



Telehealth Research Summer Institute TRSI 2003

Telehealth / e-Health Evaluation:

From Theory to Practice to Policy

Reader Information

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1. Main Messages

Theory: Evaluation Frameworks

- It is <u>not</u> possible to recommend a single evaluation framework.
- Whatever evaluation framework is chosen by evaluators it must be adaptable to a variety of environments.
- Evaluation frameworks must encompass elements such as a global / societal perspective, be flexible, be unbiased, and adopt common definitions and indicators.

Practice: Policy - What do we have and what do we need?

- Minimal e-health policy exists in the healthcare sector; what e-health policy does exist is being developed locally and in an uncoordinated and ad hoc manner.
- The Glocal e-Health Policy Matrix is a good start, but needs further development.
- It is important to know who the 'drivers' of policy are. These drivers will include the Canadian Institute for Health Information (CIHI), the World Health Organization (WHO) and the General Public. Researchers need to be able to communicate with these 'drivers' in order to guide the development and adoption of e-health policy.
- Communication is key to moving from e-health practice to policy.

Practice: Knowledge Transfer

- Inter-jurisdictional policy is important for several reasons, including: to help network the
 environment, people, and technology, and to bring together a number of stakeholders and
 levels.
- Knowledge transfer strategies are *not* easy or simple to employ. Any strategy will take great
 effort and time.
- Knowledge transfer strategies that could be employed by the broader telehealth community include: education, marketing, creating demand / expectations, knowledge warehousing, and formulating a collective strategy.
- Key elements that will aid in swiftly advancing the development of inter-jurisdictional policy include: the ability to spot opportunities and harness them; building 'buy-in' or acceptance at all levels; identifying issues; and offering solutions as a group.

Policy: Global e-Health Policy and Inter-jurisdictional Issues

- Globalization is the sharing of experiences and knowledge not imposing one value system upon another.
- e-Health researchers and practitioners can act as one group to direct e-health policy. However, they certainly will not be the only force.
- e-Health practitioners and researchers must be active in the global e-health policy debate.
- The telehealth community is small and the expertise is sparse. We need to align ourselves
 with other telehealth practitioners elsewhere to form a collective strategy and strengthen
 global e-health relationships.

2. Executive Summary

The fourth annual Telehealth Research Summer Institute (TRSI) was held at the University of Calgary between 25 and 28 June 2003. Participants included members from the public, private and government sectors interested in moving e-health evaluation from practice to policy. TRSI participants were actively engaged in discussions around the evidence of telehealth / e-health's $^{\alpha}$ impact and recommendations to move global e-health policy and research agendas forward.

This report is a compilation of the TRSI presentations, breakout discussions, and re-convened group discussions, as well as main messages and overall recommendations. Dissemination of the report will be achieved through e-mail distribution and placement of the report on the HTU Website (www.ucalgary.ca/telehealth).

The four themes that underscored TRSI 2003 were: Evaluation Frameworks; Policy in Practice; Knowledge Transfer; and Global e-Health Policy.

Theme 1. Theory: Evaluation Frameworks

Four presentations were made on e-health evaluation frameworks. The first introduced the theory behind evaluation frameworks in general. Subsequent presentations discussed various evaluation frameworks, including the CHIPP Evaluation Framework, Modified Donabedian, and a new, developing Synthesis Approach from Quebec. The strengths and weaknesses of each framework were highlighted.

Theme 2. Practice: Policy

Four presentations were made on policy in practice. One focused on how to move from e-health practice to policy by engaging the "people vehicle". The other three provided real life examples of how e-health policy is being practiced from health sector, institutional, and network points of view.

Theme 3. Practice: Knowledge Transfer

Day Two concluded with a presentation focusing on knowledge transfer. This presentation detailed methods of moving research into both policy and practice while illustrating the barriers to adoption of research.

Theme 4. Policy: Global e-Health Policy and Inter-jurisdictional Issues

Four presentations were made on the final morning of TRSI 2003. The first discussed the concept of a "Glocal e-Health Matrix", as a way of describing how local events have global impact and *vice versa*. The final three presentations focused on the issues and challenges that exit around e-health policy as seen in Canada, the United States and Australia.

Overall Recommendations

During the course of the Workshop, participants offered recommendations for resolution of identified issues. These recommendations were:

- Communication is key. In order to move from e-health practice to policy and influence decision-making, researchers need to become skilled at spotting opportunities and clearly conveying their messages to a variety of audiences (i.e. knowledge translation).
- There is no single method for evaluating e-health applications. When choosing an evaluation method it must be flexible and include elements such as a global / societal perspective, and common definitions and indicators.

 $[\]alpha \quad \mbox{ e-Health}$ is used as an overarching term. Telehealth is a component of e-health.

- Education of decision-makers, researchers, the public, and healthcare practitioners is vital in order to swiftly advance inter-jurisdictional e-health policy.
- There is no easy-to-employ strategy to advance inter-jurisdictional e-health policy. Any strategy will take great effort and time. Strategies that may prove beneficial include education, marketing, creating demand / expectations, knowledge warehousing, and formulating a collective strategy.

Summary

TRSI 2003 provided a forum for interested participants from government, academia, and professional bodies to actively engage in and discuss the topics of evaluation frameworks, knowledge transfer, practice to policy, and global e-health policy.

3. Introduction

The Health Telematics Unit (HTU) at the University of Calgary hosted the first **Telehealth Research Summer Institute** (**TRSI**) in July 2000. It has become an annual event focusing on research and evaluation of telehealth programs and telelearning initiatives.

The fourth annual TRSI was held at the University of Calgary from 25 to 28 June 2003. Participants included members from the public, private, and government sectors interested in moving e-health evaluation from practice to policy. TRSI participants were actively engaged in discussions around identified aspects of telehealth, and provided recommendations to move global e-health policy and research agendas forward. The themes that underscored TRSI 2003 were: evaluation frameworks; knowledge transfer; practice to policy; global e-health policy, and inter-jurisdictional strategies.

The objectives of the TRSI were to:

- Describe and discuss available evaluation frameworks.
- Compare and contrast evaluation efforts.
- Explore issues of implementing evaluation in practice.
- Develop mechanisms to transfer research findings into policy.
- > Explore issues of inter-jurisdictional (international) e-health policy.
- > Build and strengthen linkages among Government advisors, health service providers, and e-health policy researchers and evaluators.
- Produce and disseminate a "white paper" that identifies priority issues in research, evaluation and policy.

A list of participants and speaker biographies is presented in Appendices 1 and 2. The full TRSI agenda can be found as Appendix 3.

Formal presentations and panels were used to provide information and stimulate discussion. Breakout sessions were used to encourage greater individual input. An experienced and knowledgeable telehealth practitioner led each breakout session. Appendix 4 lists the questions and guidelines used during the breakout sessions. Reconvening for collective reports of the breakout sessions ensured all participants remained informed. Rapporteurs captured the thoughts and opinions offered by participants, which were collated and synthesized to form the basis of this report.

This report is presented as a series of sequential sections. A standardized reporting format has been adopted:

- a summary of 'main messages' for the section
- a brief summary of the formal presentations for that section; and
- summary notes taken from the breakout and reconvened sessions

Great effort was made to capture the *major themes and concepts* presented by participants during discussions.

4. Theory: Evaluation Frameworks

Main Messages:

- It is <u>not</u> possible to recommend a single evaluation framework.
- Whatever evaluation framework is chosen by evaluators it must be adaptable to a variety of environments.
- Evaluation frameworks must encompass elements such as a global / societal perspective, be flexible, be unbiased, and adopt common definitions and indicators.

4.1 Introduction

TRSI 2003 was divided into four themes. Within each theme participants were posed a specific question for consideration. Theme 1 focused on the theory of evaluation frameworks.

4.2 Presentations

Four presentations were made on e-health evaluation frameworks. The first introduced the theory behind evaluation frameworks in general. Subsequent presentations discussed a variety of evaluation frameworks, including the Canada Health Infrastructure Partnerships Program (CHIPP) Evaluation Framework, the Modified Donabedian, and a new, developing Synthesis Approach from Quebec. The strengths and weaknesses of each framework were highlighted.

4.2.1 Evaluation Frameworks: The Theory.

The gap between the current situation (i.e. what we are able to evaluate) and the ideal (i.e. what we would like to be able to evaluate) is very wide. This gap may suggest that we need a new approach for designing and evaluating telehealth and other programs. A possible new evaluation approach that may close the gap between what we can evaluate with certainty and what we cannot evaluate with confidence is called the Theory-Driven Program Evaluation (TDPE) Method ¹.

The TDPE is a relatively new theory of evaluation practice that attempts to build upon knowledge acquired from the practice of program evaluation over the past three decades. Program evaluation has a history filled with illustrations of investigations (such as method-driven, black-box, input/output, or outcome focused).

TDPE involves three steps:

- 1. *Developing program theory* where evaluators typically work with stakeholders to develop a common understanding of how a program is presumed to solve the social problem(s).
- 2. Formulating and prioritizing evaluation questions this common understanding of program theory helps evaluators and stakeholders identify and prioritize specific evaluation questions.
- Answering evaluation questions evaluation questions of most interest are then answered
 using the most rigorous methods possible given the practical constraints of the evaluation
 context.

Recent evaluation frameworks used in program evaluation include: IOM Model ², Balanced Score Card Model ³, Modified Donadedian Model ⁴, CHIPP Evaluation Framework ⁵, and the new Synthesis Approach.

The latter three models were the subject of subsequent presentations.

4.2.2 Modified Donabedian Evaluation Framework.

The purpose of the Modified Donabedian framework is to identify variables and research questions from a theoretical perspective, and to identify practical solutions to real-world problems. The framework must demonstrate influence on one factor or another for "quality of care" to be improved – showing the progress from structure to process to outcome ⁴.

When evaluating e-health applications, we must ask a variety of questions that will help to shed light on how the e-health intervention is of benefit to those using it. Some questions that need to be asked when evaluating e-health may include the following:

- Is the technology acceptable?
- Are patients and healthcare professionals trained to use the technology?
- Does the technology work? Is it safe and convenient to use?
- How satisfied are patients and healthcare professionals with the process or interaction and quality?
- Are clinical outcomes met?
- What are the quality of life issues?
- Is the technology cost-effective?

4.2.3 CHIPP Evaluation Framework: A Strategic Adaptation.

The Canada Health Infostructure Partnerships Program (CHIPP)⁵ is a program that was launched in 2000 with an \$80 million budget. Funding for CHIPP projects started in 2001 and it provided support from \$436,000 to \$12 million to 29 projects. The program also paid up to 50% of costs for the implementation of innovative telehealth and electronic health record (EHR) applications in healthcare systems across Canada.

