PREMIÈRES NATIONS DU QUÉBEC

PLAN STRATÉGIQUE DE TÉLÉSANTÉ
2007 - 2010

WORK DIRECTION

Catherine Power, EHealth Program Agent, FNQLHSSC

DEVELOPMENT AND WRITING

Jocelyne Picot, Ph. D., President, Infotelmed Communications Inc.

GRAPHIC DESIGN AND PAGE LAYOUT

Chantal Cleary, Communications Agent, FNQLHSSC

Elizabeth Sioui, Secretary, FNQLHSSC

Julie Laperrière, Prokläm édition informatique (revision, October 2009)

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EXECUTIVE SUMMARY

This Telehealth strategic plan was developed as requested by the First Nations of Quebec and Labrador Health and Social Services Commission (FNQLHSSC), which supports the First Nations (FN) communities in the Quebec region. This plan covers the period from 2007 to 2010. Based on needs that were identified by the First Nations, the plan balances and supports the activities related to health in the communities, takes the First Nations culture and reality into consideration and, finally, demonstrates the potential for integration with the Quebec telehealth networks. A steering committee was implemented in order to monitor the developmental process for the plan. This committee unites the main partners involved in the telehealth domain such as the *Ministère de la Santé et des Services sociaux* (MSSS), Canada Health Infoway (CHI), Health Canada – First Nations and Inuit Health Branch (FNIHB), FNQLHSSC, First Nations Education Council (FNEC) as well as First Nations representatives.

The undertaken environmental scan includes a review of select literature, consultation workshops as well as individual interviews carried out among key interveners and experts. The results of the workshops demonstrate the need to improve access to health services, chronic disease management as well as the hiring, retention and training of personnel. As for the challenges related to the implementation of telehealth, of note are the needs for connectivity, equipment, training and technical support within the communities. An overview of the telehealth activities among the First Nations of Canada demonstrates that the development of telehealth usually occurs in two phases. In the first phase, videoconferencing is used for training purposes. A second, much more complex phase allows for the development of clinical applications.

In regards to the strengths that can be found among the First Nations, there is the FNQLHSSC's leadership as well as the FNEC's important contribution that enabled the communities to equip themselves with a tele-education network. The First Nations can also count on a high-capacity videoconferencing bridge as well as on the presence of competent and qualified health personnel. The retained vision for the plan is to create, exploit and manage an equitable, virtual and viable network that will be coordinated by the FNQLHSSC and the FNEC along with other privileged partners. It is expected that this network will be integrated into the current Quebec telehealth networks in order to facilitate the exchange, hiring and training of health personnel as well as to offer access to information on health and improve the management of chronic diseases as well as access to health services.

With that in mind, four strategic orientations have been laid down. First of all, we will pursue a strategy that focuses on distance training, which will allow for the provision of training to the health workers through the use of the FNEC's network. Secondly, negotiations to access the RTSS network are anticipated in order to pursue a series of clinical applications that will aim to reduce the occurrence of complications related to chronic diseases as well as an improved management of these types of diseases – particularly with respect to diabetes. The second phase will also foster the improvement of access to mental health professional services and plan the provision of selective tele-consultations for the communities that require these services.

Furthermore, the strategic plan contains a list of ways to ensure the permanence of the telehealth service as well as a series of proposals to manage the organisational change caused by the implementation of telehealth. The governance model proposes that the FNQLHSSC coordinate the preparation of the project plans and ensure the coordination, management and continuity of the telehealth activities.

On the other hand, the responsibility in terms of the technical aspects of the management of the telehealth network, including the staff training, would be carried out in a collaborative fashion with the FNEC. The management and the coordination of individual projects would take place among the local teams in the communities where the project will

be implemented. As for the telehealth committee, it would play an advisory role. Its composition will however need to be reviewed in order to increase the representation of First Nations.

Finally, among the priority actions, it is proposed that the FNQLHSSC will create a permanent position to ensure the coordination of the telehealth activities. In addition to preparing an operation plan and a communications plan, funding proposals will need to be submitted among the main funding partners – more specifically to the CHI, FNIHB and MSSS for phase 1 of the proposed projects.

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LIST OF ACRONYMS

ADRLSSS	*Agence de développement de réseaux locaux de services de santé et de services sociaux*
ATKC	Aboriginal Telehealth Knowledge Circle
FNEC	First Nations Education Council
HC	Hospital Centre
CHUQ	*Centre hospitalier universitaire de Québec*
CSSS	*Centre de santé et de services sociaux*
FNQLHSSC	First Nations of Quebec and Labrador Health and Social Services Commission
vCSSS	Virtual *Centre de santé et de services sociaux*
MUHC	McGill University Health Centre
EHF	Electronic Health File
FNIH	First Nations and Inuit Health
PIA	Privacy Impact Assessment
FNQLRHS	First Nations of Quebec Longitudinal Regional Health Survey 2002
CHI	Canada Health Infoway
KOTH	Keewaytinook Okimakanak Telehealth
KNET	Keewaytinook Okimakanak Network
INAC	Indian and Northern Affairs Canada
MSSS	*Ministère de la Santé et des Services sociaux*
OIIQ	*Ordre des infirmières et infirmiers du Québec*
NAHO	National Aboriginal Health Organisation
ORL	Otorhinolaryngoloy
FN	First Nations
CHIPP	Canada Health Infrastructure Partnerships Program
OCAP	Principles of Ownership, Control, Access and Possession
RAMQ	*Régie de l'assurance maladie du Québec*
LSN	Local services network
RQT	*Réseau québécois de télésanté*
RTSS	*Réseau de télécommunications sociosanitaire*
RUIS	*Réseau universitaire intégré de santé*
CIT	Communications and Information Technology

1 INTRODUCTION

In Canada, telehealth network programs are implemented in 12 of the 13 provinces and territories. Although telehealth and telemedicine have existed for more than 30 years in Canada[1], it is only towards the middle and end of the 1990s that several telehealth projects became programs. In several Canadian communities, telehealth is no longer considered to be something new. Since the dawn of the 2000s, the development of strategic and operational plans to guide the implementation of telehealth through partnerships with various organisations has become commonplace.

All across Canada, First Nations (FN) communities have adopted telehealth. Viable applications were implemented in order to address the needs of the FN and Inuit communities. Among these applications, the most current are those related to the prevention and treatment of diabetes, home care, mental health and otorhinolaryngology (ORL). In December of 2005, the EHealth Solutions Unit at Health Canada – First Nations and Inuit Health (FNIH) and the First Nations of Quebec and Labrador Health and Social Services Commission (FNQLHSSC) organised a First Nations and Inuit of Quebec Telehealth Regional Forum in which more than 80 people participated. It was during this event that a recommendation was made in favour of a FN-specific telehealth strategic plan.[2]

1.1 THE PLAN'S OBJECTIVES AND GUIDING PRINCIPLES

The objectives of the strategic plan are to develop a vision of telehealth that corresponds to the health needs identified by the FN communities and to create a three-year strategic plan (2007-2010). The strategic plan will have to address the following guiding principles:

▪ Present strategies that correspond to the definition of telehealth as well as the results of the telehealth workshops;

▪ Be strategic; adapted to the culture of First Nations and realistic;

▪ Harmonise, complete, support and increase, when possible, the existing activities related to health and social services in the FN communities of Quebec;

▪ Be innovative and ensure the development of viable e-health and telehealth projects;

▪ Correspond to the objectives and policies of Canada Health Infoway (CHI) and Health Canada – FNIHB;

▪ Have the potential to integrate into pre-existing telehealth networks and projects developed by the *Réseaux Universitaires Intégrés en Santé (RUIS) (Free translation: integrated health university networks)*, as well as respect the service corridors that are already established with the *Agences de santé.*

1.2 PARTNERS FOR THE DEVELOPMENT OF THE PLAN

Delegates from most of the First Nations communities of Quebec participated in the development of this plan, either by filling out the questionnaires or by participating in one of the two workshops that were held in Sept-Îles and Montreal, in March and April of 2007. The conception and the implementation of the telehealth strategic plan involve the following partners:

FNQLHSSC: the FNQLHSSC coordinates the planning process and leads this project on behalf of the First Nations communities in the Quebec region;

Health Canada - FNIH: the Health Canada – FNIH E-Health Solutions Unit offers resources and advice in the framework of the planning process;

Canada Health Infoway: CHI funds the achievement of the strategic plan. Once approved by the telehealth advisory committee, the plan will be submitted to the CHI. The following step will consist of requesting funding for the telehealth activities proposed in the plan;

MSSS: the *Ministère de la Santé et des Services sociaux (MSSS)* is responsible for the coordination of telehealth activities in Quebec, and this, through the four *réseaux universitaires intégrés de santé (RUIS)* and the *Agences régionales de santé et de services sociaux.* All the telehealth activities indicated in the First Nations strategic plan will have to be integrated into the RUIS.

1.3 DEFINITIONS OF THE TERMS

Since there are many definitions for telehealth in existence, we have maintained, for the purpose of uniformity, the definitions that are included in the information document that was distributed to the participants in the consultation workshops for the development of this plan (see annexe 3):

EHealth: a generic term used by Health Canada, CHI and other organisations in order to describe the exchange and transfer of health information within secure networks with the objective of improving the health care delivery system as well as access to the health care system. EHealth includes connectivity and infrastructures: it is therefore telehealth in addition to the information systems - including electronic health files.

Telehealth: the use of communication and information technologies (CIT) to provide health services and transfer health-related information over large and small distances.

In Quebec, Act 83 modifies the *Loi sur les services de santé et les services sociaux* and updates practices related to telehealth starting from the following definition: "By telehealth services, we mean an activity, service or system related to health or social services, practiced in Quebec, from a distance, by way of communication and information technologies for educational, diagnostic, treatment, research, clinical management or training purposes. (Free translation)."[3]

***Tele-medecine:* medicine practiced at a distance.**

Tele home care: Patients who are suffering from a chronic disease can be followed-up on at home with the use of a telephone line. They can use a simple device to send data on a regular basis regarding their disease (weight, blood pressure, blood sugar, medication, diet, vital signs, etc.) to a nursing station. This communication enables the nursing staff to follow the patient's state of health and to intervene, if necessary. Patients who have complex wounds or who are recovering from surgery can also be followed-up on from home by sending information and digital pictures to a health professional.

1.4 METHODOLOGY

The methodology used for the development of this strategic plan includes an environmental scan and a consultation process with the key interveners in the FN communities of Quebec. This consultation process consisted of two workshops in which the participants were the administrators and employees of the health sectors in the communities that are interested in telehealth. The final step of the consultation process includes a review of the plan that was

established by the **Telehealth Steering Committee**. The committee is composed of representatives that come from organisations that have an interest in the deployment of the strategic plan (annexe 1).

Environmental scan

The main sources of information for the environmental scan were the interviews that were carried out among the key interveners as well as the study of pertinent documents at both the national and regional levels. **The literature review** included the study of selected documents, both published and unpublished as well as recent online material regarding the telehealth experiences of Aboriginals and Indigenous people.

Thus, interviews with open-ended questions were carried out among 14 key interveners (annexe 4). The objective of these interviews was to obtain complementary information on the issues raised during the workshops, verify the procedures and policies in effect as well as evaluate the consequences of the strategic orientations that are proposed in this plan.

