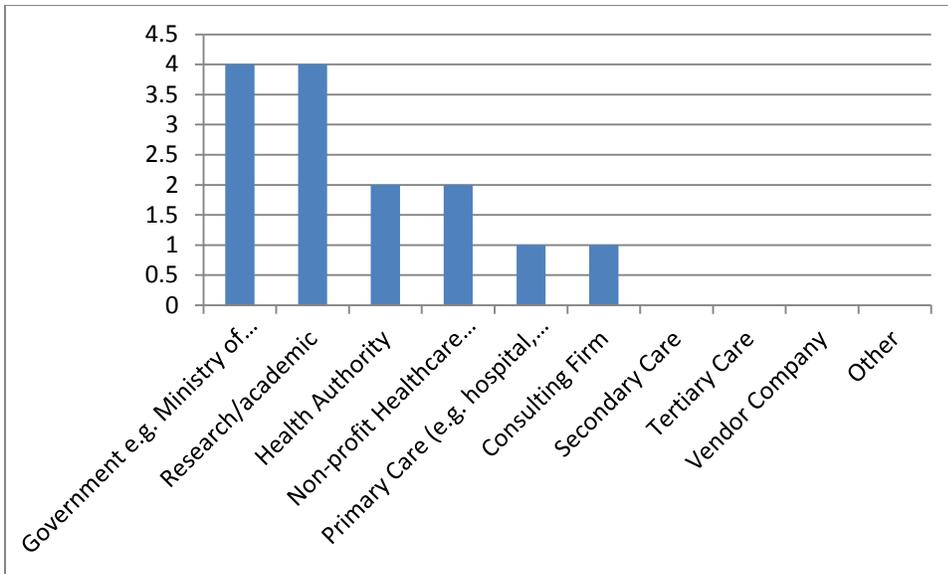


Figure 11 - Work settings of final survey respondents

Three respondents were researchers (Figure 9). We also received responses from managers or administrators, system developers or consultants, and evaluation or change management specialists. There was also one CIO, CMIO, CEO, president, or director in the group.