The CHIPP Program objectives were to:

- Provide incentive support for collaboration, innovation, and renewal in healthcare delivery through the application of Information and Communication Technologies (ICT's).
- Support large implementation model telehealth and EHR projects to accelerate ICT-enabled healthcare delivery renewal.
- Improve the accessibility and quality of healthcare for Canadians, while increasing efficiency and protecting the long-term viability of the health system.

The policy issues addressed via the CHIPP program were: interoperability and standards; privacy and security of personal information; sustainability; licensure and reimbursement; best practices; and resource allocation and usage.

The CHIPP program evaluation was based on the IOM Model ² which focused on quality, access, acceptability, and costs. Alterations to the IOM Model were made to better reflect CHIPP program objectives, such as:

- What are we trying to achieve?
- What do we want to learn about ICT's in health?
- What do we want to learn about evaluation?
- Adaptability for different types and sizes of projects.
- Applicability in the short-term and the long-term.
- Don't re-invent the wheel.
- Feed into program evaluation.

The CHIPP evaluation framework focused on ten main indicators. These indicators were: quality, accessibility, cost, acceptability, integration (into the health system), health and related impacts, technology performance, privacy, rationale and, lessons learned.

A number of CHIPP funded programs have completed their project evaluations. Remaining projects are to have their evaluations completed by March 2004.

Key points learned from the CHIPP program were:

- Strategic orientation evaluation is a management and decision tool as well as an accountability mechanism.
- It is important to evaluate ongoing need, rationale, and lessons learned.
- Do not re-invent the wheel.
- Adapt to context and purpose.

4.2.4 Synthesis Framework for a Useful and Usable Evaluation.

Over the last decade a diversity of new information and communication technologies (ICT's) has emerged in the healthcare system. In a context of rapid technological developments, coupled with major reforms in the healthcare system and the escalation of costs, the assessment of these technologies is a priority for decision-makers. The importance of evaluation of ICT projects at each stage, from their emergence to their diffusion, is also evident.

Evaluation must be seen as an input for initiating, implementing, and diffusing innovation, decision-making processes, policy making, and healthcare system development.

To develop the Synthesis Framework, Fortin *et al* referred to a wide variety of models, theories and literature. Information from clinical practice ⁶, organizational behaviour ⁷, political science ⁸, change management ⁹, and behaviour management ¹⁰ were also used to develop the framework.

The strategy for developing the framework was to be: pluralist (i.e. multidisciplinary) and participatory in nature; comprehensive; build in evaluation; progressively adapt to the different stages and needs of the project; constructivist (i.e., view it as a learning process); and facilitative to build trust.

This multidimensional logical framework encompasses major components when evaluating ICT projects. The first dimension of the framework, the environment, includes the project's nature and context, government priorities, and levels of decision-making (such as federal, provincial, regional or local). The other dimensions are: the stage of the project, the specific issues being addressed, and the stakeholders involved. Elements of the evaluation itself are also specified (i.e., theoretical approaches, methodological approaches, strategies and data collection methods). The purpose of the evaluation process is to share knowledge gained from ICT projects at their different stages to support decision-making.

4.3 Group Discussion

The following Group Discussions revolved around three main topics: the strengths and weaknesses of the evaluation frameworks, development of a Pan-Canadian evaluation tool, and how to avoid the *ad hoc* use of evaluation models?

The question for Theme 1 discussion was:

What are the strengths and weaknesses of each of the evaluation frameworks?

4.3.1 Strengths and Weaknesses of Each Evaluation Framework

The three breakout groups were asked to assess the strengths and weaknesses of the IOM, CHIPP, Balanced Score Card, Adapted Donabedian, and the Synthesis Models. It was noted by some of the breakout groups that the models presented are grounded in theory, and to be of use, they must be able to be applied to reality. The models need to be dynamic in nature in order to effectively evaluate e-health interventions.

The group as a whole agreed that whatever model is chosen, to evaluate an e-health intervention, it must be flexible. The group also agreed that choosing from a variety of evaluation models is advantageous, as long as there is consistency in the indicators used.

No matter what model you use, it has to be flexible.

(Working Group Participant)

Another breakout group noted that in order to move e-health forward, the value to the end user must be apparent. Evaluation tends to deal with the *process* and not the *value* to end-users. One way to increase the value of evaluation would be by performing randomized control trials (RTC's).

Table 1 summarizes the breakout groups' discussions around the strengths and weaknesses of each of the models presented.

4.4 Group Discussion

The first question for group discussion was:

What recommendations can be provided for development of a Pan-Canadian evaluation model?

4.4.1 Development of a Pan-Canadian Model

It is not in the best interest of telehealth evaluation to pick only one model.

(Breakout Group Discussant)

All breakout groups were in agreement that it is **not** possible to recommend just one evaluation model for e-health interventions in Canada (i.e. using only the IOM Model or only the CHIPP Model). The group, as a whole, suggested that developing an evaluation tool kit may be a more appropriate option. Such a tool kit could be populated with standardized definitions and examples of well-performed evaluations.

One breakout group developed a draft framework for a possible tool kit (Figure 1) that could be used by the e-health community. In order to be useful, the tool kit needs to address the theory of evaluation, the life cycle of the project, education, and a recommended set of outcome indicators.

4.5 Group Discussion

Given that it is not possible to recommend a single evaluation model, the second question for group discussion was:

What recommendations can be provided to minimize use of 'ad hoc' evaluation frameworks?

TABLE 1: Strengths and Weaknesses of Evaluation Models

Model	Strengths	Weaknesses
IOM Model	Is a telehealth specific model Widely accepted Simple to use Flexible Based on many studies Has sustained interest	 Not application specific Needs refinement Not comprehensive Issues of readiness and context are missing Users may have difficulty with terms such as 'satisfaction'
CHIPP Model	1. Built from what is already out there (i.e. IOM) 2. Widely used in Canada and comprehensive 3. Can be tailored to applications 4. Easy to understand by nonevaluators	Not all lessons learned are revealed Does not capture the social elements
Balanced Score Card	1. Integrates results 2. Saves money 3. Helps to identify gaps 4. Can accommodate IOM and CIHI indicators 5. Frames start-up programs nicely 6. Can be adapted to e-health applications	Not an evaluation tool Not health specific (needs to be adapted to e-health)
Adapted Donabedian Model	Comes from the healthcare arena Is a simple model (not purely from business sector)	1. If you do not know the theory, it is hard to apply
Synthesis Framework (Fortin <i>et al</i>)	1. Based on theory and literature 2. Strong stakeholder input 3. Knowledge and 'lessons learned' element 4. Simple to use	Unclear terminology How to implement is as yet unclear?

Figure 1: Framework for Content of an Evaluation Tool Kit

- 1. Recommended data set; needs to include:
 - outcome indicators
 - process indicators
 - cost-effectiveness indicators
- 2. Theory of evaluation.
- 3. Application to stages (life cycle) of program development.
- 4. Model after existing tool kits (such as HIV AIDS).
- 5. Clearly state:
 - what you are going to do,
 - how you are going to do it, and
 - when you are going to do it.
- 6. Education share results with other researchers and decision -makers.

4.5.1 Evaluation Framework Recommendations

Ad hoc research does not lead to any major consolidated body of evidence.

(Working Group Discussant)

Each breakout group provided suggestions that may help guide the overall use of evaluation models for e-health evaluation in Canada.

In order to minimize use of *ad hoc* evaluation frameworks within the e-health arena, evaluation approaches and models or frameworks *MUST* encompass the following:

- Global and societal perspective.
- Common definitions.
- Flexibility (adjust to reflect specific needs).
- · Use benchmarking.
- Transparency of evaluation methods.
- Able to follow the life cycle of the project.
- Provide guidelines or evaluation architecture (i.e. the tool kit).
- Evaluation needs to be viewed as an investment and not a cost.
- Seek input when developing a plan (i.e. networking and seek expertise).
- Keep evaluation methods unbiased and learn from failures.
- The evaluation process must be able to feed into the decision-making process.
- Identify other main users of the evaluation based on their needs and interests (such as technical developers, policy makers, academics and the general public).

Some group members reported that lack of evaluation and evidence has resulted in missed funding opportunities. Researchers and practitioners need to provide funding agencies with an array of impact stories, evaluation of the evidence (both qualitative and quantitative), and establish political connections. If they do so, they better their chances of setting their research agendas as part of the broader political agenda.

One group participant highlighted the advantages of establishing political connections by presenting an example of inviting a US Senator to partake in a demonstration of an e-health application in use delivering care. This form of "outreach" worked extremely well, as the Senator offered advice and help on the political front to push the e-health application forward.

The participants concluded that it would be advantageous for researchers to show funders and decision-makers how the e-health programs work – and to act as a team, rather than viewing decision-makers as a separate entity from the success of e-health.

For e-health to be successful, politics and research need to work in concert, as opposed to researchers only pulling the political chain.

(Working Group Discussant)

5. Practice: Policy - What do we have and what do we need?

Key Points:

- Minimal e-health policy exists in the healthcare sector; what e-health policy does exist is being developed locally and in an uncoordinated and *ad hoc* manner.
- The Glocal e-Health Policy Matrix is a good start, but needs further development.
- It is important to know who the 'drivers' of policy are. These drivers will include the Canadian Institute for Health Information (CIHI), the World Health Organization (WHO) and the General Public. Researchers need to be able to communicate with these 'drivers' in order to guide the development and adoption of e-health policy.
- Communication is key to moving from e-health practice to policy.

5.1 Introduction

Theme 2 of the TRSI Workshop focused on practice to policy. The question for Theme 2 was:

What types of policy are needed most urgently and at which levels?

5.2 Presentations

Four presentations were made on the issue of policy in practice. One focused on how to move from e-health practice to policy, by engaging the "people vehicle". The other three provided real life examples of how e-health policy is being practiced from health, institutional, and network points of view.

5.2.1 Practice to Policy.

e-Health is now incorporated to varying degrees into healthcare practice in Canada and internationally. We therefore need to move from the practice of e-health, to formulation of policy to guide the future development and adoption of e-health.

There have been a few reports that clearly define the current Canadian healthcare system and possible reform to ensure sustainability. Some examples of these reform documents include: the Mazankowski Report ¹¹; the Romanow Commission ¹²; the Fyke Report ¹³; the Clair Report ¹⁴; the Canada Health Act ¹⁵, and other national and global initiatives, activities, and frameworks.