Furthermore, two key interveners from each of the FN communities were invited to participate in the workshops. In total, thirty-two participants from **22 communities** participated (Table 1). These interveners included directors or administrators of health centres as well as nurses. Before holding the workshops, a general information document was distributed as well as a list of questions, which were essentially the same questions as those that were discussed during the workshops.

Participants	Number of participants
Director or administrator	11
Nurse or head nurse	16
Other	5
Total	**32**

TABLE 1: WORKSHOP PARTICIPANTS

2 CONTEXT

2.1 THE HEALTH OF THE FIRST NATIONS POPULATIONS

Canada

In 2001, according to Health Canada, the life expectancy of FN was estimated to be 68,9 years for men and 76,6 years for women, which is, respectively, a gap of 7,4 years and 5,2 years with the life expectancy of the Canadian general population. In 2000, the birth rate among the FN was 23,4 births per 1000 residents (more than twice the rate for all of Canada). As for the infant mortality rate, it was 6,4 deaths for every 1000 births (16% more than the national rate).

Diseases of the circulatory system and cancer are the main causes of death among the FN. On the other hand, in 2000, suicide and self-mutilation were the main causes of death among people under 44 years of age and accounted for 22% of all deaths among the youth, compared to 20,4% among all young Canadians. As for the hospitalisation rate, it was

higher among Aboriginals than among the Canadian general population and this, for all hospitalisation causes except circulatory system diseases and cancers. In 2000, compared to the Canadian general population, the FN had higher rates of whooping cough (twice as high), rubella (seven times higher) and tuberculosis (six times higher).[4]

Québec

In 2002, the FNQLHSSC carried out the First Nations of Quebec Regional Longitudinal Health Survey (FNQRLHS). A sampling of 3785 individuals, composed of 1949 adults, 798 adolescents and 1038 children, participated in the FNQRLHS.[5] During the 12 months preceding the survey, 55% of adolescents and 22% of adults had sustained injuries – including fractured bones. Furthermore, more than two-thirds of the adults were overweight or obese and the percentage of diabetic adults was 14,5% - which is twice the rate of diabetes among the non-Aboriginal population of Quebec over this same period. Over half of the responding adults also reported having health problems. Muscular-skeletal, respiratory and cardiovascular problems and those related to the digestive system were those with the highest rate of prevalence (65%) in the isolated communities. Almost half of the respondents over 55 years of age suffered from cardiovascular problems and more than a third of them were diabetic. More than a third of parents and over half of the adults had encountered difficulties with receiving care because of the long waiting lists while more than 26% mentioned the lack of physicians or nurses available in their region.

On the other hand, in 1999, Health Canada launched the First Nations and Inuit Home and Community Care program. This includes the home care services, linkages with specialists and social services, access to specialised equipment as well as a data collection and file storing system. In 2004, four First Nations of Quebec communities were selected to participate in a survey aiming to determine the needs in terms of continuing care.[6] The survey revealed that 97% of the clients preferred to remain in their community rather than go someplace where the services are more readily accessible – meaning outside of their community.

2.2 THE FIRST NATIONS COMMUNITIES OF THE QUEBEC REGION

First Nations of Quebec

The population of First Nations who live in Quebec equates to approximately 10% of the First Nations across Canada and 1% of the population of Quebec. The FN belong to two large cultural and linguistic families: the Algonquin and the Iroquois. Thus, the Huron-Wendat and Mohawk nations belong to the Iroquois family while the Algonquins include the Abenaqui, Algonquin, Atikamekw, Micmac, Cree, Malecite, Innu and Naskapi nations.

Each nation has its own unique language and cultural identity. The FNLQHSSC collaborates with 31 First Nations communities (excluding the Cree who are part of a different legal framework through the adoption of the Cree-Naskapi of Quebec Act in 1978[7]). This legal framework also applies to the Naskapi nation even though they still collaborate with the FNQLHSSC. According to the FNQRLHS that was carried out in 2002, 38,5% of First Nations primarily use an Aboriginal language. The FNQRLHS also demonstrates that a community's degree of isolation is directly related to a more frequent use of an Aboriginal language. Many people use the services of an interpreter in order to obtain health care. The French and English languages are often a second language and, in many communities, two languages are spoken. The primarily English-speaking communities are located close to the Ontario and New Brunswick provincial borders. The First Nations of Quebec communities are located in 12 of the 17 administrative regions of Quebec. The populations in the communities vary from more than 7 300 residents to less than 300 residents. In Quebec, the number of people who live in the non-agreement FN communities (including the agreement community of Kawawachikamach) comes out to approximately 39 540 people. Some communities are located close to

urban communities and tertiary health care centres, as is the case for Kanesatake, Kahnawake and Wendake. Others are isolated and are only accessible by railroad, air or water travel. This is actually the case for a third of the communities.
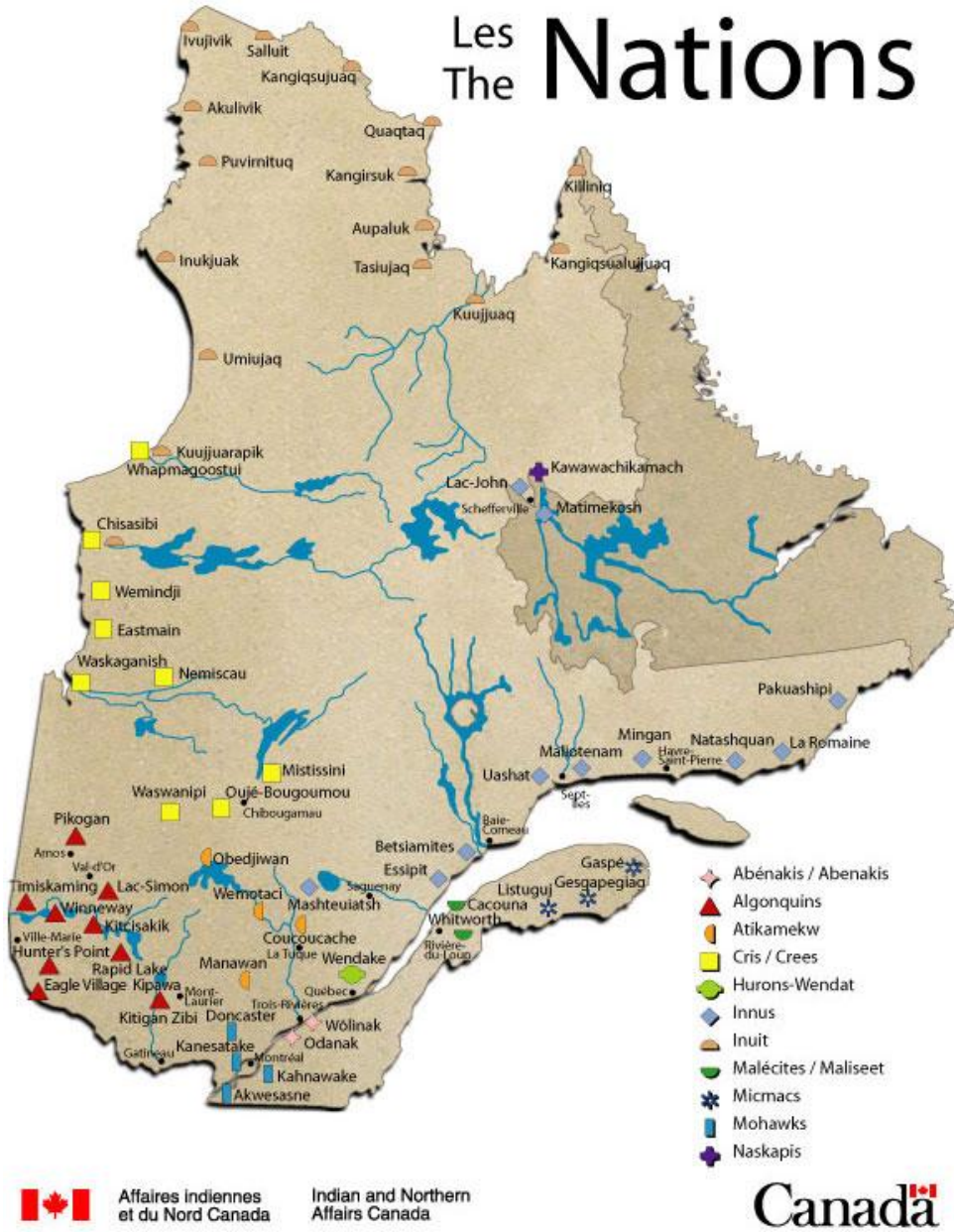
FIGURE 1: FIRST NATIONS AND INUIT COMMUNITIES IN QUEBEC

Table 2 shows the number of First Nations of Quebec communities in relation to the degree of isolation. None of these communities are considered remote-isolated while eight of them are considered to be isolated. Health Canada defines the degree of isolation as follows[8]:

- **Remote-isolated**: no road access, no regular flights;

- **Isolated**: no road access, regular flights;

- **Semi-isolated:** road access, located more than 90 km from access to medical services;

- **Non-isolated:** road access, located less than 90 km from access to medical services.

	Isolated	Semi-isolated	Non-isolated
Number of communities	9	4	18

TABLE 2: NUMBER OF FIRST NATIONS OF QUEBEC COMMUNITIES IN RELATION TO THEIR DEGREE OF ISOLATION

Annexe 6 establishes the list of the First Nations of Quebec communities in relation to their degree of isolation and the size of their population.

The FNQLHSSC and the FNEC

The FNQLHSSC was created in 1994 following the adoption of a resolution during an Assembly of Chiefs of Quebec and Labrador. The FNQLHSSC's role consists of assisting the First Nations and Inuit of Quebec communities and organisations in the defence, maintenance, and exercising of inherent rights related to health and social services and to help them in the achievement and development of their programs. The FNQLHSSC ensures the promotion of community-based health and social services organisation models and provides technical support for research, development and training in these areas – upon request by the communities. The FNQLHSSC has the goal of ensuring that the First Nations health and social services delivery system respects the fundamental needs of its citizens. Its mission is to "improve the physical, mental, emotional and spiritual well-being of the First Nations and Inuit individuals, families and communities while respecting their culture and local autonomy."[9]

FIGURE 2: THE FIRST NATIONS HEALTH CIRCLE

As for the FNEC, it is affiliated with the Assembly of First Nations of Quebec and Labrador (AFNQL). The FNEC manages an educational network that is partially funded by the SchoolNet program, which is administered by Indian and Northern Affairs Canada (INAC), and exploits, in collaboration with the FNQLHSSC, a teleconferencing bridge. The bridge, which is used for educational and administrative meetings, can connect up to 16 sites simultaneously for video contact and more than 90 sites for audio contact. The FNEC provides technical support as well as computer training to the health workers and teachers in the FN communities.[10] Furthermore, equipment for videoconferencing is now in place for all the schools and health establishments in the FN communities. Moreover, all the communities have Internet access.

2.3 HEALTH CARE IN THE FIRST NATIONS COMMUNITIES OF QUEBEC

In 2004-2005, the Quebec government created an organisational structure that was conceived to facilitate the transition of people between the primary services (general medicine and social services), secondary services (specialised medicine and social services) and tertiary services (highly specialised medicine and social services) provided by the local health service networks. The 18 *Agences de développement de réseaux locaux de services de santé et de services sociaux* (ADRLSSS), formerly known as the "Régies", are each constituted of local networks of services with many types of establishments. At the local level, 95 health and social services centres, as well as their local service network partners (such as family doctors and establishments that provide specialised services), share a collective responsibility with respect to the population, including the First Nations, who are located on their territories (annexe 7).

