

## An Evaluation Framework

### Introduction

An evaluation framework is a way of organizing the evaluation questions that are asked of the KO Telehealth/NORTH Network expansion project.

Evaluation questions are asked by the various people and groups who will use, provide, manage or pay for the service.

The framework puts similar questions into major themes to make the evaluation more meaningful and to help suggest other questions to make the evaluation more complete.

Some examples of evaluation questions could include:

- How did communities get hooked up to the telehealth service?
- When did people in the communities use the service?
- What times and days did people use the service?
- What did people do with the service? (What did they use it for?)

These are examples of the type of questions found in the "Access" theme.

The evaluation framework helps to put questions together and works in the other direction to help divide questions into as much detail as needed to show exactly what will be measured, how will it be measured, who will make the measurement and other details that have meaning for data collection.

Going into the details of the question helps make the collection of information that much easier. For example, the appointment books (scheduling records, logbook, etc.) could be used to answer questions about (1) who is used the service, (2) when did they use it and (3) why did they use it.

Evaluation questions are the starting point and sit in the centre of the evaluation framework (Figure 1). The evaluation framework itself has two jobs: (1) put similar questions together to make the evaluation more meaningful and complete; and (2) show some of the details of how the data will be collected.

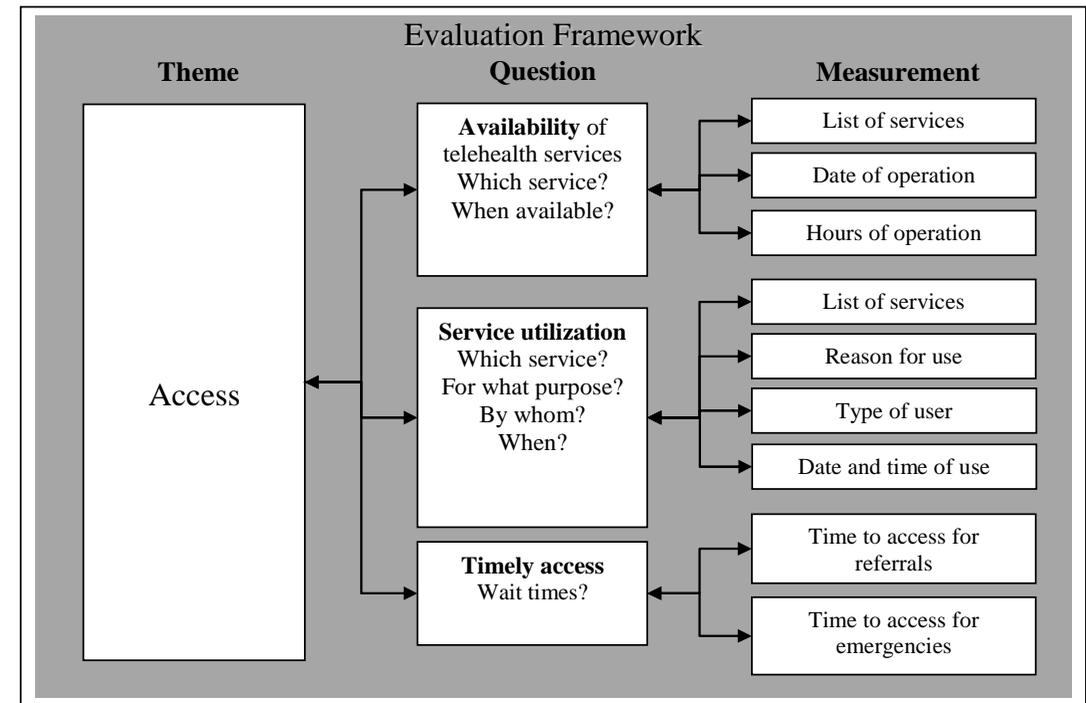


Figure 1. Evaluation Framework Example

## Proposed Framework--Major Themes

The proposed framework includes five major themes. These broad themes are based on telehealth frameworks designed by the Institute of Medicine, the National Telehealth Outcomes Indicators Project at the University of Calgary and NORTH Network, as well as other sources.

There is flexibility in the number and type of questions within each theme. The questions in this framework come from the original proposal to the Primary Health Care Transition Fund, feedback from stakeholders (communities, administrators, funders, etc.), published evaluation frameworks (listed above) and the experience of the evaluation team.

**Access:** *the availability of the right care at the right time without undue burden.* Measures would include the availability and use of the telehealth service over time and space. Questions could include: when could people use the service and when did they use it? Who was allowed to use the service and did they use it? Telehealth would be compared to alternate ways of delivering the service. For example, the number of telehealth sessions in which the patient sees a specialist would be compared to the number of trips to see the specialist before and after telehealth became available.