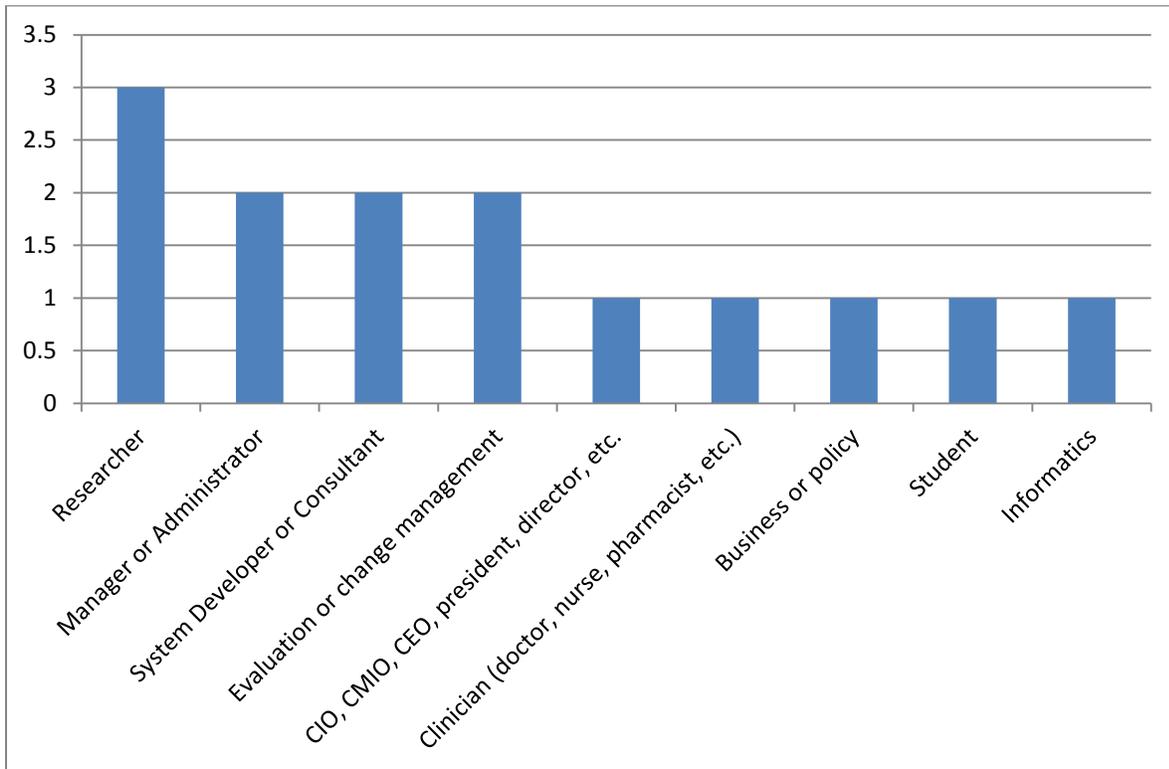


Figure 12 - Positions held by final survey respondents

## 6.2 Visits to the Community

Half of the respondents indicated that they visited the community website on a monthly basis (Figure 10). The rest visited at least twice a month. None visited more often than twice a month.

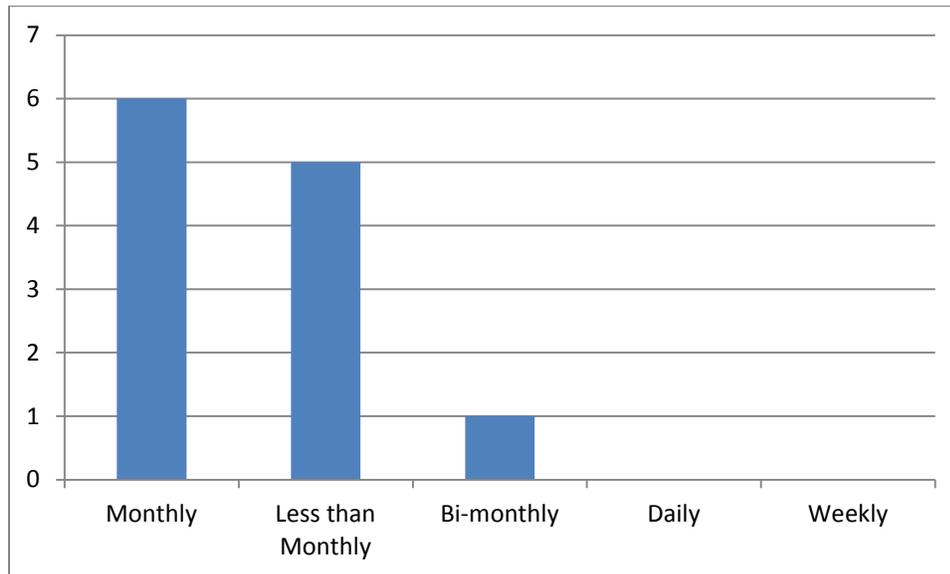


Figure 13 - Frequency of visits reported by final survey respondents

## 6.3 KT Sessions

There were 28 web-based knowledge translation sessions offered over the duration of the project. All of the respondents attended at least one of the KT sessions. Half had attended 6 to 10 sessions while the rest had attended 1 to 5 sessions. We also recorded and posted the sessions for later viewing. 1 respondent viewed more than 20 of the sessions, while another viewed 11 to 15. The majority (58%) had viewed 1 to 5 sessions and 3 had viewed none.

When asked to rate the quality of the KT sessions, 3 respondents rated them as excellent, 7 rated them as good, and 2 were neutral.

## 6.4 Forum

There were usually 2 or 3 discussion topics posted on the forum after each session. Half of the respondents said that they had taken part after a few sessions, while the other half had never taken part. Respondents rated the quality of the forum discussion as excellent (n=2), good (n=2), and neutral (n=8). We also asked about the design of the forum and again, the responses ranged from neutral (n=5) to excellent (n=2).