Following negotiations between Health Canada – FNIH and several communities that desire to have greater control over the resources and to obtain responsibility for the community health services and programs, Health Canada transferred the responsibility for the management of health care directly to most of the First Nations and Inuit communities in Canada. Thus, 29 of the 31 communities represented by the FNQLHSSC were "transferred" under the management of the band councils. Note that with respect to health services, the non-insured health services are covered by Health Canada.

There exist at least four types of health care establishments in the First Nations communities: the nursing stations, health centres, treatment centres and long-term care centres. Health Canada – FNIH funds some of these establishments: 11 nursing stations, 16 health centres and 6 treatment centres. Table 3 shows the distribution of these establishments in the communities. Moreover, the Mohawk community of Kahnawake has full authority regarding the administration and exploitation of Kateri Hospital. The associated costs for the hospital are covered by the province of Quebec.

Types of health establishments	Number of establishments
Nursing stations	12
Health centres	15
Treatment centres	6
Hospitals	1
Long-term care centres	7
Total number of establishments	41

TABLE 3: TYPES OF HEALTH ESTABLISHMENTS IN THE FN COMMUNITIES THAT ARE SUPPORTED BY THE FNQLHSSC

A *nursing station* is an installation on the territory of an isolated community that is not accessible by any roads leading to other health care installations. Nursing stations have at least two community health nurses and two support workers who are organised to provide primary health care services, including emergency care, short-term hospitalisation services, community services and public health services. Emergency health care services are provided on a 24-hour per day basis. The services of a physician and a dentist are provided in accordance with a rotation system. In order to obtain secondary care services, the patients are referred to the closest hospital centre outside of the community. For tertiary care, they can be transferred from the hospital to the tertiary care centre. The transfers are carried out through public transportation, except for in emergency or serious situations that call for an air ambulance service. The patients who reside in the communities that are located in proximity to the borders of Ontario and New Brunswick can be directed towards a health care providing centre in a neighbouring province. Then, the costs for the medical appointment or hospitalization is reimbursed by the *Régie de l'assurance maladie du Québec* (RAMQ).

A *treatment centre* is an establishment that provides a therapeutic service to the First Nations members who are suffering from problems related to addictions. The treatment centres have operated in the framework of the National Native Alcohol and Drugs Addictions Program.

A *health centre* is an installation on a territory, normally located in the non-isolated communities, that has at least one nurse and a few supporting employees who provide disease prevention and health promotion activities. The delivery of primary or urgent health care is provided by the physicians who live in the region or by visiting physicians. The health services are provided five days per week – from 9 am to 5 pm.

A *long-term care centre* is an establishment that provides accommodations for people who require supervised care both day and night – including professional health care and personal care (meals, laundry, cleaning).

2.4 TELEHEALTH IN QUEBEC

The development of telehealth is not new in Quebec. In fact, in the 1990s, we already had two services for tele-paediatrics – one of which was provided by the *Hôpital Sainte-Justine à Montréal* and another by the *Centre Hospitalier de l'Université du Québec* (CHUQ). The latter would then become the *Réseau québécois de télésanté de l'enfant* (RQTE) and then, with the addition of an adult clientele, the RQT. Today, there exists more than 200 telehealth stations across 116 different sites throughout Quebec.

Furthermore, in 2004, the Quebec government created four *Réseaux universitaires intégrés de santé* (RUIS). These networks have the mandate to plan, manage and evaluate the telehealth activities on their respective territories (annexe 5). Each RUIS developed a strategic plan and identified two major telehealth projects that were then submitted to the MSSS and CHI in order to be funded. Most of these projects are currently in the second phase - which involves implementation. Wide-ranging projects that are liable to be the most useful and interesting for the First Nations communities are underlined in Table 4.

RUIS	Telehealth projects
Université Laval	Tele-consultation and support for the development of professional and multi-disciplinary practices
	Tele-pathology
Université de Sherbrooke	Tele-assistance for wound care and treatment
	Support for the professional health practice: tele-consultation and tele-information
Université de Montréal	Tele-training and multidisciplinary clinical support
	Tele-home care
McGill University	National Program for Home Ventilatory Assistance (NPHVA)
	Le CSSS virtuel (free translation: the virtual CSSS)

TABLE 4: RUIS TELEHEALTH PROJECTS THAT ARE FUNDED IN PART BY CANADA HEALTH INFOWAY

Moveover, the *Réseau de télécommunications sociosanitaire (RTSS) (free translation: socio-sanitary telecommunications network)* of the MSSS provides a videoconferencing service for telehealth, which includes an upgrading of the bandwidth capacity for the majority of the sites as well as high bandwidth connections for the large establishments. This network enables access to tele-information services by way of Internet and through the use of a RTSS-RISQ *(Réseau d'informations scientifiques du Québec (free translation: Quebec scientific information network))* gateway. For its part, the RISQ network is a high bandwidth network that links the Quebec universities thereby providing access to the users to a wide array of services and expertise. It is also Quebec's access point to the CA*net pan-Canadian network. Thus, through CA*net, the RISQ members are connected to all the major teaching and research networks throughout the world. Lastly, obviously, they also have access to the Internet. [11]

Also note that the development of the RTSS telehealth network is compatible with the plan that is being developed through a CHI-MSSS collaboration. This plan includes the implementation of the "PACS" medical imaging network, *the Dossier santé électronique interopérable du Québec (DSÉIQ)*, the user and intervener registries as well as the medication, laboratory and public health networks.

Despite the fact that most First Nations of Quebec communities are equipped with videoconferencing stations, only two communities currently have an operational telehealth service. **Manawan** just obtained their services while the other is located in **Winneway**. Telehealth is used for distance education and for certain types of consultation, such as tele-psychiatry. Among the advantages for the Algonquin population, of note there is a lower rate of resorting to the closest hospital's emergency unit, reduced waiting times and transportation, improved communications between the physicians and the nurses as well as the possibility to obtain regular services for elderly citizens.[12]

3 ENVIRONMENTAL SCAN

3.1 THE WORKSHOPS

Preparation and presentations

All of the participants received a general information document ahead of time that included a series of questions that they were asked to answer (annexe 3). These were essentially the same questions that were discussed during the workshops. Furthermore, each of the workshops started with short presentations that were prepared to foster discussions.

Results of the discussions

Values

The participants deemed that the following values were the most important in terms of health and well-being:

- Access to quality **specialised services**;

- A **decrease in waiting periods**;

- The acknowledgement of telehealth as being **one tool among others** to improve health and achieve the objectives in the community health plans;

- Respect for **autonomy, specificities and developmental potential of each of the communities**, while encouraging the creation of **partnerships** between the different communities;

- The acknowledgement, respect for, and reinforcement of the **expertise and competencies of the local personnel**;

- The importance of raising awareness among patients regarding their **responsibility with respect to their health** and well-being;

- The importance of giving patients the possibility of making an **informed decision** regarding the treatment to be administered and the importance of respecting their choice;

- That the hierarchal nature of the **organisation of the health care services be adapted to the needs** of the population of each community;

- Maintain or adopt a **holistic approach** with respect to health within a healthy community in which the people live in a safe environment and provide mutual aid as needed;

- Respect for **spirituality, traditional and cultural values** as well as the role of Elders in the transmission of these values;

- Preserve or achieve a **balance between traditional values and technological advances**.

Needs

The participants deemed that the highest priorities in terms of health needs are as follows:

- **Improve access to health care specialists**: clinicians, general practitioners and specialist physicians – particularly in the fields of psychiatry and paediatrics. There is currently a shortage of physicians and health professionals, especially physiotherapists, dieticians, mental health specialists, ergotherapists, psychologists and nurses;

- **Reduce wait times**: consideration for the pooling of resources in order to share access to the different clinicians that provide care in the communities;

- **Recruitment**: standardise the training of new employees in order to facilitate personnel moves and avoid competition between the communities in terms of hiring;

- **Retention:** The staff turnover rate in the health centres and the nursing stations is a real problem;

- **Facilitate access to health services in the other provinces** that are the most affected because of the language spoken, particularly in the area of mental health. Eliminate additional border-crossing fees and remove restrictions with respect to transportation;

- **Facilitate electronic access to patient files**, for example, for laboratory test results thereby reducing wait times for treatment;

- Improve funding for transportation through the establishment of a more equitable formula: funding on a per capita basis does not take into consideration that the more isolated communities usually have the smaller populations.

Potential uses for telehealth:

The potential uses for telehealth that are the most frequently mentioned by the participants are the following:

- Consultation of a specialist – especially for **isolated and semi-isolated communities**;

- **Pooling of resources** in order to facilitate staff turnover, attract and retain younger personnel and offer education and training possibilities on-site;

- **Reduction of wait times for patients** in terms of examination results and treatments and to **reduce travelling** as well;

- In the framework of the development of emergency **preparedness plans for a pandemic** as well as during and after a pandemic situation in order to ensure communications, accelerate the dissemination of information and to support the health sector personnel;

- Access to distance **education and training**;

- **Promote health, prevent diseases** and provide **family education**, especially for cases of chronic diseases such as diabetes – sending images of wounds, dialysis monitoring and treatment of retinopathy and childhood diseases;

- Have access to a specialised nurse in emergency situations for patients who suffer from **chronic diseases** (e.g. diabetes);
- Break community isolation and offer assistance in times of crisis that requires the intervention of a mental health professional (e.g. family violence and suicide);
- Support the **FN institutional organisations** (treatment centres, native friendship centres, Quebec Native Women and shelters for women who are the victims of violence) in their respective activity fields.

Challenges

The most major problems raised are the **lack of equipment and space** as well as the **lack of human and material resources**. Also of note is the absence of partnerships between the various political levels, the lack of training on the use of information and communication technologies as well as limited access to **technical support** within the community health establishments. The high staff turnover rate and resistance to change, particularly among the older personnel, also represent significant challenges to overcome.

Furthermore, the need to find and support visionaries (leaders in the field who have the necessary capacity to carry out a telehealth project from the developmental stages through to implementation) as well as the need to integrate telehealth into the organisational culture are also considered challenges. The same applies for the issue of sustainability and the need to promote telehealth in the communities.

Moreover, the communities that do not use telehealth stated as the main reasons the lack of knowledge in terms of equipment, **connectivity issues**, the lack of infrastructure and physical space, financial resources, training and technical support. The high staff turnover rate requires that training be provided on the use of the equipment on a regular basis.

As for those who have never used telehealth, they foresee issues with respect to its adoption and have concerns regarding the dehumanisation of the services caused by the use of the equipment and also feel the need to educate the community on this issue. Finally, the promotion of telehealth should be carried out to ensure ongoing utilisation.