**Acceptability:** *the degree to which patients, clinicians, or others were satisfied with a service or were willing to use it.* Measures of what to expect from the service, satisfaction, knowledge transfer and the use of the service would be included in this theme. Understanding how First Nations and the medical community view health and well-being may help in understanding differences in expectation and satisfaction.

Community capacity is an important sub-theme of integration. Capacity includes knowledge and skills, willingness to use (Acceptability), as well as community ownership of equipment and services.

**Integration:** *the degree to which the telehealth service and other health care services worked with one another.* This theme combines aspects of other themes such as continuity of care (Quality of Care), ease of use (Quality of Technical Service), and willingness to use (Acceptability), but with a focus on the way in which telehealth and other services interact.

## Quality: Quality has three sub-themes

**Quality of Care:** *the degree to which telehealth care service is consistent with current professional knowledge.* The evaluation team will leave the assessment of the quality clinical care up to the individual health care provider. The evaluation will examine how the Community Telehealth Coordinators (CTCs) help provide a quality service.

**Quality of Technical Service:** *the performance of telehealth equipment (hardware and software) and support services, plus measures of site preparation/readiness.* These are technical measures related to service delivery.

**Quality of Outcomes:** the degree to which the telehealth service improves health outcomes for individuals and populations. Typical measures would include health status and disability adjusted life years that are compared before and after telehealth is implemented. It may take several years, even decades, before the impact on health status is observed. One solution is to identify medical conditions for which we know that early detection and intervention have proven long-term benefits. Then the next step would be to show that these conditions were detected and treated via telehealth. One example would be diabetes and the complications of diabetes. The Evaluation Team will help identify long-term health outcomes for future evaluations.

**Financial Impact:** *the monetary cost of providing the service by telehealth compared to other ways of delivering the service.* This theme measures the dollar costs and savings to individuals (patients, clients, professionals, workers, etc.) and to organizations (communities, KOTH, Health Canada, Government of Ontario, etc.). The dollar cost or savings of providing services by telehealth is compared to the costs or savings of travelling to receive services.

## Evaluation Design

The Evaluation Design is used with the evaluation framework to determine groups for comparison. For example, one design is to compare the same communities before and after telehealth to see if telehealth has had an effect on, say, the number of medically necessary trips.

The following design uses data collected each month for those months before telehealth was introduced into a community and continues to collect data after telehealth is up and running (Figure 2). This is called an Interrupted Time Series Design. "Interruption" means the introduction of telehealth into the First Nation Community. This is the design that will be used in the evaluation. With the permission of each community, data will be collected for each month from April 2000 to March 2006.