## 6.5 Repository and Case Studies

The repository was established for participants to contribute resources or tools for benefits evaluation. The responses to the survey clearly showed that respondents had largely not contributed to the

repository. The reasons offered for no contribution were a lack of time (n=4), nothing to offer (n=3), didn't think to contribute (n=2), and lack of permission (n=1). 2 respondents didn't provide a reason.

The responses were similar for case study contribution with nothing to offer (n=4) and no time (n=4) being the most common reasons.

When asked about the design of the repository, the responses again ranged from neutral (n=2) to excellent (n=5).

## **6.6 KT Community Site**

The last set of questions asked respondents about their feelings towards the KT Community as a whole. 91.7% of respondents felt the quality of the website in terms of navigation and usability was good or excellent. All but one respondent had recommended the KT Community to a colleague. Some reasons respondents had recommended it were because they thought it was good resource (n=5), sessions were of interest (n=4), and it was relevant to their work (n=3). The respondents ranked their overall experience of being a participant in the community as good (n=7), excellent (n=3), or neutral (n=2).

We asked whether respondents would remain participants of the community if it were kept active and 83% said yes. They commented on it being valuable for learning, networking, providing resources, and sessions. For the two respondents who indicated they would not remain in the community, the cited reasons were lack of time or relevance.

Some of the individual final comments offered by respondents included that they wanted to see it continue and that they had benefitted from it in some way.

## **7. Discussion**

The KT Community brought together a large group of individuals from different work settings, roles, and experience levels. Each person had their own reasons for joining and expectations. The responses from the initial and session feedback surveys provided good formative feedback that we were able to use during the project. Although we only received 12 final survey responses, the comments regarding reasons for lack of participation are helpful to understand the participation rates seen for various KT activities. This will be helpful for planning similar projects in the future.

## Appendix 2 – Sustainability Plan

# Increasing Capacity in eHealth Benefits Evaluation

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eHealth Benefits Evaluation Knowledge Translation Community  
Sustainability Plan

April 9, 2014 – v1.0

This project is funded by a  
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## **1. Background**

The eHealth Observatory at the University of Victoria (UVic) in collaboration with Canada Health Infoway established the eHealth Benefits Evaluation Knowledge Translation Virtual Community in 2012 with the support of a Knowledge Translation (KT) Grant from the Canadian Institutes for Health Research (CIHR). This KT project was done to share current products with key individuals across Canada who are involved with benefits evaluation activities and engage them in sharing their knowledge, experiences and resources as well.

## **2. Purpose of this Document**

This document outlines a sustainability plan describing what would be required to extend the operation of the KT Community at UVic or to establish a similar virtual community elsewhere in the future. Please refer to the companion final report and lessons learned for additional suggestions.

## **3. Overall Coordination**

As stated in the final report and lessons learned, people are a key resource for a project like this. There was a great deal of coordination required to operate the community. The project team met regularly to review the current status of the project and make changes as needed. A dedicated project coordinator worked with all team members, session presenters, and was the main point of contact for participants. The following is a list of some of the main responsibilities of the project coordinator:

- Preparing project plans and schedules
- Obtaining ethics approval
- Scheduling and leading team meetings
- Working with the site developer to create the KT Community site
- Creating and managing content on the KT Community site
- Writing instructions, scripts, guides, etc. required for team members and participants
- Managing participation requests
- Monitoring the project email and responding to inquiries
- Resolving reported issues or escalating to team members
- Sending notifications and reminders to participants
- Moderating the forum
- Scheduling live sessions
- Liaising with service providers (e.g. WebEx)
- Helping presenters prepare for live sessions
- Moderating the live sessions
- Tracking session attendance and following-up
- Editing and posting the live session recordings plus materials

- Collecting and reviewing survey responses
- Adding resources and case studies (formatting as needed)
- Gathering data for reporting (website statistics, survey responses)

#### 4. Costs

The creation of a virtual community requires many resources which have associated costs. The resources are detailed in subsequent sections. Table 1 provides a summary of the main cost items for the project and approximately what percentage of the budget these items used.