How do we move from practice to policy – more specifically, what are our roles and responsibilities as researchers? As researchers we need to make sure that we measure the "right" thing and that we are measuring the thing "right". In addition we need to:

- Strategically align evaluation and research activities with priorities and needs.
- Align e-health policies with existing policies.
- Frame (package) results to influence and persuade policy- and decision-makers.
- Keep it simple: and most of all act.

We cannot initiate and effectively move from practice to policy by ourselves. We need the "people vehicle", which includes local and other champions, opinion leaders, change agents, and change aids.

The Socio-economic Impact of Telehealth: State of the Science Report ¹⁶ is a document that reveals current telehealth evidence to affect healthcare. The priority areas of this document are: paediatrics, mental health, radiology and ultrasound, first nations, geriatrics, rehabilitation, home care, renal, and rural and remote. The main guestions asked within each of the priority areas were:

- What level of evidence is there that e-health can impact socio-economic issues?
- What are the implications for policy and decision-makers, as well as future research(ers)?
- What do we do with what we have?
- Where should we go from here?

The document reports that the best evidence exists for: home telehealth, mental health, radiology, and rural remote applications (i.e., varied uses such as for geriatrics).

To move from practice to policy, we need to follow strategies that include:

- Integration.
- Policy goal-setting.
- Recognition and resolution of policy barriers/ challenges in telehealth.
- Collaboration.
- Partnerships and sharing.
- Identification of high-impact areas for telehealth.
- Evaluation and research.
- Investment.

5.2.2 Policy in Practice: A Health System View.

The Calgary Health Region (CHR) ¹⁷ was formed in 1994 and is the largest integrated healthcare region in Canada. The CHR services over 1 million people, offers specialized medical services to southern Alberta and south-eastern B.C. and is the largest employer in the city with over 22,000 staff. The CHR has four primary portfolios: Healthy Communities, Care in Community, Mental Health Services, and Primary Care Initiatives.

Health Link Alberta is a multi-channel 24x7 contact centre providing nurse advice via telephone and health information and system navigation via telephone and web. Further clinical development of Health Link Alberta will focus on: integration with primary care initiatives, disease management, and mental health. Health Link Alberta became a provincial system as of May 2003. It is operationally delivered through Calgary and Capital (Edmonton) Health Regions and has extensive regional input.

The current Telecare services provided by the CHR include:

- 943-Link.
- Early Start.
- Children's Telephone Advice Line.
- Nutrition Helpline.
- Crowfoot Village Family Practice After Hour Helpline.
- Public Health Nurse Office Nurse Line.

For a health advice and community information service to be successful it needs to be:

- Accessible.
- Of top quality.
- Collaborative and innovative in nature.

The main challenges for policy include issues such as incentives, coordination, change management, and uncertainties.

5.2.3 Policy in Practice: Organization Policy.

Integrating e-health services requires broader thinking. Champions are needed from all sectors: academia, government, industry, and practice in order to be successful. We must take advantage of opportunities for increased participation across groups and focus on adding policy developers early in the planning and implementation stages of the process.

Translation of research and evaluation results into policy is a critical factor. Dissemination of results is required to support a consensus-building approach; and to develop consensus on standards, evaluation methods, and tools. Policy development must also consider both the local and global impact.

Organizational experience shows that issues such as consent, registration, documentation, licensure, credentialing, confidentiality and reimbursement must be solved before telehealth can be expected to flourish. As for "readiness" (the desire to change and develop policy relating to the key issues above), the IWK Health Centre will be developing policy over the next 5 years. To date, the IWK Health Centre is questioning the current policy process and is looking to develop clinical guidelines. Evidence of this readiness can be seen in the following provinces:

- Nova Scotia, who is asking organizations to partake in policy development.
- New Brunswick where there is Regional Organization Collaboration.
- Newfoundland where there is movent towards Operational Guidelines.
- Ontario where there has been the establishment of a Policy Committee (June 2003).

The objective of the 2002 National Telehealth Coordinators (NTC) Workshop ¹⁸ was to 'identify and support the development of operational guidelines to ensure that telehealth services are interoperable, optimally delivered and utilized across jurisdictions.' The results from the Workshop indicated the need for more information exchange among Telehealth programs, and the need for clear paths to escalate issues and action items.

Key findings indicated the need for a common process in developing policy and guidelines, and that this requires a national approach. The identified policy priorities (from the 2002 NTC Workshop) are:

- Telehealth consent.
- Registration.
- Documentation and records.
- Job descriptions, roles and responsibilities (human resource).
- Telehealth awareness, evaluation, and training.
- Other interoperability issues.

Despite the lack of national telehealth guidelines, inter-jurisdictional telehealth activities are occurring in Canada. The biggest barriers to greater activities are provincial health acts and policies governing licensure.

5.2.4 Policy in Practice: Policy at the Network Level.

An example of policy development at the network level is the Telemental Health Service (TMH) in Alberta ¹⁹. The program's focus is on innovative clinical service and education and administrative support. The TMH implementation timeline was as follows:

- Technology demo (1994).
- Pilot (1996).
- Expansion to routine service (1998).

- Addition of subspecialties/ services (1998 to present).
- Addition of 'provincially funded' sites (1998 to present).
- Addition of education component (1999).

The TMH program's clinical services include: child/adolescent, adult, geriatric, forensic assessment and follow up, and a community mental health clinic pilot. Activity for the 2002/03 year included 836 direct clinical consultations, 44 indirect (case review) sessions, and 93 learning sessions on Mental Health topics with 3,833 participants, mostly to rural receiving sites. Evaluation of the TMH program²⁰ addressed the following issues:

- Specification (e.g. key technical operating characteristics).
- Performance measures (e.g. time and cost).
- Outcomes (e.g. safety, efficacy, and effectiveness).
- Summary measures (e.g. cost comparison and cost effectiveness).
- Operational and other considerations (e.g. access, acceptability to patients, caregivers, managers).
- Policy impact: feasibility, expansion, and sustainability.

Current policy challenges within the program include: advocacy and linkages, best practices and standards, monitoring and evaluation of the mental health system, governing province wide services, and mental health promotion and education.

5.3 Group Discussion

The question for Theme 2 discussion was:

What types of policy are needed most urgently and at which levels?

To assist in this process, the only known model describing e-health policy issues was used as the basis for discussion.

5.3.1 'Glocal' e-Health Policy Matrix Model

To help answer the Theme 2 question, participants were asked to review the existing model, and to respond to the following questions:

Is the draft Glocal e-Health Policy Matrix representative of the levels, themes, and actors involved in e-health?

If not, what changes can be recommended?

The Glocal e-health Policy Matrix includes defined actors, issues, policy themes and policy levels. The actors include: international bodies, NGO's, private sector, governments, institutions, agencies, professional groups / associations, and public. The policy levels include: patient / provider, program, organisation / facility, regional, provincial, national, and global. The policy themes include: professional, operational, institutional, ethical, legal, cultural, commercial, communication, and interoperability. The current two-dimensional Matrix is shown in Figure 2. When developed as a three-dimensional model, the specific policy issues will be identified at each point of intersection.

The Matrix illustrates the complexity of developing e-health policy by identifying the elements (actors, themes, levels) involved.

The breakout groups were asked to review the Glocal e-Health Policy Matrix, identify key issues of concern, and provide suggestions on how to improve the Matrix.

In Canada there are so many issues that we are trying to address at this point in time. We are covering a huge spectrum – from the information highway to telehealth licensing to remote access. From the provincial perspective you see that the main issue that needs to be addressed is policy.

(Breakout Session Participant)

The key issues identified by the groups that need to be addressed within the Glocal e-Health Policy Matrix are:

- Human resource issues.
- Consent.
- Registration.
- Documentation.
- Inter-jurisdictional issues such as licensure.
- Fee-for-service issues and other operational issues, such as funding.
- Coordination and resource allocation.
- Privacy and policy issues.
- Communication issues.

Some group participants made reference to the Canadian Federal-Provincial-Territorial (F/P/T) Working Group which addressed telehealth issues. This Working Group identified reimbursement, viability, e-charts and e-health integration as the most pressing e-health topics. However, there has been reorganization in the Federal Provincial Advisory Committee structure, and telehealth is no longer discussed at the Federal – Provincial level. The new committee now looks at health technology assessment, privacy, genetics and pharmaceutical issues. Therefore, at the National level, there is currently no clear priority on telehealth. This will have direct effect on the key issues identified and their resolution.

The problems we have are numerous and the questions that arise are many. What comes first? Licensure is definitely one of them – and so is funding at the provincial level and reimbursement across jurisdictions. Interoperability is not causing that much trouble at the practical level.

(Breakout Session Participant)

Once the Glocal e-Health Policy Matrix was examined to identify key issues of concern, the next step was to provide comments on improving the Matrix. The suggestions from each group are presented in Table 2.

With respect to suggestion #15, "Know the drivers of the bus", during the discussion it became apparent that identifying and working in partnerships with the telehealth 'bus drivers' is critical. The group members further identified these 'drivers' as including the following organizations / groups:

- Canadian Institute for Health Information (CIHI).
- Canadian Organization for Advancement of Computers in Health (COACH).
- ➤ The Federal-Provincial-Territorial Advisory Committee for Information and Emerging Technologies (F/P/T ACIET).
- General Public.
- Professional Groups (wide variety).
- Providers.
- World Health Organization (WHO).
- Canadian Society of Telehealth (CST).
- Ministries of Labour, Health and Industry.

Figure 2: Glocal e-Health Matrix

HTU-GeRT 'Glocal' e-Health Policy Matrix								
		Policy Levels						
Policy Themes (and examples of issues)	Individual (Patient / Provider)	Community	Program	Organisation / Facility	Regional	Provincial	National	Global
Professional Credentialing Reimbursement Licensing Registration								
Operational Funding								
Institutional Accreditation Authorisation [data access]								
Ethical Confidentiality Consent								
Legal Privacy Security								
Cultural Traditional Medicine Health beliefs								
Commercial Intellectual Property Copyright								
Communication Cross-border acceptance Common 'language'								
Interoperability Technical Professional Organisational								

Categories of e-health actors (and examples):

International Bodies (e.g. WHO (World Health Organisation), PAHO (Pan-American Health Organisation), ITU (international Telecommunications Union), ISO (International Standards Organisation), World Bank, UNDP (United Nations Development Program);

Non-Government Organisations (Charitable groups, Private Sector Foundations), Private Sector (Multinational corporations);

Governments (National, Regional (e.g. province, state), Local);

Institutions (Hospitals (regional vs rural), Clinics, Academic Institutions);

Agencies (Accreditation agencies);

Professional Groups / Associations (Physicians, Nurses, Dentists, Allied Healthcare Professionals (multiple));

Public (Individual consumers, Interest Groups).