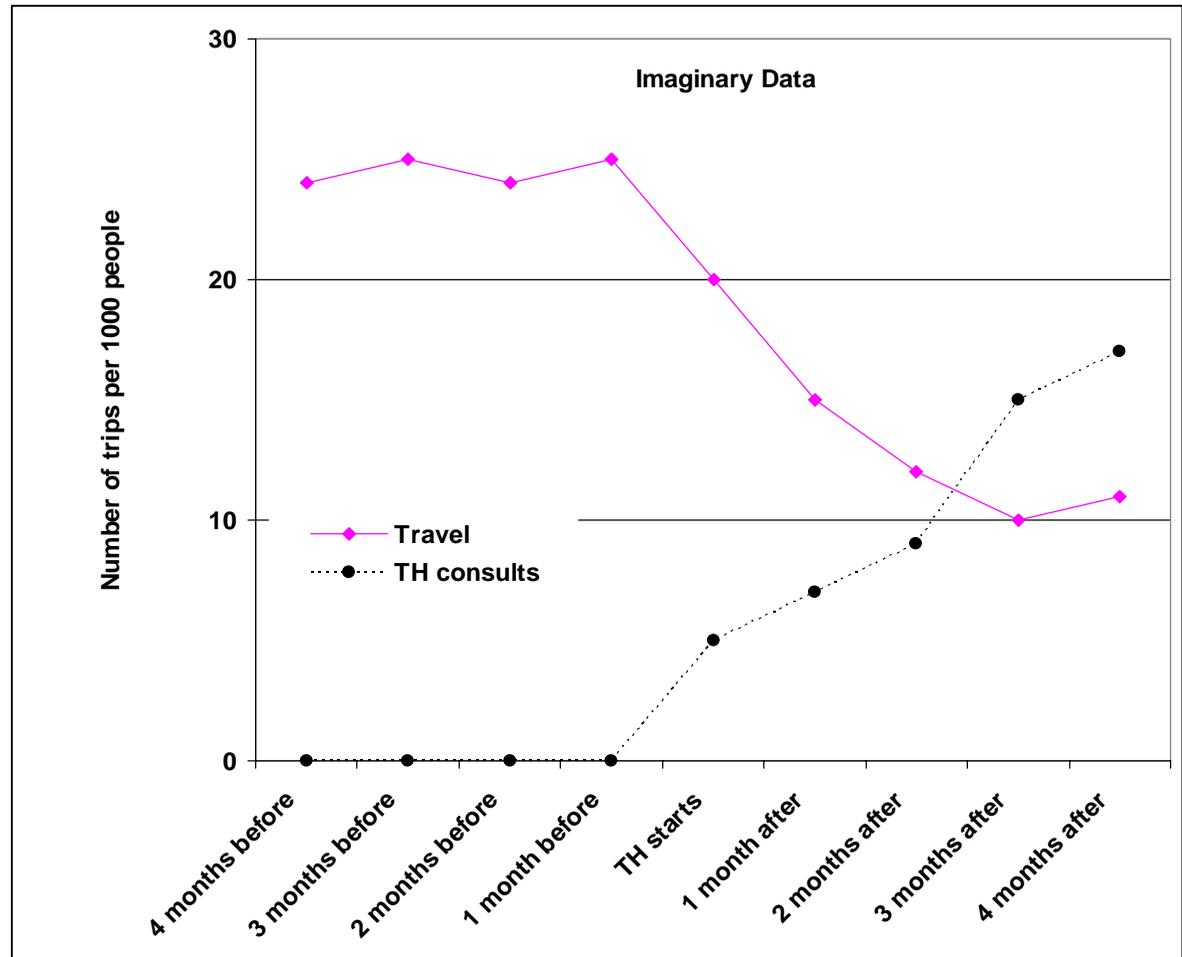


Figure 2. Interrupted Time Series Evaluation Design

**A Note Aside—Going Beyond the Evaluation**

Comparing the same communities over time is one way that the good and the bad effects of telehealth could be measured. One problem with looking at the effect over time is that other things are changing—new drugs are prescribed, new tests become available, new health programs are introduced, policies change, an all-season road is constructed, people get older, people move, and so forth.

This comparative design is a way to deal with many of the other things that could hide the effect of telehealth. Data will be collected for two types of communities:

- (1) those with telehealth services; and
- (2) those without.

Putting these two designs together will give stronger evidence than either design by itself. This combined design (Figure 3) still has some problems, but it is one of the better designs available in any evaluation. The comparison communities are called non-equivalent groups and so the combined design is called an Interrupted Time Series with Non-equivalent Groups Evaluation Design. This design is proposed for the long-term, ongoing monitoring of the impact of telehealth on First Nations communities and is not part of the evaluation.