Table 6 - Cost Items

Cost Item	Description	% of Total Budget
<b>People</b>	This covers team members to start and run the community and technical support.	73%
<b>Advertisement/Recruitment</b>	This covers the costs associated with conferences and advertising through organizations.	6%
<b>Web conferencing</b>	This covers both the monthly license fee and audio minutes.	12%
<b>BE Challenge</b>	This covers costs associated with the Benefits Evaluation challenge that was incorporated into the project as part of the case studies component.	6%
<b>Materials</b>	This covers supplies and print costs for advertisement posters.	2%

As shown above, the main cost items for running this community were people and web conferencing fees. Please note the following with respect to costs:

- The costs shown reflect research project costs which may not be required for a community that is not part of a research project. For example, the surveys were collected for project data so the costs associated with creating, administering, synthesizing, and analyzing the data may not be relevant for the community on its own. These activities contributed to people costs.
- The advertisement poster was distributed widely by email and the snowball approach which reduced the need to do formal advertisements in publications.
- The staffing costs include all costs for starting the KT Community, packaging knowledge projects, setting up the site, creating content, writing the site code, configuring messages, etc. which would not need to be done again if the community were to continue.
- The site was built by a team member so the cost is within the people costs. If this expertise doesn't exist within the team, then external resources would need to be acquired to do this work.

- We made use of existing software we had and freely available tools as much as possible. Other technical costs associated with the site were minimal because we already had an existing research website. If additional features, servers, or databases are needed (e.g. to expand KT activities), then there may be additional purchase and license costs.
- The BE Challenge was an optional piece incorporated into a KT activity.
- Material costs were minimal because all knowledge products were digital within the virtual community. If a hard copy report or book is produced, there would be additional costs.

## **5. The KT Community Site**

Since this is a virtual community, the core piece that would be required is the KT Community website. The resources for this are detailed below.

### **5.1 Webspaces**

Webspaces are needed for the site. For the project, the site was hosted at the University of Victoria as a sub-site of the eHealth Observatory website. Site administration by the coordinator was all done through the web interface. This included editing page content, adding sessions, adding files, etc. However, any structural changes to the site were done by manually editing the source code files. When files needed to be uploaded to site folders, this was done through secure file transfer using FileZilla FTP Client.

### **5.2 Database**

A backend database is required to securely store participant data and files. For the project, data was stored in a secure MySQL database backend hosted at UVic on the research computing facility. This database was accessible and managed by only two team members using Navicat Lite (a free database software program).

### **5.3 Video Server**

The live session recording files can be large and need to be available on the website. During the project, participants requested playback controls as well so all live session recordings were uploaded to a video-on-demand server hosted at UVic. This allowed us to use a more sophisticated player with playback controls. Recording files were uploaded to the server using FileZilla FTP Client.

### **5.4 Email Address**

The primary means of communicating with participants is by email. A high volume of emails is generated from the automated notifications so having a separate email will eliminate one member having their individual email inundated with messages. For the project we created a secondary email address at UVic. All automated notifications were sent to or came from this email and could be checked by designated team members. Participant inquiries submitted on the KT Community site were also directed to this email.

### **5.5 People**

Two team members were needed to run the KT Community site for the project. The technical support team member set up the entire site in PHP, set up the database and video servers, configured all pieces to work together, revised the site code as needed, and addressed any technical issues that arose. The project coordinator was the main user of the site in terms of managing the content and using the features to operate the community. The project coordinator also needed to understand and use the FTP client and Navicat Lite to manage site files. The coordinator handled all emails as well.

## **6. KT Sessions**

The live sessions are a key KT activity for the KT Community. The resources required to run these are described below.