VALUES	NEEDS
▪ Access to quality services ▪ Reduction of wait times ▪ Improvement of health ▪ Respect for the autonomy and specificities of the communities ▪ Recognition of the knowledge and competencies at the local level ▪ Respect for informed decisions on behalf of patients with respect to their health ▪ Holistic approach ▪ Respect for spirituality, traditional and cultural values as well as the role of Elders ▪ Support for activities that contribute to health ▪ Balance between traditional values and technological advances	▪ Improve access to health professionals such as physicians, pharmacists, dieticians, etc. ▪ Reduction of wait times ▪ Improve the employment and standardise training for new personnel ▪ Facilitate access to cross-border services ▪ Facilitate electronic access to patient files ▪ Cover travel in a more equitable fashion while taking distance into consideration
POTENTIAL USES	**CHALLENGES**
▪ More useful for isolated and semi-isolated communities ▪ Use resources collectively ▪ Facilitate staff turnover ▪ Attract and retain personnel ▪ Offer on-site education and training through long-distance courses ▪ Reduce the wait times for the patients as well as travelling ▪ Access training to promote health, prevent diabetes, provide educational opportunities for families (particularly in regards to diabetes, treatment of wounds and retinopathy) ▪ Offer assistance in social and psychosocial crisis situations	▪ Lack of equipment, space and material and human resources ▪ Lack of training on the use of information and communications technologies ▪ Lack of technical support ▪ Resistance to change ▪ Need to find and support visionaries at the local level ▪ Sustainability ▪ Promotion of telehealth in the communities ▪ Inadequate connectivity ▪ Burden in terms of training new employees can increase because of the staff turnover rate

FIGURE 3: SUMMARY OF THE DISCUSIONS IN THE CONSULTATION WORKSHOPS

3.2 FN TELEHEALTH PROJECTS IN THE OTHER PROVINCES AND TERRITORIES

Telehealth is now present in a large number of FN and Inuit communities in Canada. Operating through partnerships and integrated into existing networks, telehealth is used by FN to improve home care, offer access to distance information and education as well as to facilitate access to medical and health services that are unavailable in remote or isolated communities. To this day, approximately 125 of the 600 FN and Inuit communities in Canada are connected to these types of activities thanks to telehealth. The main telehealth applications among the FN are the provision of care for chronic diseases, tele-home care as well as tele-consultations in the fields of Otolaryngology and mental health.[13]

KO Telehealth — Ontario
KO Telehealth (KOTH) is a significant FN telehealth network that is located in northern Ontario. In the beginning, this network linked five communities while today it connects 24 communities (with an average population of 7000 residents). KO Telehealth is managed by the FN and supported by NORTHnet (now called Ontario Telehealth Network). In 2005, an average of 128 telehealth sessions took place on a monthly basis. Among these sessions, 48% of them were for clinical consultations across eight different fields of specialisation. Furthermore, it is estimated that $4,2 million has been saved in travelling costs per year. KOTH is part of the KNET network in Ontario, to which the FNEC in Quebec is linked through a 100 mb connection, creating redundancy in terms of network services and a teleconferencing bridge. This connection ensures communication between the FN of Quebec and Ontario in addition to providing bandwidth to 14 sites of the FNEC's T1 regional network.[14]

MB Telehealth — Manitoba
It's in Manitoba that the highest concentration of FN in Canada is found. It is also the province that serves the most clients who are FN members with its health care system. The MB Telehealth network connects 41 telehealth sites, also offering improved access to specialised care, education and administrative applications. The Assembly of Manitoba Chiefs is currently working with other FN member communities in order to develop future telehealth sites.[15]

Alberta
In Alberta, 31 FN communities use videoconferencing for administrative, tele-training and tele-consultation meetings. Thanks to a co-management model between Health Canada and the province, the coordination is ensured by the personnel at Health Canada – FNIH. The tele-training and tele-consultation service providers are the regional health centres (9).The personnel who are employed in the health services sector in the FN communities can access training sessions and case presentations (grand rounds) in accordance with an events calendar that is posted on a website (www.onehealth.ca/videoc). CHI is currently providing support for the costs of planning, change management and the clinical expansion of the network. It is expected that the entirety of the 44 communities will be connected shortly and will be able to access Alberta's "Supernet" network – an IP network with a very high capacity that connects the institutions, communities and service centres everywhere in the province.[16]

British Columbia
In British Columbia, a tripartite agreement between the FN, the province and the federal government regarding the health plans, also including telehealth, was signed. A project that is funded by CHI allows for the development of a governance structure that allows for the integration of the telehealth network. Tele-training and administrative applications are the only telehealth services that are currently working. However, a few pilot projects are being tested, such as, among others, a retinopathy mobile service. The issue of remuneration and the practice rights of physicians are however hindering the development of telehealth for clinical purposes. In fact, these types of services are limited to the provision of services within the borders of regional centres.

3.3 REVIEW OF THE SELECTED LITERATURE

The telehealth documentation is mainly found in the evaluation reports. For example, Health Canada's Canada Health Infostructure Partnerships Program (CHIPP) has produced evaluation reports for approximately 30 projects across the country, of which 19 were telehealth implementation or expansion projects. Many of these projects had the objective of addressing the needs of FN.[17]

Moreover, the organisational, financial and technological challenges that are associated with the implementation of telehealth were mentioned time and time again in the documentation. Past experiences lead to the belief that the challenges are significant for Aboriginals.[18] The burden represented by diseases, the remoteness of the communities (requiring people to travel great distances in order to receive care), the special requirements in terms of connectivity, the staff turnover issues and the need to work with two levels of government in order to obtain the required health care services are elements that have contributed to hindering the implementation of telehealth among the FN. Recently, the appearance of a certain number of factors opens a window to the possibility of changing the situation and encouraging autonomisation.

Even though it is too early to see examples of sustainability and long-term changes due to investments in telehealth, the CHI investment strategy is to encourage the creation of partnerships between the various key interveners, which constitutes a criterion of viability for telehealth.

CHI's structured process offers a gradual process towards investment and requires that the communities that adopt telehealth control the management of the issues of sustainability, autonomisation, partnerships and resources – thereby imposing the integration of these elements into all of the telehealth projects.

Capacity-building and professional training have become standard in the telehealth networks. These practices allow for distance education and are likely to contribute to personnel retention.

The E-Solutions Unit at Health Canada – FNIH has developed tools and strategies to assist and guide the FN that will adopt EHealth solutions.

The first telehealth experiences of the FN provided lessons, work models, experiences and resources to share. Thus, in most cases, the adoption of telehealth goes through two steps. At each of these steps are associated governance models and structures that are adapted at the developmental level. Usually, in a first phase, the FN become acquainted with the videoconferencing technologies and use the technology for educational and administrative ends. During this phase, the FN can also initiate pilot projects that are clinical in nature.

In a second phase, the FN will proceed with the adoption of projects that are clinical in nature, including tele-consultation. This phase, which is more complex than the first phase, requires a local coordination and technical support, the development of clinical protocols that are negotiated with the service providers, technologies and peripherals that have the capacity to fulfil the medical requirements in terms of interoperability and, finally, a bandwidth that is sufficient to fulfil current and future needs. It is also necessary to anticipate secure, high-performance and computerized methods to make reservations for the telehealth system and premises, establish

meeting appointment calendars, transfer electronic patient files as well as capture and record the reports of the meeting or tele-consultation.[1]

4 STRENGTHS, WEAKNESSES, POSSIBILITIES AND THREATS

Many health needs that are present among the FN members could be fulfilled thanks to telehealth. The internal and external environmental analysis addresses the strengths and weakenesses as well as their potential effects on the development of telehealth.

4.1 HUMAN RESOURCES – STRENGTHS AND WEAKNESSES

Strengths

The communities of the First Nations of Quebec are equipped with competent and qualified health personnel. Two communities have already adopted telehealth (Manawan and Winneway) and their experiences could prove useful for the other communities during the telehealth planning and implementation process.

Furthermore, the communities can count on the technical support of the FNEC as well as on the support of the E-Health Solutions Unit at Health Canada – FNIH. The FNEC also provides training on communication and information technologies. Also, as per the recommendation of the *Ordre des infirmières et infirmiers du Québec* (OIIQ), McGill University is working on the development of a course program, which will focus on the needs of the nurses in the remote and northern communities in Quebec. A series of courses is being planned in both official languages along with an optional module on telehealth. This type of course could eventually be adapted to the FN context.

Moreover, a recent informal survey was carried out among the nurses who work in the First Nations communities. This survey focused on the use of videoconferencing in the FN communities and, despite the fact that most had never used it, all of the respondents indicated that they were ready to try it. The reasons cited for not using videoconferencing were mainly the lack of connectivity, training and time to learn how to use the technology.

Weaknesses

The main weakness is the high rate of staff turnover and the current lack of capacity in the communities to share expertise. The communities could however share resources with other communities if they were organized to do so. Also, the small communities generally do not have direct access to on-site technical support, which constitutes a necessary condition for the implementation of telehealth.

Furthermore, the telehealth adoption process requires trained visionaries for the management of projects who are ready to be the defenders of the cause. Currently, there are few leaders to be found in this field in the FN communities. The people who demonstrate the highest level of interest with respect to telehealth seem to be already completely occupied by their current employment.

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[1] An electronic turn-key solution that facilitates the implementation of the multiple functions that are essential to the effective management of a telehealth service was co-developed by the Medical Computing Group Inc company and evaluated by RUIS McGill.

4.2 TECHNOLOGY – STRENGTHS ANDW WEAKNESSES

Strengths

In 2006, according to a consultation process that was carried out by the FNQLHSSC in collaboration with Health Canada – FNIH, more than 92% of the communities were equipped with videoconferencing computers and stations and access to computer equipment was not considered an issue in the health establishments. More than 97% of the personnel employed in the health establishments of the 24 consulted communities indicated that they were able to use computers, but some of them stated that their knowledge was limited.[19] An update of the computer materials is also being carried out by Health Canada. This process aims to replace the computers that were previously provided by Health Canada. This update is being carried out in all of the health establishments that are funded by Health Canada. Furthermore, a broad band connection (fibre optic) is available in nine FN communities while most of the others have a T1 connection (annexe 8).

As for the FNEC, it operates an educational network that allows for the connection of more than 90% of its member communities (22 member communities) through a variable bandwidth network. This network was implemented in the framework of the Schoolnet program and it allows for the provision of videoconferencing as well as Internet access for the schools in the FN communities. The FN also manages a videoconferencing bridge that is capable of serving all of the FN communities and 16 sites simultaneously in continuous attendance or 38 sites simultaneously with switching video. This network allows the communities to organise videoconference meetings and distance education courses. The network communications can also be encrypted in order to protect information. The FNEC also offers network services at a much lower rate than what an individual community would have to pay in order to register with a telecommunications company (Bell, Telebec and Telus).

Furthermore, the FNEC shares a 100 mbps connection with the KNET network in Ontario. KNET uses telecommunications networks that are located in Toronto for access to fibre optic servers and to facilitate the creation of gateways to other networks. This connection provides an integrated security solution (redundancy) for the teleconferencing bridge services, increased capacity to address the needs of the FNEC and KNET, an Internet broadband for the FNEC's T1 regional network (14 sites) – in addition to facilitating communications between the FN in Quebec and Ontario.

Weaknesses

With the exception of Manawan and Katerie Hospital that is located in Kahnawake, no communities are currently connected to the RTSS. Without this connection, the complete integration of the FN telehealth sites into the MSSS existing telehealth network is impossible.

In Quebec, the patient files are not yet available electronically and are currently being transferred manually for the telehealth sessions. If the FN communities use videoconferencing for telehealth without taking advantage of the advantages related to the electronic transfer of patient files, they will remain on par with the first generation of telehealth services.