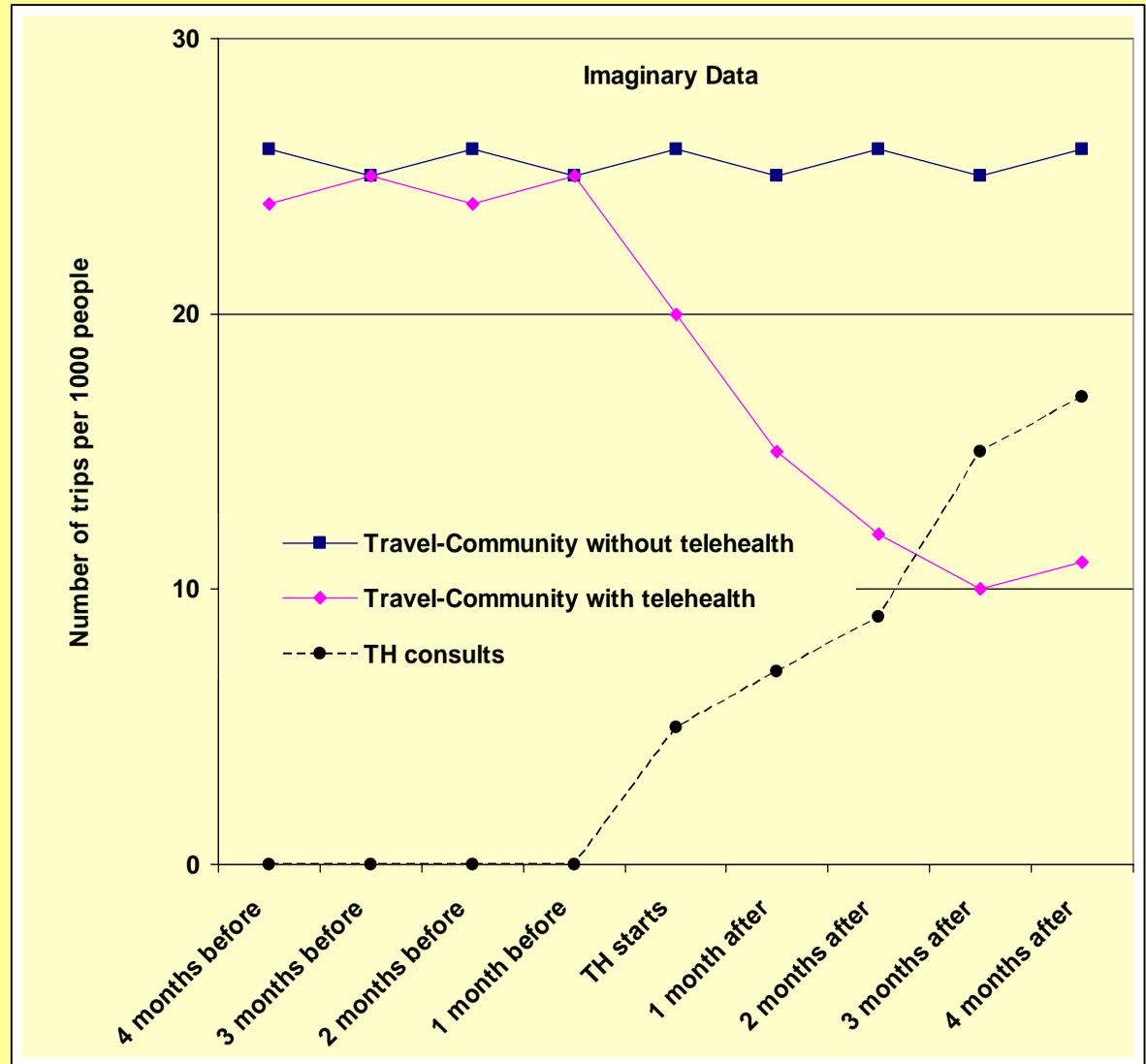


Figure 3. Interrupted Time Series with Non-equivalent Groups Evaluation Design

## Explanation of Spreadsheets

Details of the evaluation framework are shown in the tables that follow. The layout of these tables is explained below.

<b><u>Column Heading</u></b>	<b><u>Explanation</u></b>
<b>ID</b>	unique identification number, used to organize the evaluation questions (some questions (rows) have been deleted from this version and so some numbers are missing)
<b>Sub-Theme</b>	evaluation sub-theme or a major grouping of evaluation questions within each theme
<b>Evaluation Question</b>	specific evaluation questions
<b>Measurement</b>	measurements that need to be made or the data that need to be collected
<b>User (if applicable)</b>	person from who the data need to be collected (user or provider)
<b>Data Source (generic)</b>	the broad type of source from which data are to be obtained
<b>Data Source (specific)</b>	the specific source, if known, from which data are to be obtained
<b>Indicator from PHCTF application</b>	indicator that originally appeared in PHCTF application (dated May 23, 2003)
<b>Recommendation</b>	recommendation as to whether these data are needed for a successful evaluation
<b>Data Collection</b>	comment on the ease or availability of the data

*The next five worksheets comprise the full evaluation framework.*

In the worksheets that follow, items that appear in unshaded cells represent the evaluation framework with the minimal set of data needed to answer basic evaluation questions.

Items that appear in shaded cells were excluded from the evaluation framework. These typically refer to questions for which data are not available (typically long-term or more detailed or more reliable data are needed to answer these questions).

**Theme: Access**

ID	Sub-Theme	Evaluation Question	Measurement	User (if applicable)	Data Source (generic)	Data Source (specific)	Indicator from PHCTF application	Recommendation	Data Collection
Access-01	Availability of telehealth services	Which service was available? When was it available?	List of available services (equipment, personnel). Date and time of operation	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	Telehealth logbooks and administrative records	KO Telehealth logs/NORTH Network Central Scheduling office	More than 20 distinct services use telehealth by end of the project term.	1-Recommended	1-Data are available
Access-02	Service use	Which service was used? Why was it used? When was it used? Where is the equipment located?	List of services. Reason for use. Date and time of use.	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	Telehealth logbooks and administrative records	KO Telehealth logs/NORTH Network Central Scheduling office	(1) Service providers accept 90% of all telehealth consults requested. (2) Team conferences account for 5% of all monthly scheduled sessions by the end of project term. (3) Teleradiology used for 100% of digital imaging in Fort Severn, Deer Lake and Meno-Ya-Win Health Centre. (4) 90% of Nursing Stations participate in scheduled CME and CHE programming (5) Telehealth is utilized as a training tool for community based health services staff: (Child & Family Services, NNDAP, Community Futures, Homecare, Health Babies/Healthy Children) by end of project term. Zone Nursing Program is delivering quarterly CNE to community based Nurse Practitioners before the end of the project term.	1-Recommended	1-Data are available
Access-03	Service use	Who used the service?	Type of user	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	Telehealth logbooks and administrative records	KO Telehealth logs/NORTH Network Central Scheduling office	(1) Population using telehealth each month is > or = 1% of population by 3rd Qtr 2006. (2) Number of scheduled consults each month is > or = 150 by the 3rd Qtr of 2005.	1-Recommended	1-Data are available
Access-04	Service use	Who provided the service?	Type of provider	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	Telehealth logbooks and administrative records	KO Telehealth logs/NORTH Network Central Scheduling office	implicit	1-Recommended	1-Data are available