TABLE 2: Suggested Revisions to the "Glocal e-Health Policy Matrix" Model

Suggested Revisions and Comments to the Glocal e-Health Policy Matrix

- **1**. Change the term "global" to "international".
- 2. Industry, research and regulatory/legal sectors should be added as additional policy levels.
- 3. The dynamics of the healthcare sector should be highlighted.
- 4. Methods of supporting innovation needs to be highlighted.
- 5. A new theme called health services delivery is needed to better address the issue of access.
- 6. Collaboration and coordination need to represented in the grid.
- 7. Cultural aspects need to include special needs.
- 8. The term "institutional" should be renamed "healthcare sectors" for clarity.
- **9**. The term "interoperability" should be renamed "integration" for clarity.
- 10. Where do definitions/standards and indicators of evaluation fit in the Matrix?
- **11**. At the policy level, patient/provider needs to be separated.
- **12**. Where does community fit in the Matrix?
- **13**. Policy themes are not mutually exclusive.
- 14. Policy levels need to include provincial, national, organizational levels.
- **15**. Know the "Drivers of the Bus".

6. Practice: Knowledge Transfer

Key Points:

- Inter-jurisdictional policy is important for several reasons, including: to help network the environment, people, and technology, and to bring together a number of stakeholders and levels.
- Knowledge transfer strategies are not easy or simple to employ. Any strategy will take great effort and time.
- Knowledge transfer strategies that could be employed by the broader telehealth community include: education, marketing, creating demand / expectations, knowledge warehousing, and formulating a collective strategy.
- Key elements that will aid in swiftly advancing the development of inter-jurisdictional
 policy include: the ability to spot opportunities and harness them; building 'buy-in' or
 acceptance at all levels; identifying issues; and offering solutions as a group.

6.1 Introduction

Theme 3 of the TRSI Workshop focused on knowledge transfer. The question for Theme 3 was:

What knowledge transfer strategy(ies) can be recommended to more swiftly achieve Canadian interjurisdictional policy?

6.2 Presentation

Day Two concluded with a presentation on knowledge transfer. This presentation detailed methods of moving research into both policy and practice, while illustrating the barriers to adoption of research.

6.2.1 Knowledge Transfer: Moving Research into Policy and Practice.

Examples of translation of evidence into policy and practice were the epidemics of cholera and the building of water pumping stations in Hamilton, Canada in 1857. Over a 30-year period, the new science of epidemiology proved that cholera was transmitted though contaminated water. It was in 1857 that the city of Hamilton started the construction of their first pump house. However, the driving factor behind the development of the pump house was not that clean water reduced the transmission of cholera, but rather:

- Fear of fires in the business district.
- Desire to attract wealthy people from Toronto.
- Offensiveness of raw sewage in the streets.

This example illustrates how a city policy (to build a pump house) was based on political factors rather than the epidemiological research evidence about the causes of cholera. This example also clearly shows that the barriers to adoption of research, both in the past and in the present, are ignorance, competing interests, and inertia. Efforts to promote knowledge transfer have focused too much on overcoming differences in knowledge (ignorance). The effects of competing interests and the inertia it causes have been neglected.

Is co-creation of policy and knowledge (between policy-makers and the research community) the solution? The key to good collaboration is finding researchable questions that are both scientifically interesting and important to the decision-maker.

It must keep in mind that the 'solution' to today's ignorance lies in yesterday's research. Today's cocreated research ought to be about anticipating the need for solutions to tomorrow's problem. This requires a re-definition of what is 'policy relevant'.

Health policy is a contest. Health spending competes with private spending, public projects which can be health promoting, and with itself over the *means* of achieving agreed *ends*. There is no such thing as the common good. Competing interests exist, and do so even when there are shared values. Policy creates winners and losers, and a decision-maker will therefore find inertia attractive.

The seduction of inertia: There is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in the introduction of a new order to things. Because the inventor has for enemies all those who have done well under the old conditions and lukewarm defenders in those who may do well under the new ²¹.

The key factors in success of any campaign are: creative framing of the problem and its solution; power to generate resources and translate ideas into action; and leadership with commitment to challenge the status quo ²².

Political arguments are seldom won only by elegance of logic or by those who can best assemble rational arguments. These are mere strategies within a wider battlefront. The real issue is: which are the overall framings of debates that best succeed in capturing public opinion and political will ²³?

Conclusions:

- More evidence is needed.
- Proper dissemination methods are needed.
- 'Better' evidence is needed ... not on the problem or its potential solutions, but on how to overcome inertia caused by competing interests.

6.3 Group Discussion

The question for Theme 3 discussion was:

What knowledge transfer strategy(ies) can be recommended to more swiftly achieve Canadian interjurisdictional policy?

To help answer the Theme 3 question, participants were asked to discuss four sequentially related questions:

- Is inter-jurisdictional policy of importance and why?
- Which strategies might be simplest to employ for the broader telehealth community?
- What education needs may arise in implementing knowledge transfer activities on a broader basis – for public, private, industry etc.
- What strategy could be recommended to swiftly advance development of Canadian inter – jurisdictional policy.

6.3.1 Is inter-jurisdictional policy of importance and why?

It was clarified in the reconvened session that inter-jurisdictional policy applies to more than just across provincial or territorial boundaries. One needs to consider the question in terms of across institutions, programs, and even hallways.

In answering the question whether inter-jurisdictional policy is important, there was a resounding "Yes" from the group.

If we want to benefit from and maximize the use of technology we need inter – jurisdictional policy... as technology has no frontiers.

(Working Group Participant)

Inter-jurisdictional policy was considered to be important for a number of reasons:

- To help network the environment, people, and technology.
- To bring together a number of stakeholders and levels.
- For health reform.
- To facilitate consistent collecting and sharing of information.
- To help at the operational level for allocating resources.
- To facilitate administrative interoperability.
- To establish risk management programs and reduce liability issues.

It was noted by one participant that even though policy is important, it might also act as a barrier. Different policy structures in different organizations will provide incompatibilities that could hinder the adoption and uptake of e-health. If unifying e-health policy is not developed, this incompatibility could also extend to provinces and nations.

6.3.2 Which knowledge transfer strategies might be simplest to employ for the broader telehealth community?

The breakout groups identified the follow strategies as being important to employ within the broader telehealth community. It was duly noted however, that the following strategies are **not** easy or simple to employ. Any one of these strategies will take great effort and time to use.

- 1. Education Strategy what telehealth can do for you?
 - a) Educate practitioners
 - b) Educate the public
 - c) Educate decision-makers

2. Marketing Strategy – what is your theme and / or logo?

The aim is to target your message to your various stakeholder groups to make your message understandable to that group. The audience is key. We must be able to translate our message into our audience's language. This is known as knowledge translation. We must also match the research evidence to the audience.

3. Create a Demand / Expectations Strategy

For example, help build a demand for home telehealth by making the public aware of what options are open to them. Help to create expectations on behalf of the practitioners.

4. Knowledge Warehousing Strategy

Accumulate knowledge into a warehouse database so that those in need of information will know where to go to get it.

5. Collective Strategy

Networking and exchange between evaluators and evaluations is needed to develop closer networks that strengthen a collective strategy (strength in numbers).

It was noted by a number of the working group participants that news releases, presentations, and newsletters are simple and effective ways of communicating our messages to policy-makers. There is a great need to continue to get the messages across in simple and concise ways. This could be achieved by hiring a journalist for any given project or by developing a media campaign.

6.3.3 What educational needs may arise in implementing knowledge transfer activities on a broader basis – for public, private, industry etc.

The breakout groups identified a number of educational needs that may arise in implementing knowledge transfer activities on a broader basis. Education in the following areas will help secure ehealth in the Canadian healthcare system as well as propel it forward (i.e. move e-health from being a separate part of healthcare to being an integrated part of healthcare):

- What knowledge transfer is and how to do it properly?
- · Change management issues.
- Consensus building (i.e. as researchers we are constantly contradicting each other).
- How policy makers make policy (i.e. determinants of policy making)?
- How to spot opportunities and how to harness them?
- How to do smart sound-bites for media?
- Knowing when and how to ask for outside assistance.
- Knowing who to hire (i.e. locate appropriate services to meet your needs).
- Communication skills and marketing strategies.

A Key Point was noted by participants:

We must provide decision-makers with consistent information that is easy to understand (i.e. in lay-language or in language of the decision maker). The two elements that are vital when communicating are *context* and *audience*.

6.3.4 What strategy could be recommended to swiftly advance development of Canadian inter – jurisdictional policy.

The breakout groups responded to this question by identifying key elements that they felt would aid in advancing the development of inter-jurisdictional policy. These key elements included:

- Ability to spot opportunities and be able to harness them. This could include e-health or telehealth think-tanks.
- Building buy-in or acceptance at all levels.
- Identifying issues and offering solutions. Letting decision-makers know that researchers are able to help with solutions.
- Ability to develop smart sound-bites for media (radio, T.V., print) so messages are consistent, clear, and easy to understand.
- Ability to understand the priorities of decision-makers.
- Use of Advisory Committee for Information & Emerging Technologies (ACIET) and Infoway.
- Ability to narrow things down to a few priorities.

We should identify issues and offer solutions at the same time. We need to educate, help with the solutions and prioritize the messages that we want to communicate.

(Working Group Participant)

The issues raised around inter–jurisdictional policy and knowledge transfer strategies are summarized in Figure 3.

Figure 3: Summary of Inter-jurisdictional Policy and Knowledge Transfer Strategies

- ✓ Re-describe and package the information so that is it appropriate for the target audience.
- ✓ Be able to focus on the key message.
- ✓ Understand the priorities of decision-makers.
- ✓ Know the context and why the information is needed.
- ✓ Make your point well, backed up with hard data.
- ✓ Reiterate your message. Tell them what you are going to do, tell then what you have done, and tell them again!

7. Policy: Global e-Health Policy and Inter-jurisdictional Issues

Key Points:

- Globalization is the sharing of experiences and knowledge not imposing one value system upon another.
- e-Health researchers and practitioners can act as one group to direct e-health policy. However, they certainly will not be the only force.
- e-Health practitioners and researchers must be active in the global e-health policy debate.
- The telehealth community is small and the expertise is sparse. We need to align ourselves with other telehealth practitioners elsewhere to form a collective strategy and strengthen global e-health relationships.