Currently, all of the communications that are initiated by the FNEC take place with a 384 kbps connection. Elsewhere in Canada, this bandwidth is most often used in the beginning of telehealth development for tele-education, administrative applications and even, in some cases, for tele-consultations. However, this bandwidth would be insufficient to allow for the use of certain clinical telehealth applications or to allow for an interactive participation in tele-education sessions that involve a large number of sites. According to FNEC management, the extension of the

fibre optic network would be the proper solution as well as the most beneficial solution in the long-term. Moreover, the FNEC is currently working on the development of a project that would allow the interested communities to obtain a fibre optic network at the local level.

In 2006, the report on the electronic health community needs, which was carried out by the FNQLHSSC in collaboration with Health Canada – FNIH, demonstrated that nearly half of the administrators estimated that the Internet connection of their establishment was average and nearly 20% estimated that they had a poor connection.[20]

4.3 PARTNERSHIP – STRENGHTS AND WEAKNESSES

Strengths

Many different partnerships are required for the implementation of EHealth solutions. The FN of Quebec can however already count upon many of these partnerships:

▪ Integration: the substantial telehealth projects that are set up by the RUIS facilitate access to medical expertise at the tertiary level for a wide range of specialties. These projects also facilitate access to continuous training programs, which are essential for the health personnel who live in the isolated FN communities.

▪ The network, composed of 18 MSSS agencies, will start by receiving the telehealth project proposals and will be able to direct the proposers towards suppliers that will be better equipped to address the identified needs (see figure 4). In cases where several agencies would be involved in a telehealth project, it is recommended for these communities to work with those in charge of telehealth at the MSSS.[21]

▪ Collaboration and resource-sharing is already established thanks to a partnership between the FNQLHSSC and the FNEC. The FNEC is already a proven entity in the area of implementation and management of communications technologies. The FNEC is also able to provide a direct connection with the FN communities outside of Quebec that have successfully adopted telehealth. Thus, the FNEC has a 100 mb connection with KNET in Ontario. The configuration and organisational structure used to implement telehealth in this network could serve as a model for the development of the telehealth network among the FN of Quebec.

▪ Health Canada provides support and expertise through the EHealth Solutions Unit. The computer material and software are also being updated.

▪ The *Réseau québécois de télésanté* (RQT), an informal interest group composed of researchers and practitioners, constitutes a forum to share information and ideas.

Weaknesses

To date, there is no legal framework that connects the aforementioned partnerships to the FN communities. The FNQLHSSC supports communities from nine different nations, from large urban centres to very small isolated communities. Presently, each community works independently and is not organised in such a way as to be able to share resources.

4.4 ORGANISATIONAL CULTURE AND GOVERNANCE – STRENGHTS AND WEAKNESSES

Strengths

The FNQLHSSC has a certain leadership in the development of telehealth for the FN. In fact, the FNQLHSSSC organised, in collaboration with Health Canada – FNIH, the 2005 Regional Telehealth Forum. Furthermore, the FNQLHSSC is coordinating the EHealth planning and consultation process. The organisation therefore already has a leadership role in the consultation, awareness-raising and coordination of various interests, while ensuring that the needs of the FN communities of Quebec are respected. Moreover, its mission melds well with the potential that telehealth provides to resolve many issues related to access to training and health services for the FN.

Currently, the FN communities of Quebec have 41 health care establishments (see table 3). With the exception of two communities, the FN communities of Quebec have all been transferred to the local management of the band council. This therefore allows them to exercise a certain level of autonomy in terms of planning, budget management and the organisation of services within their territories.

Moreover, it is expected that the FN telehealth services will be based on Quebec health care delivery models. In each region, the *Centres de services de santé et de services sociaux provinciaux (CSSS)* are obligated to provide all of the services that the population requires, including those that they cannot provide on their own. Consequently, telehealth is considered to be a tool that would facilitate access to these services while respecting the service corridors with the obligation of reaching agreements between establishments that provide telehealth services to those who need them (figure 4).

Furthermore, the arrival of Act 83 modifies the law on health and social services. In fact, it modernizes the practices associated with telehealth while clearly stating the responsibilities of each establishment in terms of the patient files. Thus, the law stipulates that any medical process (e.g. tele-consultation) takes place wherever the practitioner is located, therefore avoiding the need to obtain various licenses or practice rights, as is the case when the process is recognized as taking place at the patient's location.

Weaknesses

Currently, because of its legal structure, the CHI does not accept reaching contractual agreements directly with the FNQLHSSC.

Furthermore, the EHealth Coordinator position remains to be confirmed as a permanent position, with duties and responsibilities that correspond to the initiation, implementation, coordination and management of a telehealth program that could potentially involve all of the FN communitiies.

Within the First Nations communities, the health care services are dependent upon several levels of government. In fact, the communities are located on federal lands, yet they obtain a part of their health services in the province of Quebec and in other provinces as is the case for communities that are located in proximity to the borders of Ontario and New Brunswick. During the implementation of telehealth, it will therefore be necessary to determine the legal framework that will apply in terms of consent and legislative dispositions related to privacy, right to exercise, etc.

Also, in order to initiate a telehealth project, it is necessary to consult many different types of organisations such as agencies, service providers and institutions, the RUIS and the MSSS. All of these organisations have a role to play in terms of the decision-making process surrounding the implementation of telehealth, which can impede development given the multiple authority levels that need to be consulted with.

5 POSSIBILITIES AND THREATS

The **external environmental scan** shows the possibilities as well as the threats that influence the potential development of telehealth.

5.1 POSSIBILITIES

Integration into existing telehealth networks and activities in Quebec: Thanks to CHI's co-funding, it was possible to implement large telehealth projects, including **three large multi-disciplinary virtual networks**: tele-consultation and support for the development of multi-disciplinary professional practices (RUIS Université Laval), tele-training and multi-disciplinary clinical support (RUIS Université de Montréal) and the virtual CSSS (RUIS McGill University). These three multi-disciplinary virtual networks will provide telehealth services in different domains of specialisation to the institutions and communities that are on their respective territories once agreements have been negotiated with the respective agencies. Depending on their location and needs, the FN projects could be "carried" by these major initiatives. The FNQLHSSC will be able to establish privileged partnerships with the organisations that are involved in telehealth projects – agencies, institutions, RUIS and MSSS in order to obtain the telehealth services that the FN require through agreements. However, this process should not prevent the FNQLHSSC from presenting proposals at the Inter-RUIS table, which would then allow them to make informed decisions regarding the service providers that have the capacity to address their needs. In the eventuality where the telehealth projects involve several agencies and the RUIS, the projects would be presented to those who are responsible for telehealth at the MSSS.

Learning from others: Since the FN of Quebec are adopting telehealth later than the other provinces and territories in Canada, they could benefit from the experiences of the other networks. They could also be able to surpass the previous generations of telehealth and directly adopt the most modern utilities, which includes access to electronic files. The communities could also benefit from telehealth initiatives that are already in progress.

Policy: The telehealth networks have helped the FN communities to increase their autonomy and self-develop through the use of the technology in order to reach a consensus. Furthermore, the use of the technologies has facilitated the organisation of meetings while avoiding the need to travel.

Families: Telehealth can serve as a tool in order to allow for the "tele-visitation" of family members who are hospitalised outside of the community.

Exchanges with other telehealth networks in Canada: The FN communities of Quebec do not need to re-invent the wheel. By using EHealth technologies, they can share information and expertise without requiring travelling or developing a new practices framework.

Resource-sharing: Among the FN communities, there is a need for access to dieticians, pharmacists, mental health workers and physiotherapists. However, some communities are not able to employ these types of resources on a full-time basis. Telehealth would thus facilitate access to these rare resources without requiring these resources to travel constantly.

Employment: The permanent acquisition of new technologies can attract young qualified people, including health professionals. The use of the technology can lead to the emergence of a new category of workers and provide models that the youth will be able to identify with. Furthermore, it can act as an incentive measure to encourage youth to remain in the communities and obtain well-remunerated employment.[22]

Funding: Telehealth is one of the nine CHI strategic investment programs and provisional funding was allocated in the telehealth program envelope that is intended for the FN. Moreover, Health Canada will invest $6 million in 2007-2008 in its EHealth program across Canada. An operational plan will have to be drafted, which will then be used to present a co-funding proposal to the three funding partners: CHI, MSSS and Health Canada.

5.2 THREATS

The CHI strategic funding program is coming to a close. The communities are therefore being pressured to present their projects before the deadline that is set for 2008 and before the available funding has been exhausted.

Project sustainability largely depends on access to new funding sources as well as the optimisation of certain existing funds. Note that in Ontario, an agreement was reached to ensure that the funding that has been saved on travel, through the use of telehealth, can be reinvested into its development.

Moreover, the large telehealth projects in Quebec are already underway and it could prove to be difficult to integrate the FN initiatives into their plans and projects which have already been established.

There are many steps to be taken before a telehealth project can be initiated such as a needs assessment, research for funding sources and obtaining consent from the local agencies. These steps may represent obstacles to the development of the project (figure 4).

Critical path for a telehealth project

The procedure can vary depending on the region

Proceed with a needs assessment; develop and present the concept to the local "agence".

If YES

If NO

Search for funding sources

End of the procedure

Present the project to the RUIS

If YES

If NO

Reach an agreement with the establishments

End of the procedure
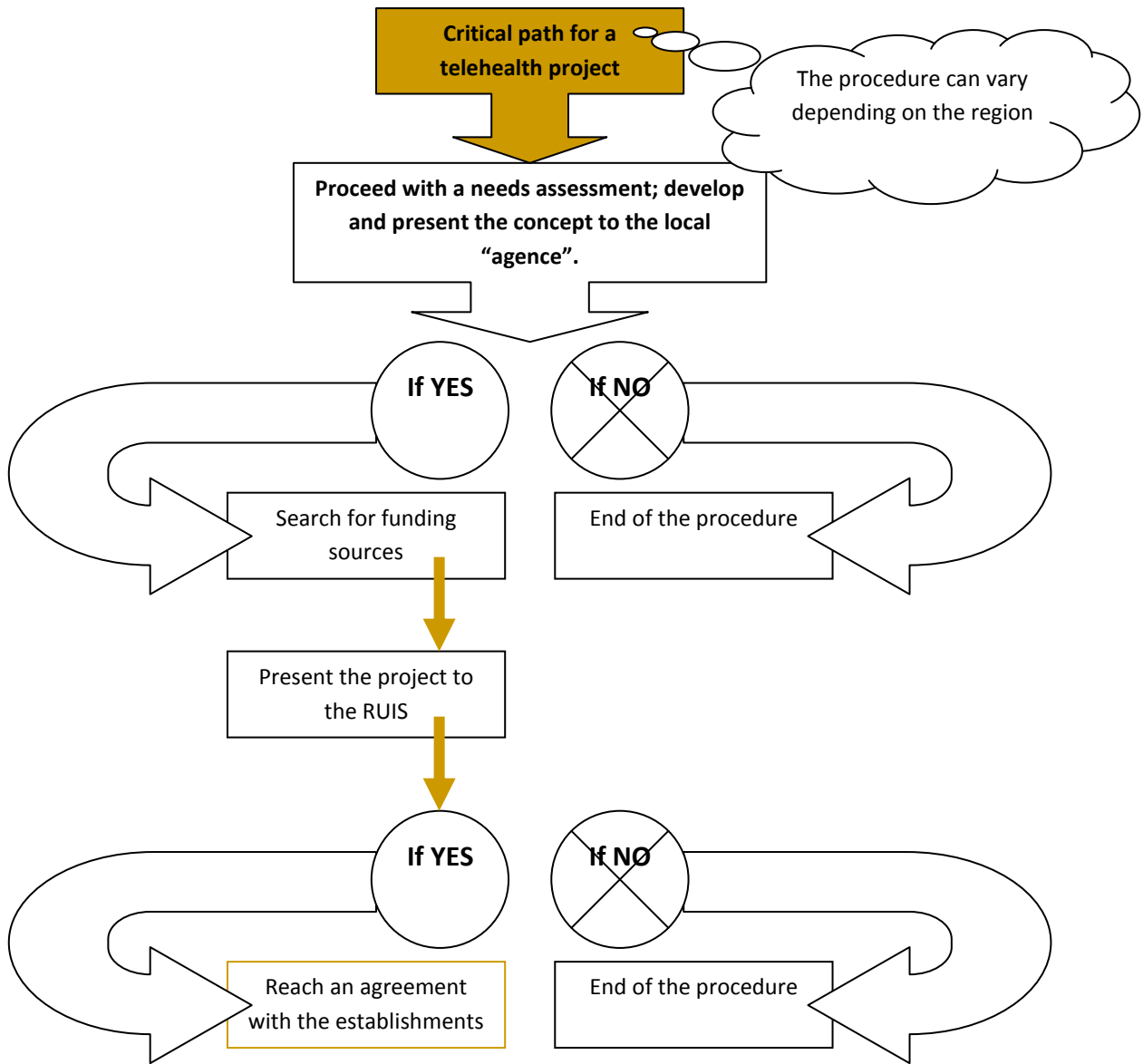
FIGURE 4: PROCEDURE TO FOLLOW TO SUBMIT A TELEHEALTH PROJECT