ID	Sub-Theme	Evaluation Question	Measurement	User (if applicable)	Data Source (generic)	Data Source (specific)	Indicator from PHCTF application	Recommendation	Data Collection
Access-05	Timely access	How long did users wait?	Time to access telehealth service for normal patient referrals	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	Telehealth logbooks and administrative records	KO Telehealth logs/NORTH Network Central Scheduling office	Time to access service providers using telehealth is < or = average time required to receive care in a face-to-face consult.	1-Recommended	1-Data are available
Access-06	Timely access	How long did users wait?	Time to access telehealth service for inter-professionals consultations	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	Telehealth logbooks and administrative records	KO Telehealth logs/NORTH Network Central Scheduling office	Spontaneous consults (Health Centre to Nursing Station/ Nursing Station to On-call physician) occur once or more per site/week by end of project term.	1-Recommended	1-Data are available
Access-07	Timely access	How long did users wait?	Time to access telehealth service for urgent patient referrals	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	Telehealth logbooks and administrative records	KO Telehealth logs/NORTH Network Central Scheduling office	Trauma telemedicine protocol developed and implemented by end of project term.	1-Recommended	1-Data are available
Access-08	deleted								
Access-09	Availability of other services	Many of the same questions that are asked of the telehealth service could be asked of the alternate services. (The alternative is travelling to receive services. This is what people did before telehealth was available or what people could do now instead of telehealth.)	See measurements listed for telehealth	See users listed for telehealth	Administrative records	Hospitals, Health care organizations	Pre-implementation baseline of primary care services and health service workers	2-Recommended, with caveats	3-Develop data collection process

**Theme: Acceptability**

ID	Sub-Theme	Evaluation Question	Measurement	User (if applicable)	Data Source (generic)	Data Source (specific)	Indicator from PHCTF application	Recommendation	Data Collection
Accept-01	User Expectation and Satisfaction	What did users expect from the telehealth service?	Expectations of users.	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	User surveys/ interviews/ focus groups			3-Optional	3-Develop data collection process
Accept-02	User Expectation and Satisfaction	Were expectations met?	List of expectations that were or were not met.	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	User surveys/ interviews/ focus groups			3-Optional	3-Develop data collection process
Accept-03	User Expectation and Satisfaction	Was the user satisfied with the telehealth session?	Satisfaction level	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	User surveys/ interviews/ focus groups	NORTH Network (1) Patient Satisfaction Questionnaire. (2) Service Provider Questionnaire.	(1)(a) Majority of patients feel that telehealth provides faster access to consultant services. (b) 85% or more patients agree or strongly agree that their telehealth session was satisfactory (Q11). (c) 85% or more patients would be pleased or very pleased if their family physician suggested that they have another appointment by telehealth (Q13). (2)(a) 100% of all new providers complete the Health professionals questionnaire. (b) 80% or more of all new providers are able to identify something that they enjoyed about their telemedicine session (Q5).	1-Recommended	1-Data are available
Accept-04	User Expectation and Satisfaction	What else should the telehealth service do? What should it do differently or stop doing?	List of services that should be added, improved or dropped.	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	User surveys/ interviews/ focus groups		(1) [patients/clients...] (2) 80% or more of all new providers are able to identify ways that their telehealth experience could be improved.	2-Recommended, with caveats	3-Develop data collection process

ID	Sub-Theme	Evaluation Question	Measurement	User (if applicable)	Data Source (generic)	Data Source (specific)	Indicator from PHCTF application	Recommendation	Data Collection
Accept-05	Knowledge transfer	What knowledge was transferred to the user?	Type and amount of knowledge transfer	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	User surveys/ interviews/ focus groups			3-Optional	3-Develop data collection process
Accept-06	Knowledge transfer	Was the knowledge and service culturally appropriate?	Comments of users on cultural relevance	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	User surveys/ interviews/ focus groups			1-Recommended	3-Develop data collection process