7.1 Introduction

Theme 4 of the TRSI Workshop focused on the issues and challenges of e-health policy in a borderless world.

7.2 Presentations

Four presentations were made on the final morning of TRSI 2003. The first discussed the 'Glocal' model of e-health policy as a way of describing how local events have global impact and *vice versa*. The final three presentations focused on the issues and challenges around e-health policy as experienced in Canada, the United States and Australia.

7.2.1 A "Glocal" e-Health Policy Perspective.

The Global perspective was described through a quote from Kofi Annan: "Ours is a world in which no individual, and no country, exists in isolation.... All of us live simultaneously in our own communities and in the world at large..... Peoples and cultures are increasingly hybrid... We are connected, wired, and interdependent" ²⁴.

The term "glocal" was first coined in the public health literature, and is a combination of global and local (global and local = glocal). Its value lies in reminding us - succinctly and constantly – that, in our networked world, what happens locally has global impact, and what happens globally has local impact. This is particularly so for e-health policy, since policy in any single jurisdiction may hamper, even prevent, e-health from reaching its full potential. 'Glocal' e-health policy is need, and we should be striving to achieve this now – as we are developing.

e-Health policy has been defined as: a set of statements, directives, regulations, laws, and judicial interpretations that direct and manage the life cycle of e-health. Health policy typically determines the rate and direction of development of healthcare initiatives. e-Health is developing so swiftly that policy development has been left behind.

Glocal e-health policy is a huge and complex undertaking. Health policy is essentially a sovereign matter. But e-health has the inherent ability to transgress all existing geo-political boundaries. The challenges of glocal e-health policy include:

 Intra-jurisdictional issues (interactions within a single jurisdiction [health region; province / state, nation]): • Inter-jurisdictional issues (interactions between two or amongst many jurisdictions [health regions; provinces / states, nations]).

The Glocal e-health Policy Matrix is being developed to describe glocal e-health policy issues, and to facilitate and encourage glocal e-health policy *research* and policy *development*. Identifying the issues is only one part of the puzzle. We need to design a strategy and process by which to bring the multiple stakeholders together in a process that permits local and global perspectives to be addressed concomitantly and in a manner that informs both levels. A conceptual model was described by which this might be achieved.

7.2.2 e-Health Policy in Australia.

e-Health is the intersection of telemedicine, telehealth and the Internet.

The stages of adoption of new techniques in medicine are:

- Stage 1. Does it work at a technical level?
- Stage 2. Is it cost-effective?
- Stage 3. The widespread diffusion.

Because e-health was fragmented and disjointed, the Australian and New Zealand Government's set up the ANZ Telehealth Committee in 1998. This committee's primary objectives were to: develop evaluation methodologies, list and describe Australian telehealth activities, and become a Telehealth think tank, located in Melbourne. It was abolished in 2001.

Another Australian Governmental Committee was then developed – The National Health Information Management Advisory Council ²⁵. The role of the Council was to report on the health information action plan for Australia and various other plans, including the electronic health record, and to set up health information conferences.

Government achievements in e-health are few, as there is little action (as opposed to words) and little funding.

In Australia today, telehealth is not a mainstream activity. There are only two large e-health software companies: IBA 26 – providing healthcare information systems; and HCN 27 – providing general practitioner software. IBA develops healthcare information systems, has 250 customers worldwide, and is worth \$530 million. HCN is a dominant supplier of general practitioner software, has 16,000 medical users, and the latest half-year profit was \$0.6 million.

e-Health in Australia has the same policy challenges as everywhere, such as reimbursement, liability and licensing. The solutions are to provide an incentive for e-health, and to encourage research to demonstrate cost-effectiveness of e-health applications. In addition, central funding is required. The development of policies alone is not enough.

There are strong arguments for the use of telehealth in Queensland due to long distances and expensive transport. Currently, the health service pays to move patients. There is relatively little clinical use of e-health in Queensland.

7.2.3 Telehealth Policy Issues and Challenges in the United States.

Past telehealth challenges in the US included: reimbursement (Medicare, Medicaid and private), equipment costs, telecommunication costs (which are very high and there is no universal service fund) and provider acceptance. Current challenges include: reimbursement (Medicare, Medicaid and private), telecommunication costs (which are lower than in the past, but still too high), provider acceptance and privacy and security issues!

In the US, telehealth policy makers include:

- Federal Government
- State Government
- Private Groups, such as Joint Commission on the Accreditation of Healthcare Organizations (JCAHO)
- Federation of State Medical Boards
- National Council of State Boards of Nursing (NCSBN) and
- Internal Organizations.

Currently, the federal policies impacting telehealth in the US are:

- Reimbursement (Centers for Medicare & Medicaid Services [CMS])
- Telecommunications (Federal Communications Commission [FCC])
- Universal Service Fund (USF)
- Privacy and Security NEW (CMS) and
- Health Insurance Portability and Accountability Act (HIPAA).

State policies impacting telehealth are:

- Reimbursement (Medicaid)
- Telecommunications (Public Service/Utilities Commissions)
- Telecommunication Tariffs
- State Universal Service Fund
- · Privacy and Security (HIPAA) and
- · Licensure of Providers.

Private policies impacting telehealth in the US are:

- Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) (Provider Credentialing)
- Federation of State Medical Boards (Licensing, Distribution of Pharmaceuticals)
- National Council of State Boards of Nursing (NCSBN) (Nurse Licensure Compact).

Federal, State and Private healthcare policies are often subject to interpretation by the internal organization. Telehealth policy issues in the United States are handled by developing policy issues slowly. From experience, the US has learnt that it takes the energy of many resources to push policy issues forward. These include the Center for Telemedicine Law, American Telemedicine Association, Association of Telemedicine Service Providers, Southern and Western Governors' Association, FSMB, NAHC, NRHA, ASHA, NCSBN, forums such as the annual Telehealth Leadership Conference, and grass roots advocacy by individuals.

Therefore, in the US setting the main objective of developing e-health policy is that: *Time + Energy = Money.*

7.2.4 e-Health Policy in a Canadian Setting: Some Issues and Challenges.

A legislative issue and challenge. The Personal Information Protection and Electronic Documents Act (PIPEDA ²⁸) is legislation that affects every individual, corporation, partnership, and association operating in Canada that collects, uses, or discloses personal health information in the course of 'commercial activities' (a broadly interpreted term) or, if it is a federally regulated employer, when dealing with its employee's health data.

The 10 PIPEDA principles are: accountability; identifying purposes; consent; limiting collection; limiting use; disclosure; and retention; accuracy; safeguards; openness; individual access; and challenging compliance. PIPEDA Health Information will pertain to: an individual's physical and mental health; the health services provided to the individual; any donations of bodily parts or substances by an individual; and information obtained when registering to receive health services.

Implementing PIPEDA requires two aspects:

- 1. *Transfer of Personal Information* specific requirements when transferring personal information to third parties [service providers, subsidiaries, affiliates, and partners] and
- 2. No Grandfathering PIPEDA applies to personal information collected before January 1, 2004. If no consent was given when personal information was initially collected, then such data may no longer be used until consent is subsequently obtained from that individual.

A technology issue and challenge. Interoperability remains a major concern. It is desirable to promote open systems, and non-proprietary dependence, if we are to achive 'seamless' system to system exchange. But interoperability will only occur if there is a collective will (such as a shared approach and not a cookie cutter solution) and the technology provides interfaces to create system-to-system exchange and messaging standards.

A system issue and challenge is integration. This occurs when the health information comes together within the patient encounter and is seamless to the work-flow. Despite significant investment and many 'pilot' projects, telehealth remains a peripheral activity. Renewed efforts to integrate telehealth into mainstream healthcare are essential if the benefits of telehealth for the healthcare system and patient are to be accrued.

A healthcare reform issue and challenge is Free Trade. In 1996, a set of principles were applied to Medicare in Alberta (1996) that called for ensuring "a strong role for the private sector in healthcare... and giving consumers the right to voluntarily purchase health services outside assessed need." Such initiatives as this may raise issues under the North American Free Trade Agreement (NAFTA ²⁹) rules. It is possible that were foreign companies allowed to operate and provide private healthcare services in Canada, future attempts to restrict or remove them might require Canada (or the individual jurisdiction) to compensate any foreign investors. The rationale would be that they were squeezed out of business in Canada by health reform limiting such private enterprise. Under NAFTA, such health reform would be viewed as favouring Canadian non-profit providers, and therefore could be viewed as discriminatory against the foreign investors.

7.3 Group Discussion

The question for Theme 4 discussion was:

What strategy(ies) can we recommend to more swiftly achieve global inter-jurisdictional policy?

7.3.1 Some Final Thoughts from the Group

For this final morning session the participants did not breakout into smaller groups, but discussed the topic in a large group format.

One Working Group member noted some important issues around globalization and international activities. Developed countries' citizens must not assume that their ways should be adopted by developing countries. The concept of globalization implies that countries work together as equals – the bringing together of ideas and traditional ways of both developing and developed countries, without dominance. This concept may be difficult for counties such as Canada and the United States to fully accept and adopt.

The whole idea of globalization is the sharing of expertise and resources.

(Working Group Participant)

Another participant stated that e-health is only one part of the ever growing "e-world", which includes e-business, e-government, and e-education. As such, e-health will continue to grow without having to be pushed - globalization is the driving force of e-technology. e-Health researchers and practitioners can act as one mechanism in which to direct e-health, but they will certainly not be the only force.

When I first started in telehealth I used to think that I'm not getting involved with international issues, as I had enough with local, provincial, and national issues. If you have a problem at the local level that you cannot solve, you take it to the provincial level. If you can not solve it there, then take it up to the national level – it is much less emotional as you move upwards. It's a strategy. I have changed my mind now. I think it is good to get involved as it is easier, sometimes, to address issues at the upper levels and then bring them down to the local level.

(Working Group Participant)

This final quote from one TRSI participant clearly highlights the need for global e-health partnerships:

We as e-health practitioners and researchers must be active in global e-health policy. The telehealth community is small and the expertise is sparse. As such, we need to align ourselves with other telehealth practitioners elsewhere to form a collective strategy and strengthen global e-health relationships.

(Working Group Participant)

8. Overall Recommendations

TRSI 2003 provided a forum for interested participants from government, academia and professional bodies to actively engage in and discuss the topics of evaluation frameworks, knowledge transfer, practice to policy, and global e-health policy.