5.3 SUMMARY OF STRENGHTS, WEAKNESSES, POSSIBILITIES AND THREATS

INTERNAL

STRENGTHS	WEAKNESSES
▪ Competent and qualified health personnel on-site	▪ High staff turnover rate and personnel retention issues
▪ Access to training and technical support	▪ No precedence in terms of resource-sharing between communities
▪ Upgrading of videoconferencing computers and stations, broadband connectivity on T1 and Internet access in more than 90% of the communities	▪ Need for coordination and technical support at the local level
▪ Existence of a partnership between the FNQLHSSC and the FNEC	▪ Lack of local visionaries in this field
▪ Telecommunications bridge and group price for the telecommunications services	▪ No access to the RTSS except for two communities
	▪ Patient files are inaccessible electronically
▪ Possibility for integration into existing telehealth projects	▪ Communities are dependent upon several levels of government for the health care services
▪ Broadband connection with KNET through the FNEC	▪ Physician salaries for telehealth are still in the negotiation process
▪ Leadership and coordination of the FNQLHSSC	▪ Telehealth projects are already underway – it may not be possible to adapt them to include FN sites
▪ Pre-established telehealth models and service corridors	

EXTERNAL

POSSIBILITIES	THREATS
▪ Possibility to follow the examples set by the telehealth networks of the other FN in Canada	▪ Limited access to telehealth funding
▪ Integration with existing telehealth networks	▪ Several levels of authority must be dealt with to obtain approval for a telehealth project
▪ Adopting telehealth later than others can enable passing directly to newer generations	▪ Sustainability is dependent upon the reinvestment of the funding saved through avoided travel – uncertainty with respect to this possibility
▪ Potential to attract and retain younger and more qualified technical and medical personnel	

FIGURE 5: SUMMARY OF THE STRENGHTS, WEAKNESSES, POSSIBILITIES AND THREATHS

6 THE VISION

In light of the results of the environmental analysis, a telehealth vision was developed for the FN of Quebec and it has served as a starting point for the development of the proposed strategic orientations.

The vision of the members of the First Nations of Quebec communities is to create, exploit and manage a virtual and viable network, which will be coordinated by the FNQLHSSC in partnership with the FNEC and other privileged partners. The First Nations communities' network must be equitable, thereby ensuring the participation of all of the First Nations of Quebec communities. This network will be integrated into the current Quebec telehealth networks in order to facilitate exchanges, employment and training of health personnel in addition to providing access to health information and improve access to health care for all of the communities that will participate in the telehealth program.

The health care needs of the First Nations communities are many. The primary mandate of the FNQLHSSC is to help, as needed, the communities to prepare project proposals and to present these proposals to the partners involved: CHI, Health Canada, MSSS, local *Agences* and others.

First of all, as the communities are not yet connected to the Quebec health network, the RTSS, the health education and training programs will be distributed in the communities that use the FNEC's education network. Secondly, the RTSS connections will allow for various clinical applications such as tele-consultations in the areas of chronic diseases and mental health. The following diagram (Figure 6) demonstrates how the adoption of telehealth can take place in two phases by starting with the FNEC network, and then, using the RTSS network during the second phase.
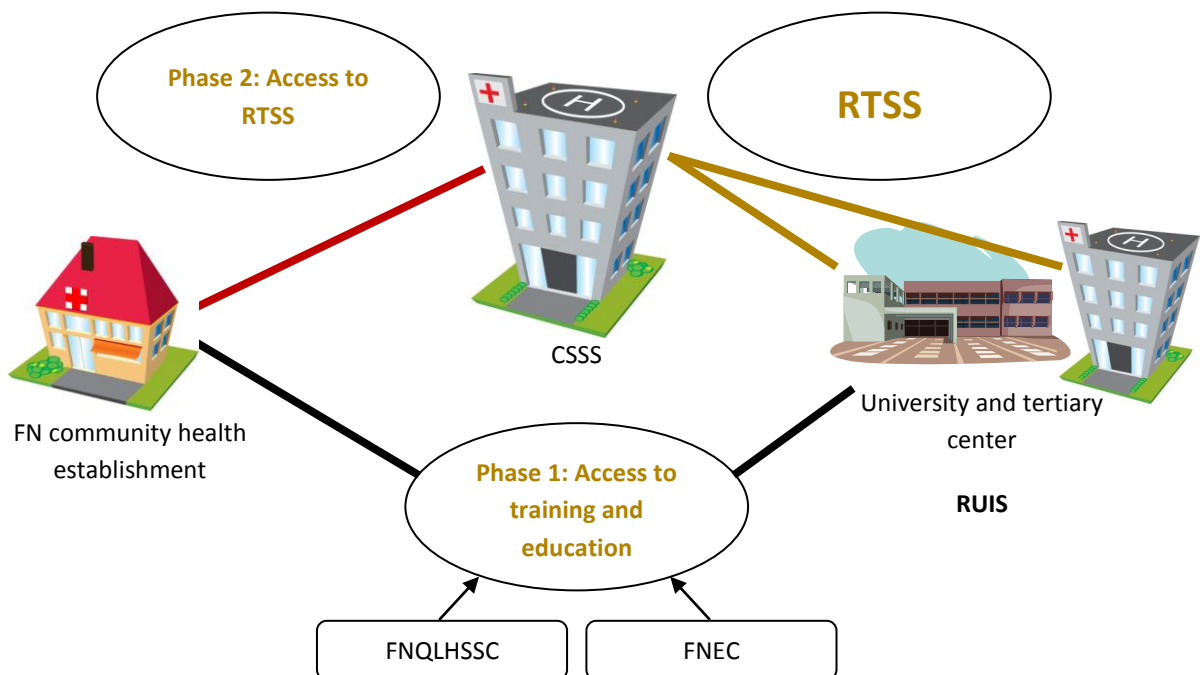

FIGURE 6: PHASES 1 AND 2 OF THE DEVELOPMENT OF FIRST NATIONS TELEHEALTH

7 STRATEGIC ORIENTATIONS

Four strategic orientations are proposed. The first strategic orientation focuses on access to health training possibilities. This first orientation will be made possible through the use of the FNEC's existing network as well as by updating the connections of the health establishments.

The three other strategic orientations are of a clinical nature. It is suggested that their implementation will be carried out through pilot projects in a limited number of participating communities. Once the evaluation is performed, these projects will be ongoing through the implementation of a viability plan. At that time, other interested communities could then take part in these activities.

7.1 CONTINUING TRAINING IN THE HEALTH FIELD

To provide access to training possibilities in the health field for the personnel in the First Nations communities, as well as to pool training resources for the new personnel.

This strategic orientation is intended for all of the communities. However, it is anticipated that approximately 20 communities could participate on a regular basis. However, let it be underlined that given the linguistic specificities of the First Nations of Quebec, the training will have to be available in both official languages. Regarding access to the RTSS, this will not be required, other than for training sessions that are provided by health care establishments from the Quebec network.

Reasoned analysis:
In Canada, each telehealth network provides distance training services. A Canadian survey that was carried out among the nurses who work in the First Nations isolated communities recommends the use of videoconferencing in order to interact with other health professionals.[23] The Romanow report cites the immense value of tele-education and continuous training through communications and information technology regarding the maintenance of competencies and the reduction of professional isolation among practitioners in rural settings. Access to technologies and their application for the provision of continuing professional training are essential components of all effective strategies that aim to retain more care providers in rural environments. There are actually many training possibilities provided by the RUIS. In fact, demonstration and training sessions stemming from different places are disseminated by video and over the Internet on a daily basis in both official languages. Also, the nurses who work in the communities must possess specific abilities and knowledge; the OIIQ actually counts 29 of them. They could then participate in courses for orientation and updating of knowledge through the use of telehealth.

Objectives:
- Improve the quality of the care by providing, at ideal times, updated training possibilities to the staff.
- Provide to the nurses who are already employed in a community health establishment the possibility to update and increase their skills as well as their knowledge.
- Initiate the new nursing personnel so that they have the required training to work in a remote or isolated community setting.
- Offer to the personnel a practical experience in the use of telehealth technology.
- Reduce transportation fees.

Advantages:
- The current personnel acquire the necessary knowledge to provide the best possible level of quality of care without having to travel.
- Fosters the retention of health professionals.
- Removes the isolation barrier for the staff who work in the isolated communities.
- Enables the nurses to renew their skills and knowledge, be up-to-date in the current practice in terms of nursing care without needing to travel.
- Provides a way for the communities to hire nurses who already have the required training to work in the isolated communities.

7.2 PREVENT, REDUCE AND MANAGE DIABETES

- **To reduce the prevalence of diabetes and manage more effectively the complications related to chronic diseases in the First Nations communities of Quebec.**

- **To place the First Nations of Quebec in a position as leaders at the national level in the field of distance diabetes care; in terms of prevention, screening and tele-care.**

It is anticipated that this strategic orientation will be carried out through pilot projects in which a minimum of five communities will participate. Each community will focus on a particular aspect of tele-diabetes – either tele-prevention, tele-surveillance, tele-consulation or tele-care. Note that certain aspects of tele-diabetes will necessitate the implementation of home tele-care projects and will thereby allow for the development of expertise in this field of activity. These measures could be integrated into the existing telehealth activities of the RUIS, but some of them may require access to the RTSS.