**Theme: Integration**

ID	Sub-Theme	Evaluation Question	Measurement	User (if applicable)	Data Source (generic)	Data Source (specific)	Indicator from PHCTF application	Recommendation	Data Collection
Integrate-01	Continuity of care	What does continuity of care mean to each type of user?	Continuity of care definitions	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	User surveys/ interviews/ focus groups			3-Optional	3-Develop data collection process
Integrate-02	Continuity of care	Was continuity of care achieved by telehealth?	Description of how continuity of care was or was not achieved by telehealth.	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	User surveys/ interviews/ focus groups			3-Optional	3-Develop data collection process
Integrate-03	Continuity of care	How could TH improve continuity of care?	Suggestions for improving continuity of care.	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	User surveys/ interviews/ focus groups			3-Optional	3-Develop data collection process
Integrate-04	Ease of Use	What telehealth tasks did users find difficult? Easy?	Description of telehealth tasks that were: (1) difficult; (2) easy.	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	User surveys/ interviews/ focus groups			2-Recommended, with caveats	3-Develop data collection process

ID	Sub-Theme	Evaluation Question	Measurement	User (if applicable)	Data Source (generic)	Data Source (specific)	Indicator from PHCTF application	Recommendation	Data Collection
Integrate-05	Ease of Use	How could ease of use be improved?	Suggestions for improving ease of use.	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	User surveys/interviews/focus groups			2-Recommended, with caveats	3-Develop data collection process
Integrate-06	Willingness to use	Were users/potential users aware of the range of services?	Awareness of service	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	User surveys/interviews/focus groups			3-Optional	3-Develop data collection process
Integrate-07	Willingness to use	Who used the service?	Type of user	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	Telehealth logbooks and administrative records	KO Telehealth logs/NORTH Network Central Scheduling office	More than 20 distinct services use telehealth by end of the project term.	1-Recommended	1-Data are available
Integrate-08	Willingness to use	Why did people use the service?	Reason for use.	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	User surveys/interviews/focus groups		More than 20 distinct services use telehealth by end of the project term.	1-Recommended	1-Data are available
Integrate-09	Willingness to use	Who is not using the service? When is the service not used? Reasons?	Description of non-users. Description of slack times. Reasons for not using the service.	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	User surveys/interviews/focus groups			2-Recommended, with caveats	2-Modify data collection process

ID	Sub-Theme	Evaluation Question	Measurement	User (if applicable)	Data Source (generic)	Data Source (specific)	Indicator from PHCTF application	Recommendation	Data Collection
Integrate-10	Service integration	Which of the existing services are now delivered via telehealth?	List of priority services	Care professionals, educators, support staff, administrators.	Telehealth logbooks and administrative records	Telehealth Service Integration Priorities Report	Report adopted at joint Health Services Provider workshop - 3rd Quarter 2004	3-Optional	3-Develop data collection process
Integrate-11	Service integration	Which of the existing services were delivered via telehealth?	List of services	Care professionals, educators, support staff, administrators.	Telehealth logbooks and administrative records	KO Telehealth logs/NORTH Network Central Scheduling office	Telehealth used at least once per month to augment community-based delivery of existing services (e.g. Sioux Lookout Diabetes program, Nodin Counseling, TB Methadone program).	1-Recommended	1-Data are available
Integrate-12	Service integration	Do regional authorities have ownership over the telehealth service? Are they asserting this ownership?	Description of management structure of telehealth services	Regional administrators.	Policy or procedures, agreements or contracts	Letter of Agreement	(1) MOU to migrate telehealth services to a regional health organization is in place by 3rd Quarter 2005. (2) Telehealth integrated into the service model at the Meno-Ya-Win Health Centre and the Red Lake Hospital.	2-Recommended, with caveats	2-Modify data collection process
Integrate-13	Service integration	Did communities have ownership over the telehealth service? How did they assert this ownership?	Description of management structure of telehealth services	Patients/clients, family, community professionals, support staff and administrators.	Policy or procedures, agreements or contracts		(1) 100% of CTC staffing is local. (2) 75% or more of all staff are of Aboriginal ancestry. (3) 100% of all management are of Aboriginal ancestry.	2-Recommended, with caveats	2-Modify data collection process
Integrate-14	Service integration	Are federal authorities using the telehealth service?	Description of management structure of telehealth services	Administrators.	Policy or procedures, agreements or contracts	FNIHB e-Services	(1) K-Net and FNIHB/HC Informatics and Connectivity Branch (Ontario/Nunavut) sign a scalable Service Level Agreement on or before the end of the 2nd Quarter. (2) 100% of KO Nursing stations/Health Centres are ready to deliver FNIHB Nursing portal & FNHIS services by end of project term.	2-Recommended, with caveats	2-Modify data collection process
Integrate-15	Capacity	What training did CTCs receive?	Description of the training that a CTC receives	CTCs	Policy or procedures, agreements or contracts	KO Telehealth administrative records		1-Recommended	1-Data are available