This document details the presentations and small group and reconvened discussions that were integral parts of the TRSI 2003. A number of issues were raised and recommendations made, reflected in the Main Messages (page 5) and below:

- There is no single method to be used in evaluating e-health applications. When choosing an evaluation method it must be flexible and include elements such as a global or social perspective and common definitions and indicators.
- Communication is key. In order to move from e-health practice to policy and influence decision-making, researchers need to become skilled at spotting opportunities and clearly conveying their messages to a variety of audiences (i.e. knowledge translation).
- Education of decision-makers, researchers, the public and of healthcare practitioners is vital in order to swiftly advance inter-jurisdictional e-health policy.
- There is no easy-to-employ strategy to advance inter-jurisdictional e-health policy. Any strategy will take great effort and time. Strategies that may prove beneficial include education, marketing, creating demand and expectations, knowledge warehousing, and formulating a collective strategy.

9. References

- 1. Donaldson SI (2003). Theory-Driven Program Evaluation in the New Millennium. In SI Donaldson & M. Scriver (Eds) 2003. Chapter 7. *Evaluating Social Programs and Problems*. Mahwah, New Jersey: Lawrence Erlbaum Associates.
- 2. Field M (1996). *Telemedicine: A Guide to Assessing Telecommunications for Healthcare*. Committee on Evaluating Clinical Applications for Telemedicine. Institute of Medicine (IOM).
- 3. Goel V, Isaacksz S and Roston B. (October 2002). *Using the Balanced Score Card for Evaluating Telemedicine Programs*. NORTH Network & University of Toronto. Presentation to Outcome Indicators meeting at CST.
- 4. Donabedian (1980;1986).
- 5. For more information on the CHIPP model, refer to the Office of Health and the Information Highway (OHIH) Webpage at: http://www.hc-sc.gc.ca/ohih-bsi/about-apropos/index-e.html#chipp
- 6. Eisenberg JM. (1985). *Physician Utilization: The State of Research About Physicians' Practice Patterns*. Medical Care. Vol 23, No 5, p 461-483
- 7. Ajzen I (1991). *The Theory of Planned Behavior*. Organizational Behavior and Human Decision Processes. Vol 50, p 179-211.
- 8. Gamson W. (1961). *A Theory of Coalition Formation*. American Sociological Review. Vol 26, p. 373-382.
- 9. Denis J, Champagne F (1990). *Pour Comprendre le Changement dans les Organisations*. Gestion. Vol 15 (1), p.44-45.
- 10. Yin RK. (1989). Case Study Research: Design and Methods (Revised Edition). Newbury Park (CA). Sage Publications.
- 11. The Mazankowski Report. A Framework for Reform: Report of the Premier's Advisory Council on Health, 2002.

http://www.premiersadvisory.com/reform.html

- 12. The Romanow Commission. *Commission on the Healthcare of Canada*. 2002. http://www.hc-sc.gc.ca/english/care/romanow/index1.html
- 13. The Fyke Report. Commission on Medicare. *Caring for Medicare: Sustaining a Quality System.* 2001.

http://www.saskschools.ca/~nric/publications/fykereport.html

- 14. The Clair Report (Quebec). *Rapport et Recommandations Les Solutions Emergentes*. 2000. http://www.amq.ca/fra/pdffiles/RapportfinalClair.pdf
- 15. The Canada Health Act http://www.hc-sc.gc.ca/medicare/home.htm
- 16. Jennett PA, Scott R, Hailey D, Ohinmaa A, Thomas R, Anderson C *et al. Socio-economic Impact of Telehealth: Evidence Now for Healthcare in the Future. Volume One: State of the Science Report.* Health Telematics Unit, University of Calgary. 2003.

http://www.ahfmr.ab.ca/grants/state of science final reports.shtml

17. For more information on the Calgary Health Region, refer to the CHR's web site: http://www.calgaryhealthregion.ca/

- 18. Canadian Society of Telehealth (CST) Education Committee. *Final Report of National Telehealth Coordinators Workshop 2002.* (Held in conjunction with the 5th Annual Meeting of the Canadian Society of Telehealth, October 1-5, 2002, Vancouver, BC) prepared by the Telehealth Coordinator's group on behalf of the Canadian Society of Telehealth. Unpublished manuscript. January 2003.
- 19. For more information on the Alberta's Mental Health Board and the Telemental Health Service (TMH), refer to the following web site: http://www.amhb.ab.ca/programs/prog_telemental.html
- 20. Hailey D, Bulger T, Stayberg S and Urness D. *The Evolution of a Successful Telemedicine Mental Health Service*. Journal of Telemedicine and Telecare 2002, 8 (Suppl. 3): S3;24-26.
- 21. Machiavelli N. The Prince. 1513. Translated by W.K. Marriott.
- 22. Glantz SA, Balbach ED. *Tobacco War: Inside the California Battles*. Berkeley California, University of California Press, 2000. ISBN 0-520-22285-7. 469 pages.
- 23. Chapman S, Lupton D. *The Fight for Public Health: Principles and Practice of Media Advocacy*. London: British Medical Journal Books, 1994. 260pp ISBN 0-7279 -0849-9.
- 24. Annan K. *Problems without Passports*. In the Foreign Policy Magazine. 2002. http://www.foreignpolicy.com/issue_septoct_2002/annan.html
- 25. For more information on the National Health Information management Advisory Council, refer to the following web site: http://www.health.gov.au/healthonline/nhimac/nhimac.html
- 26. For more information on IBA Healthcare Services, refer to the following web site: http://ats.business.gov.au/aws/NSW_400/
- 27. For more information on HCN general Practitioner Software, refer to the following web site: http://www.hcn.net.au/support/generalsupport.asp
- 28. For more information on PIPEDA, refer to the PIPEDA web site: http://www.pipeda.org/
- 29. For more information on NAFTA, refer to the NAFTA web site: http://www.nafta-customs.org/

Appendix 1: TRSI Participants

TRSI Organizing Committee:

Richard Scott – University of Calgary Bonnie Rush – University of Calgary Mone Palacios – University of Calgary Penny Jennett – University of Calgary Marilynne Hebert – University of Calgary

Speakers:

Jean-Paul Fortin – University of Laval
Roger Galbraith – Health Link Alberta
Robert Hanson – Health Canada
Marilynne Hebert – University of Calgary
ChrisAnn Ingram – Izaak Walton Killam Health Centre
Penny Jennett – University of Calgary
Tom Noseworthy – University of Calgary
Alan Shiell – University of Calgary
Richard Scott – University of Calgary
Sharlene Stayberg – Alberta Health and Wellness
Joe Tracy – University of Missouri
Richard Wootton – University of Queensland

Facilitators (F) and Rapporteurs (R):

Chris-Anne Ingram (F) and Maryann Yeo (R) – Breakout Group 1 Richard Scott (F) and Mone Palacios/Pin Cai (R) - Breakout Group 2 Sandra Chatterton (F) and Bonnie Rush (R) - Breakout Group 3

Participants:

Valerie Ashworth – Provincial Health Services Authority
Louise Bouchard – Health Canada
Pin Cai – University of Calgary
John Cristescu – Health Canada
Nancy Lefebre – Saint Elizabeth Healthcare
Tina McKinnon – Nanavut Department of Health and Social Services
Arto Ohinmaa – University of Alberta
Mone Palacios – University of Calgary
Marion Perrin – Health Canada
Colin Stafford – BC Ministry of Health Services
Mo Watanabe – University of Calgary
Wang Xiaomin – University of Calgary
Peter Youell – Royal Ottawa Hospital

Appendix 2: TRSI Speaker Biographies

Jean-Paul Fortin
Professeur agrégé Université Laval
Direction régionale de la santé publique de Québec
Institut national de santé publique du Québec
Centre francophone d'informatisation des organizations

Dr. Fortin is a medical specialist in the area of community health (Laval, 1980). After working for five years as a medical consultant for a community health department (1975-1980), he occupied management positions in the Ministère des Affaires sociales (community health and health planning) (1980-1983) and the Régie régionale de la santé et des services sociaux de Québec (planning, evaluation and information systems) (1991-1992). He was senior technical adviser for the European regional office of the World Health Organization (Morocco, 1984-1985), special adviser to the Commission d'enquête sur les services de santé et les services sociaux au Québec (Rochon commission, 1986-1987) and, finally, an expert member of the Federal-Provincial-Territorial Advisory Committee on Population Health (1996-1999).

Roger Galbraith Medical Director Health Link Alberta

Dr. Galbraith is a Paediatrician in the Emergency Department at the Alberta Children's Hospital. In addition, he is also a Clinical Associate Professor in the Faculty of Medicine, University of Calgary, and Medical Director of Health Link Alberta. Health Link Alberta provides telephone information and advice as well as information on clinical topics and health system way-finding on the web.

Dr. Galbraith's other main medical interest is in International Medicine. As such, he is one of founders and member of the Board of the charity "Project Outreach International Child Health Society" that has supported teaching and medical care in Vietnam. He has also taught courses in Taiwan and Kuwait.

Robert Hanson Senior Program Consultant Health Canada

Currently, Robert Hanson is a Senior Program Consultant with the Innovation and Investment Division of the Office of Health and the Information Highway at Health Canada in Ottawa. Prior to this position, Robert was Acting Manager, Research and Analysis at the Health Transition Fund, also at Health Canada. Before coming to Health Canada in 1998, Robert was the Director, Evaluation and Statistics Division of the Social Sciences and Humanities Research Council of Canada.

Among his numerous achievements, Robert participated in all phases of the review and selection process, supervised the technical reviews process, and co-lead the program evaluation tem. He has overseen 7 telehealth and EHR projects totaling \$10 million (in Northern and Western Canada) and acts as regional liaison on behalf of the division to BC-Yukon and Alberta-NWT regions. He has also been the co-organizer and presenter of regional workshops in Vancouver and Toron on "Evaluation and Sustainability" for CHIPP funded-projects.

He received the Governor General's Award for Contribution to Canada in 1994 for organizing the international conference *Evaluation, Social Science and Public Policy*.

Marilynne A. Hebert Assistant Professor Health Telematics Unit University of Calgary

Dr. Hebert is an Assistant Professor in the Health Telematics Unit (HTU), Faculty of Medicine, University of Calgary. Over twenty years experience in healthcare contributes to Dr. Hebert's research, consulting and teaching interests in evaluating the impact of information and communications technology. Her current research interests include developing and testing an evaluation framework and research tools for determining the impact of telehomecare applications in the community as well as e-learning activities in health.