Reasoned analysis:

This project targets all of the care related to diabetes such as prevention, screening and treatment. According to the 2002 First Nations of Quebec Regional Longitudinal Health Survey, among the First Nations of Quebec, at least 14,5% of the adult population is diabetic.[24] In an extensive study lead by the Canadian Diabetes Association, people who are liable to develop diabetes have succeeded in diminishing risks by 58% by exercising moderately for 30 minutes per day and by losing 5 to 7% of their body mass.[25] The community of Kahnawake actually participated in such a program. One of the main objectives for diabetes treatment is to avoid the serious and chronic complications. The main complications related to diabetes are: microangiopathies, including retinopathies and nephropathies, macroangiopathies, including ischemic heart disease, cerebrovascular accidents, peripheral vascular disease, neuropathy and foot problems that can lead to amputation. An early diagnosis as well as a strict control of the glycaemia and arterial pressure can prevent or delay these complications.[26] Telehealth can be useful for prevention through tele-education, distance screening (for example: tele-retinopathy), tele-consultation (to prevent complications), tele-suveillance (communication of information such as blood sugar level and vital signs), home tele-care and tele-rehabilitation. The connections to the RTSS may not be required for these aspects of the project that focus on the education of patients and the surveillance of health care.

Objectives:	Advantages:
▪ Disseminate information on diabetes prevention and provide success stories.[27]	▪ Broader dissemination of effective strategies regarding screening and prevention.
▪ Implement a screening program, including distance screening of retinopathy in order to prevent complications.	▪ Improvement of the regular surveillance of patients in their homes while using simple tele-surveillance equipment. This could allow for a reduction in the workload for the health workers.
▪ Use tele-surveillance and home tele-care in order to enable diabetics to remain in their community despite their need for treatment such as dialysis.	▪ Acquisition of knowledge and capacity-building for the nursing staff in terms of home care.
▪ Use home tele-surveillance to monitor glycaemia and vital signs.	▪ The patients who are suffering complications will obtain better quality services without the need to travel, such as for tele-dialysis and tele-rehabilitation.
▪ Participate in a tele-rehabilitation program so that the patients can obtain treatment in their own community.	▪ Diminished travel needs.
	▪ Connecting the prevention-screening-treatment continuum by using telehealth would place the First Nations of Quebec and their plan in a lead position in the area of distance diabetes care.

7.3 OBTAIN HELP IN CRISIS PERIODS (PSYCHOSOCIAL AND SOCIAL)

To use telehealth as a tool to obtain expertise, advice, "counselling" or support on behalf of qualified personnel during crisis periods (psychosocial and social) in order to provide help to the staff who play a role in the delivery of health and social services.

It is anticipated that this strategic orientation will be achieved through telehealth pilot projects in at least one community. The necessary steps can be integrated into the existing activities of the RUIS, however they necessitate access to the RTSS.

Reasoned analysis:
The history of First Nations has demonstrated that cultural change, disappearance of the traditional ways of life, poverty and unemployment have created conditions of life, both in and out of the communities, that affect their mental health and social life – particularly in the more isolated communities.[28] Many social problems such as suicide, addictions and family violence necessitate immediate and long-term interventions by clinicians and specialists (social workers, psychologists, psychiatrists, etc.) Furthermore, most of the communities do not have regular access, let alone emergency access, to specialized mental health services. This fact has actually been confirmed by the workshop participants. Moreover, in other places, there exists data that demonstrates that tele-addictions and distance mental health care programs have helped to improve access to these services.[29]

Objectives:
In the case of a psychosocial crisis (individual or family):
- Provide immediate access to a general practitioner or a psychiatrist;
- Validate the evaluation made by the community's professional;
- Identify security measures to be taken immediately to ensure the physical and psychological security of the individual in a crisis situation;
- Provide assistance to the community professionals in their decision-making process regarding the need to evacuate the individual in a crisis situation towards a hospital or a crisis centre.

In the case of a social crisis (traumatic event that affects a large part of the community's population):
- Offer quick access to a specialist for community crisis management, postvention or pandemic crisis management;
- Validate the immediate measures that will have been taken to contain the crisis within the community;
- Ensure communication between the various interveners in the health field within the First Nations communities and the specialists or the required human resources in the case of a pandemic crisis;
- Provide orientation to the interveners regarding the measures to be taken to ensure the safety of the affected individuals;
- Give advice to the interveners on the postvention activities to be carried out among the members of the population;
- Counsel, direct and support the interveners on the actions to be taken following a pandemic situation;
- Offer a distance debriefing to the interveners who are impacted by the event.

Advantages:
- Improved continuity of care thanks to a coordinated approach with respect to the mental health care.
- Allow the community interveners to be supported in their intervention and take action that is quicker and more effective.
- Ensure the safety of the person in a crisis situation and/or the community in a more effective manner.
- The patients and the family members will be more reassured and some travel could be avoided thanks to the tele-consultations during the emergency situations.
- Possibility to increase the skills of the employees and improve the process for the treatment of mental health problems and family crises through videoconferencing sessions.

7.4 SELECTIVE TELECONSULTATION

To reduce the waiting times and the transportation costs through selective consultations.

This strategic orientation is conceived to reduce the duration and the number of hospitalisations as well as the number of patient travels by enabling them to remain in their community rather than having to travel long distances for routine examinations from a physician. Furthermore, the nurse(s) will be able to discuss clinical cases with physicians (general practitioners and specialists) and with other health care providers. It is anticipated that a pilot project will commence in a limited number of selected communities.

Reasoned analysis:

The difficulty to access care services (waiting times, travel distances) was mentioned time and time again in the documentation, in health surveys among the First Nations and by the participants in the telehealth workshops. "According to the statistics, telehealth has virtually diminished the geographical distances that, in the past, were barriers to access health and information services."[30] A report by the OIIQ has documented the main reasons for which people have accessed a nursing station in two First Nations of Quebec communities. Thus, for the babies, the main problems encountered were of a respiratory, digestive and otorhinolaryngological nature. As for the children and adults who are aged less than 65 years, the otorhinolaryngological, digestive and dermatological problems were the reasons that were the most commonly cited. In the case of elderly people, the issues were digestive, respiratory and cardiovascular in nature. Each of these communities only had two nurses, a single telephone line and did not have a visiting physician.[31] On the other hand, telehealth was used to send out otorhinolaryngological and dermatological images in several sites in Canada.

Objectives:	Advantages:
▪ Facilitate access to health care services by using telehealth for tele-consultations with clinicians, family doctors and specialists. ▪ Avoid travel for patients and escorts by using telehealth for pre- and post-operation routine visits. ▪ Help the communities to obtain diagnostic confirmations for non-emergency medical cases. ▪ Obtain medical advice for the communities in which there is no visiting physician.	▪ The patients will avoid systematic travel. ▪ The communities will acquire experience in the fields of telehealth and tele-consultations. Their telehealth initiative will be integrated into current RUIS telehealth projects and will obtain an access to the RTSS. This pilot project will be rigorously evaluated in order to determine the benefits of tele-consultations in the First Nations communities of Quebec. ▪ The automatisation of the establishment of calendars and the transfer of reports will reduce the number of steps needed to set telehealth sessions and prepare the reports.

summary and conclusion

The strategic plan was developed starting from information gathered among the First Nations representatives and according to the results of an environmental scan. The strengths, weaknesses, possibilities and threats have been

summarised, demonstrating the needs that can be addressed through the use of telehealth, as well as the strengths and weaknesses related to the adoption of telehealth.

On the other hand, the environmental scan includes a review of selected literature, the holding of consultation workshops as well as individual interviews with key interveners and experts in the telehealth domain. The results of the workshops have shown that there is especially a need to improve access to health services, chronic disease management as well as the employment, retention and training of personnel. As for the challenges related to the adoption of telehealth, these include the need for connectivity, equipment, training and technical support within the communities. On the other hand, it is expected that the development of telehealth will occur in two phases – the first will be based on the use of videoconferencing for distance training purposes and the second will be to develop clinical applications.

The vision supporting this plan looks to create, exploit and manage an equitable, virtual and viable network that will be coordinated by the FNQLHSSC in partnership with the FNEC and other privelged partners. This network will be integrated into the current Quebec telehealth networks in order to facilitate exchange, hiring and training of health personnel as well as to provide access to health information, improve the management of chronic diseases and access to health services.

Four strategic orientations are proposed, the first being to provide distance training possibilities. In the second phase, an access to the RTSS network will need to be negotiated in order to access a series of clinical applications that will allow to reduce the prevalence of diabetes and to better manage the complications of chronic diseases, improve access to mental health professional services and, finally, to plan the selective tele-consultation offer for the communities that need this service.

Furthermore, in the plan there is a list of ways to ensure permanence and manage the organisational change. A governance model proposes that the FNQLHSSC coordinate the preparation of the project plans, in collaboration with the communities, and ensure the coordination, management as well as the continuity of the telehealth activities. However, responsibility for the technical aspects of the telehealth network management would be under the responsibility of the FNEC. As for the management and the coordination of the individual projects, they would be carried out by the local team – in the communities in which the projects are implemented.

Finally, regarding the priority actions, it is proposed that the FNQLHSSC, in collaboration with Health Canada – FNIH, create a permanent position for the coordination of the development of telehealth. In addition to the preparation of an operational plan and a communications plan, it will be necessary to prepare funding proposals for the funding partners – for CHI, Health Canada and MSSS to be specific, for the first phase of the proposed telehealth projects.

8 SUSTAINABILITY

It is important to underline that many telehealth projects across the country were unable to continue their activities because of a lack of a business plan that would have allowed for the securing of ongoing funding once the preliminary phase had come to an end. We are therefore proposing that the issue of sustainability for FN telehealth be resolved through the development of a sustainability plan. **Sustainability** could be guaranteed:

▪ By optimising current and future resources (note: it would be interesting to consider the possibility of re-investing, if applicable, the amounts of funding saved through the telehealth activities);

- By rationalising the injection of additional funding given the possibility to save money through group purchasing and negotiations;

- By the sharing of resources between communities, which would be facilitated by telehealth;

- By looking for funding and investments in the public and private sectors.

Optimising the investments

First of all, an examination of the health care funding among the FN reveals that certain investments, particularly for travelling, training and home care, could be optimised through the use of telehealth. Note that, among other things, nurses spent more than 22000 hours carrying out home visits among 19000 clients – for a total of approximately 140 000 visits. Tele-surveillance and tele-care would allow increasing and facilitating access to health services while improving the quality of health care. Furthermore, home tele-care could potentially reduce the duration and number of hospitalisations.[32]

The sharing of resources between the communities also provides the opportunity to optimise the investments that are currently devoted to recruitment, employment and training of personnel. Thus, the use of telehealth would be able to facilitate access to rare resources. In the long term, if it turns out that money is being saved, this funding could be re-directed to cover the operational costs of the telehealth program.

Group negotiations and purchasing

One of the most significant costs related to the implementation of telehealth in the FN communities of Quebec will be the upgrading of the telecommunications systems. Note that currently, some communities have very elementary, or non-existent, communications capacities (annexe 8). Furthermore, only two communities are equipped with know-how in terms of telehealth: Winneway and Manawan. In the case of the latter, negotiations with the government for access to the RTSS as well as with the communications companies allowed for the securing of quality specialized bandwidth. It is therefore recommended that an initial feasibility study be carried out in order to examine the way in which access to quality telecommunications services ("quality of service") and the RTSS could be obtained by the communities that are interested in adopting telehealth.

Moreover, the FNEC has already demonstrated that they are able to help their member communities to achieve substantial savings through the group purchasing of telecommunications services. This way of doing things has in fact allowed the communities to reduce the costs related to telecommunications to a third of what they were, for example, from $2700 per month to $900 per month per community.