**Theme: Quality**

ID	Sub-Theme	Evaluation Question	Measurement	User (if applicable)	Data Source (generic)	Data Source (specific)	Indicator from PHCTF application	Recommendation	Data Collection
Quality-01	Quality of Care	What is the quality of clinical care?	To be determined by health care professional					3-Optional	3-Develop data collection process
Quality-02	Quality of Outcomes	Are health care outcomes via telehealth as good as or better than that under the alternative service delivery system?	Long-term measures to be identified					3-Optional	3-Develop data collection process
Quality-03	Quality of Service	Did CTCs help to provide a quality service?	Description of roles and responsibilities of CTCs	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	User surveys/ interviews/ focus groups		(1)(a) 100% of KO Community Telehealth Coordinators have completed the CTC training program. (b) 100% of KO Community Telehealth Coordinator Backups have completed the short-backup course. (2) 25% or less staff turnover each year.	2-Recommended, with caveats	3-Develop data collection process
Quality-04	Quality of Service	What were the service limits (bandwidth, number of sites, etc.), service interruptions, and time to restoration of service?	Technical description of telehealth service	Not applicable	Technical service manuals, logbooks, troubleshooting records	(1) K-Net monthly network utilization records. (2) NORTH Network Remedy Database.	(1)(a) Community-based terrestrial videoconference bandwidth is 1 Mbps or better for each telehealth session. (b) Community-based satellite videoconference bandwidth is 512 Kbps or better for each telehealth session. (c) Videoconference bridging services connect up to 24 simultaneous sites. (2)(a) Average level 1 response time (problem to solution) is less than 1 hour. (b) Average level 2 response time (problem to solution) is less than 8 hours. (c) Average level 3 response time (problem to solution) is less than 24 hours.	1-Recommended	1-Data are available
Quality-05	Quality of Service	What did the users think about the quality of the audio, video, connection, help desk, etc.?	User assessment of the quality of the service	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	User surveys/ interviews/ focus groups			2-Recommended, with caveats	2-Modify data collection process

**Theme: Financial Impact**

ID	Sub-Theme	Evaluation Question	Measurement	User (if applicable)	Data Source (generic)	Data Source (specific)	Indicator from PHCTF application	Recommendation	Data Collection
Cost-01	Equipment	What was the cost of the hardware & software?	Costs: Telehealth platforms, Peripherals and medical devices, Satellite earth stations, Computers, monitors, etc., Cables, ground lines (purchase), Software	Not applicable	Administrative records	Ministry of Health/ NORTH Network/ KO Telehealth	Baseline infrastructure metric established quarter: contribution of network integrator/hospitals	1-Recommended	1-Data are available
Cost-02	Equipment	What was the cost of the hardware & software?	Costs: Shipping & handling, Installation costs, Warranty/ maintenance/ insurance cost	Not applicable	Administrative records	Ministry of Health/ NORTH Network/ KO Telehealth	Baseline infrastructure metric established quarter: contribution of network integrator/hospitals	1-Recommended	1-Data are available
Cost-03	Equipment	What was the cost of the hardware & software?	Costs: Amortization period, rate, etc.	Not applicable	Administrative records	Ministry of Health/ NORTH Network/ KO Telehealth	Baseline infrastructure metric established quarter: contribution of network integrator/hospitals	3-Optional	2-Modify data collection process
Cost-04	Communication	What were the communication costs?	Costs: Hook-up, Access and line charges	Not applicable	Administrative records	(1) Ministry of Health/ NORTH Network/ KO Telehealth. (2) Vendor Research and published tariffs	(1) Baseline infrastructure metric established quarter: contribution of network integrator/hospitals. (2) Cost of comparable bandwidth is < or = managed services provided by regional vendors.	1-Recommended	1-Data are available