Research activities in Home Telehealth include: Stakeholder Readiness for Telehomecare (Calgary Health Region); Development of a Nursing Guideline for Video-visits in Palliative Home Care and Retrospective Chart Review for Suitability of Video-visits in Palliative Home Care (ACB Palliative Care Research Initiative); and Multi-methods Study of Telehomecare Video-visits in Rural Alberta (CIHR). Current activities in the development and evaluation of web-based applications for health education and tele-mentoring include: Building Capacity in Health Informatics (OLT); Pan Canadian Health Informatics Collaboratory (CANARIE); and PhD/Postdoc Training Program in Health Informatics (CIHR). Dr. Hebert is a member of a number of professional organizations related to ICT and evaluation: COACH, AMIA (Working Groups: People and Organizational Issues; Telehealth), Canadian Evaluation Society, and Canadian Society for Telehealth. She is also currently a COACH Board member.

Penny A. Jennett Professor Head, Health Telematics Unit, University of Calgary

Dr. Penny Jennett, Head, Health Telematics Unit, Professor, Community Health Sciences (previous Director, Office of Medical Education) Faculty of Medicine, University of Calgary is recognized internationally for her expertise in telehealth, e-health, and health telematics/informatics/education. She is President and a Founding Member of the Canadian Society of Telehealth (CST), as well as a past treasurer and past member of the Board and Executive of Canadian Network for the Advancement of Research, Industry, and Education (CANARIE) Inc., and Vice-Chair of the Board of Netera. Recently, she received the first Digital Group of Telehealth Companies "Award of Excellence" for her significant contributions to telehealth in Canada. The Medical Sciences Graduate Students' Association (MSGSA) awarded Dr. Jennett the 2nd Annual Golden Apple Award for excellence in graduate science education (Department of Community Health Sciences) for demonstrating an outstanding interest and participation in education and student issues. She was Project Lead for the EU-Canada Collaborations in Health Telematics, was a member of Alberta Telehealth Project Planning Team, and chaired the Implementation Team for Alberta Wellnet's Telehealth Committee. She was a member of Health Canada's Peer Review Committee of First Nation's Telehealth Research Project and has led a national initiative to build research capacity in rural and remote areas of Canada.

Chris-Anne Ingram
Coordinator of Telehealth
Izaak Walton Killam Health Centre

Chris-Anne Ingram, RN, is the Coordinator of Telehealth for the Izaak Walton Killam (IWK) Health Centre, Halifax, Nova Scotia - the tertiary centre for children, youth and women of the Maritime Provinces. Ms. Ingram began her professional nursing career as a pediatric nurse in 1991 and has been involved with the IWK Telehealth Program since 1997. Tasked with helping to develop the Telehealth Program for the Children's Telehealth Network™(CTN) for the Maritimes and the

provincially funded Nova Scotia TeleHealth Network (NSTHN), Ms. Ingram became a passionate spokesperson and advocate for telehealth.

Ms. Ingram is a Founding and Executive Board member of the Canadian Society of Telehealth (CST), Chairperson for the CST Education Committee and the National Telehealth Coordinator's Special Interest Group.

Richard E. Scott Associate Professor Health Telematics Unit University of Calgary

Dr. Richard Scott is an Associate Professor in the Global e-Health Research and Training Program of the Health Telematics Unit, and a Fulbright New Century Scholar alumnus. He has over 16 years healthcare experience as a practising clinical and forensic toxicologist, Director of Research, and telehealth researcher.

His research program is directed towards inter-jurisdictional ('glocal') e-health policy, outcomes evaluation, and environmental e-health. Richard is a lead co-investigator on a national study designed to identify, define, and achieve consensus on a core set of suitable outcome indicators for demonstrating the value of telehealth. He was a co-investigator for a recent State of the Science study examining socio-economic indicators in relation to the impact of e-health, and co-author of an associated telehealth policy report. He is also pursuing a new area of investigation - the environmental costs and benefits of e-health.

As an independent evaluator, Richard has brought his research expertise to the design and completion of evaluations of e-health applications in home telehealth, web-based tele-triage, tele-cardiology, and extension of hospital care to the home. He is a Founding member of the Canadian Society of Telehealth (CST) and the current Vice-President. He is also Chairperson for the CST International Committee, and member of the Research Committee, Communications Committee, and Policy and Standards Committee.

Alan Shiell
Professor, Community Health Sciences
Faculty of Medicine
University of Calgary

Dr. Shiell is a Professor in Community Health Sciences and has recently joined the health economics program from the University of Sydney (Australia) where he was a Research Associate and founding member of the Social and Public Health Economics Research Group (SPHEre). Prior to this he was Senior Lecturer in the Department of Public Health and Community Medicine at the University of Sydney and Deputy Director of the Centre for Health Economics Research and Evaluation (CHERE). He has over 16 years experience in the UK and Australia and has acted as advisor to state and federal governments and the OECD. His research interest covers the economics of public health, with special focus on the evaluation of social or community-level interventions and the political economy of health.

Sharlene Stayberg Telehealth Director Alberta Health and Wellness

Ms. Stayberg presently is the Telehealth Director for the Health Professions and Telehealth Branch of Alberta Health and Wellness. All provincial health authorities/ boards access central support services for telehealth through this government office.

In her previous position as Administrative Director of the Telemental Health Service of the Alberta Mental Health Board, Ms Stayberg had the opportunity to lead development of a telehealth project, from a six-site pilot to an operational service offering clinical, education and administrative services to more than fifty sites. Ms. Stayberg has received the degree of Master of Public Health and a Credential in Health Services Administration from the University of Minnesota.

Joseph A. Tracy Executive Director for Telehealth, University of Missouri Healthcare

Since joining University of Missouri Healthcare in 1992, Mr. Tracy has been involved in developing affiliate relations with rural healthcare facilities throughout Missouri, with an emphasis on helping meet the various healthcare needs of these facilities. In 1994, Mr. Tracy began directing the Missouri Telehealth Network (MTN) in an effort to help meet those needs by delivering healthcare services through the use of advanced telecommunication technologies. Since that time, the MTN has provided more than 5,000 interactive clinical exams in more than 15 specialties and has also provided more than 30,000 teleradiology exams to the citizens of Missouri.

Mr. Tracy is also an advisor to the Advanced Technology Institute's Telehealth Deployment Research Testbed Program, a contributing editor for the Technical Guidelines published by the Federal Office for the Advancement of Telehealth, co-author of several peer reviewed articles on telehealth, and co-author of MU grants and contracts for telehealth. He has testified before Congress on issues related to Medicare reimbursement for telehealth and before the Federal Communications Commission on issues related to the Universal Service Fund for healthcare. He also speaks at many local, state and national meetings on issues related to telehealth.

Richard Wootton Head, Centre for Online Health University of Queensland

Dr. Richard Wootton is the head of research in the newly formed Centre for Online Health at the University of Queensland. The Centre is exploring the role of new technologies in medicine, with a view to obtaining quantitative evidence of cost-effectiveness in healthcare delivery, training and education.

Richard was previously the Director of the Institute of Telemedicine and Telecare at Queen's University, Belfast. The Institute ran a number of telemedicine research trials and pioneered the use of telemedicine for minor injuries units, currently one of the most successful forms of real-time telemedicine in the National Health Service.

Professor Wootton is the Editor of the *Journal of Telemedicine and Telecare*, an international peer-reviewed journal. He was the founder chairman of the UK's academic Telemedicine Forum and was the government's representative to the G8 telemedicine project.

Appendix 3: TRSI 2003 Agenda



4th Annual Telehealth Research Summer Institute



'Telehealth / e-Health Evaluation: From Theory to Practice to Policy'

CALGARY; 25 – 28 June 2003

Goal:

To connect and inform e-Health Research, Practice, and Policy

Objectives:

- To describe and discuss available evaluation frameworks
- To compare and contrast evaluation efforts
- To explore issues of implementing evaluation in practice
- To develop mechanisms to transfer research findings into policy
- To explore issues of inter-jurisdictional (international) e-health policy
- To build and strengthen linkages among Government advisors, health service providers and e-health policy researchers and evaluators

Format:

The focus of TRSI 2003 will be telehealth / e-health evaluation. Using this as the base, we will explore transitions from theory to practice to policy. Day 1 will focus on the theory (Session I and Breakout I) and move us towards issues of practice (Session II and Breakout II). Day 2 will focus on practice issues from the perspective of required enabling policy (Session III and Breakout III) and will begin to explore how the knowledge gained from evaluation and research can be transferred into practice and policy, particularly inter-jurisdictional policy (Session IV and Breakout IV). Day 3 will focus on inter-jurisdictional policy with a particular consideration of international policy issues.

Formal presentations or panels will be used to provide information and stimulate discussion. Breakout sessions will be used to encourage greater individual input, and reporting sessions will be used to ensure the group remains informed. The final report from TRSI 2003 will be a synthesis of the experience and expertise shared by you - the participants - in examining the various topics, and will provide an informative tool that will contribute to moving e-health forward in Canada and abroad.

Final Program

Date	Time	Activity					
Wednesday	1100 - 1500	Arrival: Calgary Airport to Motel Villag					
25th							
		Conference Hotel: Quality Inn Motel Village, 2359 Banff Trail NW					
		Calgary, Alberta T2M 4L2. Tel: 403-28	9-1973. Fax: 403-282-1241				
	F	Toll Free: 1-800-661-4667					
	Evening	Evening Event:					
		Optional. Informal supper by mutual arrangement	at of individual participants				
			e range available in registration package.				
		Own transportation.	o range available in registration package.				
Date	Time		Activity				
Thursday	0750	Bus pick-up at Motel Village (Quality Ir					
26th	0800 – 0825	Registration: Mall, Health Sciences C	Centre				
		Refreshment: Mall, Continental Break					
	0830 – 0845	Opening - Theatre 1, Health Science					
		Welcoming Comments: Penny Jenr					
		Housekeeping announcements: Bo					
	0045 0000	Introductory Comments: Richard So					
	0845 - 0900	Session I – Theatre 1, Health Science Introduction: Evaluation Framew					
		Marilynne Hebert	orks – The Theory				
	0900 – 1025		1, Health Sciences Centre				
	1020		aluation Frameworks				
		Speaker	Topic				
		Marilynne Hebert	Modified Donabedian model				
		Robert Hanson	CHIPP model				
		Jean-Paul Fortin	Developing an evaluation model				
	1030 - 1055	Refreshment: Mall, Health Sciences (Centre - Coffee, Tea, Bottled Water				
	1100 - 1155	Breakout I:					
		What strengths and weaknesses exist for each evaluation model identified or presented?					
		Group 1 – Room 821	Group 3 – Room 825				
		Group 2 – Room 823	Group 4 – HTU Boardroom				
	1200 - 1240	Reporting – Theatre	1, Health Sciences Centre				
		Reconvene – Group summary reports – each 10 minute maximum					
	1245 - 1325	Bag Lunch: Mall, Health Sciences Centre (HSC); access to picnic area					
		Walking tour (optional): Health Telematics Unit					
	1330 – 1430	Session II - Theatre 1, Health Sciences Centre					
		Panel and Open Forum					
		Critique the identified strengths and weaknesses to compare and contrast					
		the evaluation models					
		Moderator: Richard Scott					
		Panelists: 8 minutes each, then open in					
		Marilynne Hebert Jean-Paul Fortin	Robert Hanson				
	1430 - 1455	Refreshment: Mall, HSC - Coffee, Te	l a Rottled Water				
	1500 - 1555	Breakout II:	a, Dollieu Walei				
	1000 - 1000	What recommendations can be provided for development of a					
		pan-Canadian evaluation model?					
		Group 1 – Room 821	Group 3 – Room 825				
		0.00p 1 - 1.00m 021	Stoup 0 - Room 020				