### **6.1 Web Conferencing Software**

A web conferencing software solution is needed to hold the sessions. For the project we chose WebEx. The key features needed were a toll-free dial-in number and VoIP, the ability to upload PowerPoint slides, a chat window, ability to pass presenter control to another individual, built-in recorder, and ability to mute participants. Other features that aren't mandatory but nice to have are polling capabilities and desktop or application sharing in case the presenter wishes to do a live demonstration. The sessions were scheduled online ahead of time and an email with the session connection information automatically came to the coordinator to pass on to attendees.

### **6.2 Editing Software**

There needs to be a way to obtain session recordings from the web conferencing software, add a title slide, and cut out portions of the video before posting to the KT Community. For the project, we used a combination of the WebEx Player and Freemake Video Converter to prepare the recordings. The WebEx recordings were downloaded, converted to .wmv using the WebEx Player, edited in Freemake, and then saved as a .flv file using custom settings.

### **6.3 Video Server**

See section 4.3.

### **6.4 People**

Sessions cannot be held without presenters. All members of the project team brainstormed possible mentors to lead the sessions. We considered recently completed evaluations and members of Infoway's Benefits Evaluation Forum plus other individuals who have experience in conducting evaluations. The project coordinator was then responsible for scheduling the presenters, preparing them for their session, scheduling the session in WebEx, posting the session on the KT Community, sending out invitations, moderating the session, editing and posting the session, and sending follow-up requests for feedback surveys.

## **7. Repository and Case Studies**

The repository and case studies are part of the KT Community website. The resources required for these are below.

## **7.1 Webpages**

Three webpages are required for the repository and case studies. The first is a submission form where participants fill in metadata about the resources (title, author, category, etc.), give permission for it to be added to the repository or case studies page, and upload the file. The second page is the repository itself which is a simple hierarchy of files. Files are added to the repository by the team after review. The third page is the case studies page which simply lists the case studies for participants to view.

## **7.2 Database**

All files need to be stored in a backend database. See section 4.2.

## **7.3 People**

The submissions for the repository and case studies come from team members and participants. To ensure all submissions are appropriate for the repository or case studies, they should be reviewed by a team member prior to posting. For the project, there was an intermediate step between submission and posting where the project coordinator received notification of a submission, went into the site to download and review the file, and then added it to the repository or case studies page.

Note that this KT activity experienced low participant contribution during the project so it would be good to identify possible barriers at the start and develop strategies to address these.

## **8. Forum**

The forum is part of the KT Community website. The resources required for this are below.

### **8.1 Webpage**

A forum webpage is needed as part of the site. For the project, the forum page was basic with topics and threads under them. The only functionalities for participants were to view the thread, click to reply, type in a short response, and submit. There was also an automatic notification email sent out to all participants when a forum posting was approved.

### **8.2 People**

The postings to the forum come from team members and participants. To keep the structure consistent, only the project coordinator should be able to add topics and threads. For the project, the submissions were marked as pending until the project coordinator reviewed and approved them. This ensured no inappropriate postings appeared on the forum.

Note that this KT activity experienced low participant contribution during the project so it would be good to identify possible barriers at the start and develop strategies to address these.

## **9. Surveys**

As this was a research project, we needed to collect information from participants for the initial, final, and session feedback surveys. This is an optional component if no information is to be collected from participants. The resources required for this are below.

### **9.1 Survey Pages**

A survey tool is required. For this project, we opted to develop our own surveys built into the site for ethics purposes so that all participant data would be stored locally. The survey webpages contained questions and multiple choice or open-ended text boxes for responses. The responses were tallied and displayed on the site for the project coordinator and could be exported for additional analysis. From the surveys page, participants could see which surveys they had completed and which ones were still available.

### **9.2 Database**

All survey responses need to be collected into a database. See section 4.2.

### **9.3 People**

Survey responses come from participants. For our project, participants had to complete the initial survey upon first access to the KT Community site. They were also asked to complete a feedback survey for each live session watched. Finally, at the end of the project we asked them to complete a final survey.

The surveys need to be managed by a team member. For this project, the KT Community website interface allowed the project coordinator to create each survey and deploy it when needed. The coordinator could view tallied responses for each survey for analysis and reporting.