ID	Sub-Theme	Evaluation Question	Measurement	User (if applicable)	Data Source (generic)	Data Source (specific)	Indicator from PHCTF application	Recommendation	Data Collection
Cost-05	Facilities	What were the costs of using/renting the space for telehealth?	Costs: Construction/renovation, Building operations, Room rental, Office furnishings	Not applicable	Administrative records	Ministry of Health/ NORTH Network/ KO Telehealth	Baseline infrastructure metric established quarter: contribution of network integrator/hospitals	1-Recommended	1-Data are available
Cost-06	Personnel	What were the salary/ wage/ fee-for-service costs?	Costs: Salary/ wage/ stipend/ fee-for-service	Care professionals, educators, support staff, administrators.	Administrative records	Ministry of Health/ NORTH Network/ KO Telehealth	Baseline infrastructure metric established quarter: contribution of network integrator/hospitals	2-Recommended, with caveats	2-Modify data collection process
Cost-07	Personnel	What were the training/education costs?	Costs: training	CTCs, care professionals, educators, support staff, administrators.	Administrative records			2-Recommended, with caveats	3-Develop data collection process
Cost-08	Administrative Overhead	What overhead costs (not already included) should be assigned to the telehealth service?	Costs: overhead costs	Not applicable	Administrative records	Ministry of Health/ NORTH Network/ KO Telehealth	Baseline infrastructure metric established quarter: contribution of network integrator/hospitals	2-Recommended, with caveats	3-Develop data collection process
Cost-09	Promotion	What were the costs of promoting the service to the users?	Costs: promotion/marketing costs	Not applicable	Administrative records	Ministry of Health/ NORTH Network/ KO Telehealth	Baseline infrastructure metric established quarter: contribution of network integrator/hospitals	2-Recommended, with caveats	2-Modify data collection process

ID	Sub-Theme	Evaluation Question	Measurement	User (if applicable)	Data Source (generic)	Data Source (specific)	Indicator from PHCTF application	Recommendation	Data Collection
Cost-10	Travel	What were the travel costs? Who paid? (the person, the community, KO Telehealth, Federal Government, Government of Ontario?)	Costs: Travel costs: transportation, accommodation & food, incidentals (parking, registration fee, etc.), lost wages, intangibles (peace of mind, reduced stress, etc.)	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	Non-Insured Health Benefits, Telehealth logbooks and administrative records, User surveys/ interviews/ focus groups	NORTH Network Patient Questionnaire (Q14- 19)	(1) Extrapolate historical baseline for pre-implementation period (May 2003 to April 2004). (2) Baseline (May 2003 – April 2004) establish a categorical medical transport cost metric that reflects mean cost of medical travel by specialty in the Sioux Lookout Health Zone. (3) Travel Cost metric by monthly consults. (4) Participants identify telehealth savings.	2-Recommended, with caveats	2-Modify data collection process
Cost-11	Length of Stay in health care facility	In which health care facility did the patient/ client stay and for how long?	Duration, location (e.g., Hospital vs. nursing station versus patient's home)	Patients/clients, family	Non-Insured Health Benefits, Telehealth logbooks and administrative records, User surveys/ interviews/ focus groups		Protocol established to extract <u>hospital separation data</u> for First Nation patients by March 2005.	2-Recommended, with caveats	3-Develop data collection process

ID	Sub-Theme	Evaluation Question	Measurement	User (if applicable)	Data Source (generic)	Data Source (specific)	Indicator from PHCTF application	Recommendation	Data Collection
Cost-12	Outcomes	What are the costs or savings of changes in: (1) health knowledge; (2) health behaviour; (3) health status; and (4) well-being of the people? How much of this cost or saving can be attributed to telehealth?	(it may be difficult to assign a cost or savings to these outcomes or to define the portion of the savings that was attributable to telehealth)	All: CTCs, patients/clients, family, care professionals, educators, support staff, administrators.	Administrative records, health surveys, hospitalization data	(1) National Aboriginal Health Organization-First Nations and Inuit Regional Longitudinal Health Survey. (2) Health Canada-First Nations and Inuit Health Information System. (3) Canadian Institute for Health Information (CIHI) Discharge Abstract database (DAD).	NOTE: First Nations Organizations to collect and analyze health survey data	2-Recommended, with caveats	3-Develop data collection process
Cost-13	Costs & Savings of alternatives to telehealth	Many of the same questions that are asked of the telehealth service could be asked of the alternate services. (The alternative is travelling to receive services. This is what people did before telehealth was available or what people could do now instead of telehealth.)	See measurements listed for telehealth	See users listed for telehealth	See sources listed for telehealth	See sources listed for telehealth		2-Recommended, with caveats	3-Develop data collection process

Written by: John C. Hogenbirk, Centre for Rural and Northern Health Research, Laurentian University  
 With feedback from:  
 Keewaytinook Okimakanak Telehealth Evaluation Advisory Committee  
 Keewaytinook Okimakanak Telehealth  
 Kuh-ke-nah Network (K-Net)  
 NORTH Network  
 Ricardo Ramírez & Andres Ibanez, School of Environmental Design and Rural Development, University of Guelph  
 Sheila Hardy, Native Human Services, Laurentian University  
 Raymond W. Pong, Centre for Rural and Northern Health Research, Laurentian University