		Group 2 – Room 823	Group 4 – HTU Boardroom					
	1600 - 1640	Reporting – Theatre 1, Health Sciences Centre Reconvene – Group summary reports – each 10 minute maximum						
	1640 - 1700		e 1, Health Sciences Centre					
	1040 1700	Summary statement of Day 1 accomplishments: Richard Scott						
		Housekeeping announcements: E						
	1705	, ,	ealth Sciences Centre for Motel Village					
	1830 - 2200	·	ening Event:					
	1030 - 2200	Heritage Park - Millerville Rancher's						
		Bus pick-up at Motel Village (Quality						
	1930 – 2130; inc. Barber Shop Quartet.							
			n drop-off at Motel Village (Quality Inn)					
Date	Time	· · ·	Activity					
Friday	0750	Bus pick-up at Motel Village (Quality						
27th	0800 - 0825	Registration: Mall, Health Sciences Centre						
		Refreshment: Mall - Continental Breakfast, Coffee, Tea, Bottled Water						
	0830 - 0845	Opening - Theatre 1, Health Scien						
		Introductory Comments: Richard Scott						
		Housekeeping announcements: Bor	nnie Rush					
	0845 - 0900	Session III - Theatre 1, Health Science						
		Introduction: Practice to Policy						
		Penny Jennett	-					
	0900 - 1015	Plenaries - Theatre 1, Health Sciences Centre						
		Policy in Practice – What do we						
		Speaker Degar Callyreith	Topic					
		Roger Galbraith Chris-Anne Ingram	A health system view An institutional view					
		Sharlene Stayberg	An institutional view A network view					
	1015 - 1040	Refreshment: Mall, HSC - Coffee, 7						
	1045 - 1145	Breakout III:						
		What types of policy are needed most urgently and at which levels?						
		Group 1 – Room 821	Group 3 – Room 825					
		Group 2 – Room 823	Group 4 – HTU Boardroom					
	1150 - 1230	Reporting – Theatre 1, Health Sciences Centre						
		Reconvene – Group summary reports – each 10 minute maximum						
	1230 - 1315							
	1320 - 1410	Session IV - Theatre 1, Health Sciences Centre						
	1000	Plenaries:	,					
		Knowledge Transfer - Moving I	Research Findings into Practice and Policy					
		Speaker	Topic					
		Alan Shiell	A researchers view					
	1410 – 1435	Refreshment: Mall, HSC - Coffee, Tea, Bottled Water						
	1440 - 1540							
		Breakout IV: What Knowledge Transfer strategy(ies) can we recommend to more swiftly achieve Canadian inter-jurisdictional policy?						
		Group 1 – Room 821	Group 3 – Room 825					
		Group 2 – Room 823	Group 4 – HTU Boardroom					
	1545 - 1630	Reporting – Theatre 1, Health Sciences Centre Reconvene – Group summary reports – each 10 minute maximum						

	1630 - 1650	Summary - Theatre 1, Health Sciences Centre Summary statement of Day 2 accomplishments: Richard Scott. Housekeeping announcements: Bonnie Rush				
	1700	Bus departs from North entrance Hea	alth Sciences Centre for Motel Village			
	1830 - 2200	Evening Event: Optional. Informal supper by mutual arrangement of individual participants. Restaurant recommendations and price range available in registration package. Own transportation.				
Date	Time	·	Activity			
Saturday	0750	Bus pick-up at Motel Village (Quality	•			
28th	0800 - 0825	Registration: Mall, Health Sciences Refreshment: Mall - Continental Bre	Centre			
	0830 - 0845	Opening - Theatre 1, Health Sciences Centre Introductory Comments: Richard Scott Housekeeping announcements: Richard Scott				
	0845 - 0900	Session V - Theatre 1, Health Scienter Introduction: A 'Glocal' e-Health Richard Scott	nces Centre h Policy Perspective			
	0900 - 1015	Plenaries – Theatre 1, Health Sciences Centre				
			' World – Issues and Challenges			
		Speaker	Topic			
		Richard Wootton	The View from Australia			
		Joe Tracey	The View from the US			
		Tom Noseworthy	The View from Canada			
	1030 - 1055	Refreshment: Mall, HSC - Coffee, Tea, Bottled Water				
	1100 - 1150	Session VI - Theatre 1, Health Sciences Centre Panel and Open Forum: What strategy(ies) can we recommend to more swiftly achieve global inter-jurisdictional policy?				
		Moderator:				
		Panelists: 8 minutes each, then open				
		Richard Scott	Joe Tracey			
		Richard Wootton	Tom Noseworthy			
	1150 - 1210	Summary and Closing - Theatre 1, Health Sciences Centre Summary statement - Day 3 and Institute's accomplishments: Richard Scott Housekeeping announcements: Richard Scott Closing statements: Penny Jennett				
	1230	Bus departs from North entrance Health Sciences Centre for Motel Village				
	Afternoon	Departure: Motel Village to Calgary Airport; own transportation. OR Free afternoon: Recommendations and directions for alternate attractions (tour and attraction				
	cage).					
Sunday 29th		Departure: Motel Village to Calgary Airport; own transportation				

Appendix 4: Breakout Group Guidelines

Breakout Session 1 – Guidelines

Question: What strengths and weaknesses exist for each evaluation model identified or presented?

Reference Material:

- 1. Presentation information Marilynne Hebert, Robert Hanson, Jean-Paul Fortin
- 2. Personal experience

Discussion Guidelines:

- Take 10 minutes each. Brief comment on each evaluation model / framework (IOM, Balanced Score Card, Modified Donabedian, CHIPP, Jean-Paul's Model):
 - a. What are the strengths of this framework?
 - b. What are the weaknesses of this framework?
 - c. Is it acceptable as a generic Canadian telehealth / e-health evaluation framework?
- b) Take 5 minutes. Summary discussion / other issues

Reporter Guidelines:

- 1. Each model / framework: Summarize the strengths and weaknesses identified for each.
- 2. 'Parking Lot' issues: Identify other issues / topics that arose during discussion that should be reviewed and debated at some future point.

Session 2 Panel and Open Forum - Guidelines

Question: Critique the identified strengths and weaknesses to compare and contrast the evaluation models identified or presented.

Reference Material:

- 1. Commentary from panelists
- 2. Material from Breakout 1
- 3. Presentation material Marilynne Hebert, Robert Hanson, Jean-Paul Fortin
- 4. Personal experience

Discussion Guidelines:

Panelists – up to 8 minutes each to respond to the breakout session material.

Open forum / Q&A session. Goal – to gather sufficient conceptual understanding to respond to Breakout 2 question: What recommendations can be provided for development of a pan-Canadian evaluation model?

Breakout Session 2 - Guidelines

Question: What recommendations can be provided for development of a pan-Canadian evaluation model?

Reference Material:

- 1. Panel / open forum discussion
- 2. Commentary from panelists
- 3. Material from Breakout 1

- 4. Presentation information Marilynne Hebert, Robert Hanson, Jean-Paul Fortin
- 5. Personal experience

Discussion Guidelines:

- a) Take 15 minutes. Is it possible to recommend one model for e-health evaluations in Canada?
- b) Take 15 minutes. If yes which model?
- c) Take 15 minutes. If no what recommendations can we provide to minimize 'ad hoc' use, and guide overall use of evaluation models / frameworks for e-health evaluations in Canada?
- d) Take 10 minutes. Summary discussion / other issues

Reporter Guidelines:

- 1. Summarize discussion and response to each of a) to d) above.
- 2. 'Parking Lot' issues: Identify other issues / topics that arose during discussion that should be reviewed and debated at some future point.

Breakout Session 3 – Guidelines

Question: What policy issues need resolution most urgently and at which policy levels do they apply?

Reference Material:

- 1. Presentation information Roger Galbraith, ChrisAnne Ingram, Sharlene Stayberg
- 2. Draft HTU Glocal e-Health Policy Grid
- 3. Personal experience

Discussion Guidelines:

- a) Take 15 minutes. Is the draft Glocal e-Health Policy Matrix representative of the levels, themes, and actors involved in e-health policy? If not, what changes can be recommended?
- b) Take 35 minutes. Which policy issues need resolution most urgently, ranking them with the most urgent first (explain the rationale).
- c) Take 5 minutes. Summary discussion / other issues

Reporter Guidelines:

- Summarize suggested additions / changes to the Glocal e-Health Policy Grid.
- 2. Summarize, in order of priority, which policy issues need resolution most urgently, at which policy level, and (briefly) why.
- 3. 'Parking Lot' issues: Identify other issues / topics that arose during discussion that should be reviewed and debated at some future point.

Breakout Session 4 – Guidelines

Question: What knowledge transfer strategy(ies) can we recommend to more swiftly achieve Canadian inter – jurisdictional policy?

Reference Material:

- 1. Presentation information Alan Shiell
- 2. Supplementary handouts
- 3. Personal experience

Discussion Guidelines:

- a) Take 5 minutes. Is inter jurisdictional policy of importance? If so, why? If no, why not?
- b) Take 15 minutes. Identify which strategies might be simplest to employ for the broader ehealth community.
- c) Take 10 minutes. Identify what education needs may arise in implementing KT activities on a broader basis.
- d) Take 20 minutes. Identify a strategy that could be recommended to swiftly advance development of inter jurisdictional policy.
- e) Take 5 minutes. Summary discussion / other issues

Reporter Guidelines:

- 1. Summarize discussion and response to each of a) to e) above.
- 2. 'Parking Lot' issues: Identify other issues / topics that arose during discussion that should be reviewed and debated at some future point.