Sharing resources

The use of a virtual network would constitute a certain advantage since it would facilitate the exchange and sharing of resources. Rare resources such as dieticians, ergotherapists, physiotherapists and dialysis specialists could be shared between a given number of communities by using telehealth in order to render the resource available. In addition, the training of new resources could be facilitated and achieved on-line. For example, community representatives have expressed their interest in a training program that is developed for the nurses who work in the northern communities. This program is based on the results of a research that was carried out by the *Ordre des infirmiers et infirmières du Québec* (OIIQ). McGill University and the MUHC are now giving consideration to provide this program.

Determine the sources of telehealth funding

It is anticipated that three main partners could co-finance the start-up of the telehealth activities: CHI, MSSS and Health Canada. Since the FN are located on the territories of the RUIS, which has projects that correspond with the strategic orientations of this plan, there is a possibility for the FN to become integrated into these initiatives without the need to invest funding into finding solutions that already work. Moreover, in 2007-2008, Health Canada will be investing $6 million into the EHealth program across Canada.

Note that all of the potential sources of funding will need to be evaluated in order to determine the investment potential in terms of the FN telehealth activities. Among these, there is, among others, the Aboriginal Health Transition Fund, the possibility of maintaining funding from the Schoolnet program, the funding from the research applied by Health Canada, the funding from Industry Canada as well as various foundations in the private sector through which mutually-beneficial partnerships could be created.

9 CHANGE MANAGEMENT

Change management involves the making of changes in a planned and systematic matter. From the beginning, all change is motivated by a lack of satisfaction with the current situation. However, all change meets with a certain level of resistance. In order to overcome this resistance, the dissatisfaction with respect to the current situation must be genuine. Furthermore, a vision that relates what could exist if our problems could be solved as well as the first steps to be taken in order to address the situation are elements that must be taken into consideration in order to achieve the desired results.

As for change management, RUIS from Montreal has completed an evaluation of the organisational impacts resulting from the implementation of tele-training and tele-consultation.[33] The authors have observed that tele-training has a particular impact on the work tools, but that the changes generated through tele-consultation "affect practically all organisational dimensions." The authors also presented a few principles to be respected: identifying a leader, paying attention to the culture of each establishment, preparing plans for communications, training and user assistance and, finally, the setting up of a team in order to manage the transition and communicate the benefits.

For the FNQLHSSC, change management started with the determination of key challenges during the Connected Communities Forum that was held in 2005, as well as during the strategic planning workshops. Moreover, the elements that were raised during the discussions and survey reports indicate that there is dissatisfaction with respect to the current organisation of health care services. Additionally, a vision to improve health, training and education has emerged. The first steps have already been taken: engagement of the key interveners during the forum, workshops and the development of the strategic plan.

Here are additional elements to consider:

Leadership: The FNQLHSSC has taken on a leadership role in terms of the development of telehealth in the FN communities of Quebec. In order to establish a telehealth service for the FN, there is a need for leaders or visionaries at the local level in this field. Currently, among the FN communities, very few people are familiar with this field of activity. Consequently, very few leaders in the field of telehealth have emerged during the current FN telehealth activities. However, by building the capacity of the FN members, we anticipate that new visionaries will be identified over the course of the Telehealth Steering Committee's activities.

Communications: First of all, a communications plan will need to be prepared and disseminated. Then, the communication of the possibilities and changes related to the adoption of telehealth will be possible from the beginning of the project through the first strategic orientation session. Furthermore, a survey of the needs in terms of education and training can be carried out and a large-scale distribution of an activities calendar will occur. The information will moreover by displayed on the websites of the FNQLHSSC and the FNEC.

Changes in the workflow process: Even though the first strategic orientation session (tele-training) will have an impact at this level, the strategic orientations 2, 3 and 4 (distance diabetes care, distance mental health care and tele-consultations) are those that are likely to generate the most changes at this level. The communities that want to participate in these projects will be able to identify the changes that they anticipate in their workflow process and the way in which they will get the key interveners for these changes to participate.

The Telehealth Advisory Committee has the mandate to facilitate the process of change. The members of this committee represent the main partners and all of the organisations that are likely to be affected by the adoption of telehealth. It is anticipated that the FNQLHSSC and the FNEC will continue to assume a leadership role in the management of the change process.

10 GOVERNANCE MODEL

Currently, the governance of telehealth resides within the governmental organisations that intervene in the health and social services field for the FN of Quebec, such as Health Canada – FNIH and the MSSS of Quebec.

In order to be operational, telehealth among the FN will have to operate within Quebec's organisational structure with respect to the delivery of health care services. However, the FN communities are located on federal lands. Currently, with the exception of two communities, the health services are under band council management, yet dependent upon Health Canada for the funding of their installations and operational budgets. However, the members of the FN communities have access to the same health services as the rest of the population of Quebec through the use of the RAMQ card. Thus, the telehealth activities could end up in a grey area. This is the main reason why the FN of Quebec must establish a structure that would provide a relevant management framework, through service agreements with service providers and funding agencies.
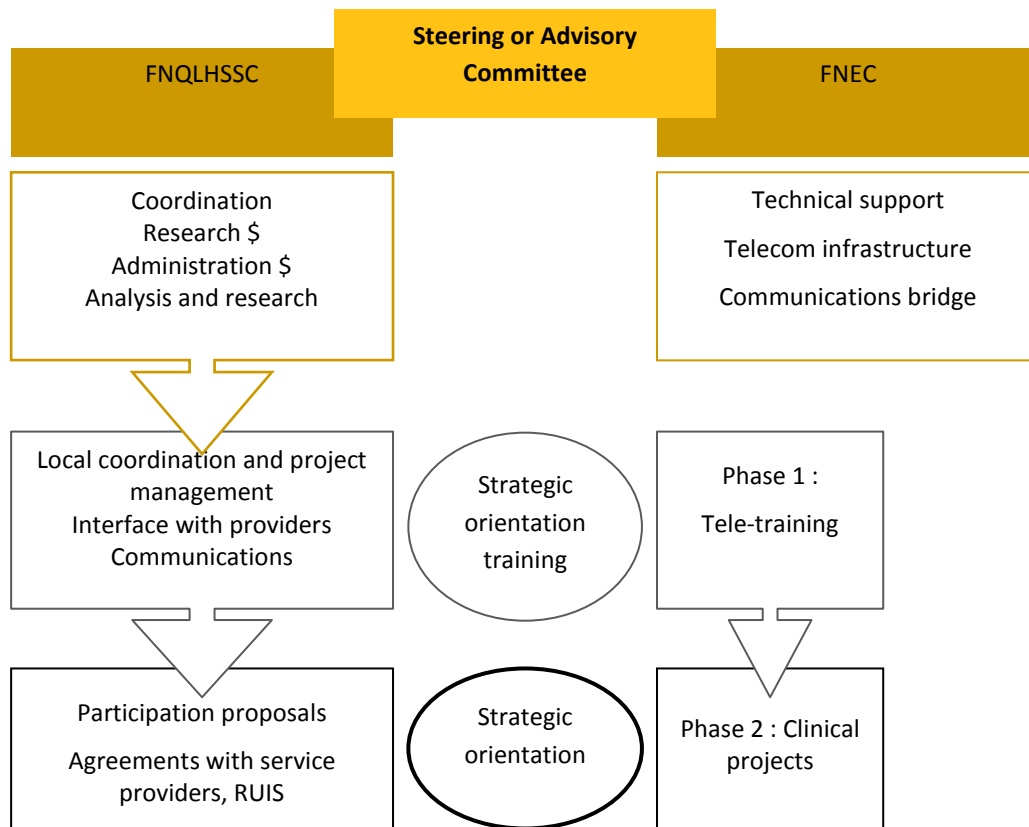
FIGURE 7: ORGANISATIONAL STRUCTURE AND GOVERNANCE MODEL

In the proposed organizational structure (figure 7), the FNQLHSSC, in partnership with the FNEC, will continue to play a leadership role with respect to the creation, coordination and management of a telehealth network for the FN communities of Quebec. Thus, the FNQLHSSC will coordinate all of the activities related to the development and implementation of telehealth, ensure the application and respect of the directives and policies that stem from various

FN authorities, provide support to the communities that want to set up telehealth projects and finally, be in charge of establishing and maintaining the various partnerships that are needed for the achievement of the telehealth activities. As for the FNEC, it will take on the responsibility of taking care of the FN telehealth/EHealth network, the technical support (help desk), the troubleshooting service, the training for the use of telehealth and the conformity with the technical standards as well as the standards in terms of privacy and security. Finally, with regards to the telehealth committee, it includes representation on behalf of all of the main organisations: FNQLHSSC, FNEC, Health Canada, CHI, MSSS and key FN representatives.

Once the first telehealth projects have been initiated and established, the user communities that are involved in the telehealth program will have the option to form an association of communities that are either telehealth users or interested in adopting telehealth. The main role of this association would be to promote the use of telehealth, represent the interests of the telehealth group in affairs related to the purchasing of services and research for funding in addition to making partnerships with other large telehealth networks throughout the country.

11 PRIORITY ACTIONS, NEXT STEPS AND DEADLINES

The priority actions were conceived with the objective of implementing the conditions necessary for the preparation and start-up of the telehealth plan among the communities that have expressed significant needs in terms of access to training and health services. In terms of the planning phase, the key elements of this phase include funding research, a feasibility study, needs assessments, agreements with relevant organisations, a communications plan and a call for proposals in order to determine the sites for the telehealth activities that are anticipated in the strategic orientations. These actions will be carried out by the FNQLHSSC in consultation with the members of the Steering Committee.

It is expected that the implementation phase will commence after the approval of the funding for the planning phase. In addition, the evaluation of all of the strategic orientations will be carried out by the end of 2010.

The following are a few of the recommended priority actions:

1. Validate the strategic plan with the Telehealth Advisory Committee and obtain approval from top level management of the FNQLHSSC and the FNEC.

2. Implement the management framework for the telehealth activities and create a permanent coordinator position for telehealth within the FNQLHSSC.

3. Sign an agreement in principal for the development of telehealth between the main partners – FNQLHSSC, FNEC, Health Canada and the MSSS.

4. Raise awareness among the First Nations communities in Quebec in order to prepare a communications plan.

5. In collaboration with the FNEC personnel, establish a team that is in charge of the planning phase.

6. Prepare an operational plan.

7. Identify all of the potential sources of funding for telehealth projects including CHI, Health Canada and the MSSS.

8. Prepare a funding proposal for phase 1 of the telehealth projects for the CHI.

9. Launch the tele-training project: evaluate the needs, establish and circulate an activities calendar for all of the available courses. Identify one or more resource persons in each of the interested communities.

10. Prepare a feasibility study in order to determine profitable and possible methods to obtain all of the telecommunications services that are required for telehealth that are of sufficient quality for the communities that are interested in adopting telehealth.

11. Prepare a proposal for the MSSS in order to obtain access to RTSS for all of the FN communities.

12. Send out a call for proposals among the communities that want to participate in the tele-diabetes, tele-mental health and tele-consultation projects. Identify the participating communities.

13. Communicate with the agencies and RUIS that are potentially involved such as telehealth service providers. Draft letters for projected agreements.

14. Establish the local teams that are in charge of implementing telehealth into the participating communities.

15. Identify and name the local visionaries in the communities that are interested in implementing telehealth.

16. Set up teams that are charged with managing change.

17. Evaluate the results of the planning phase.

18. Prepare a sustainability plan.

19. Proceed with the implementation phase for the clinical projects.

20. Evaluate the results.

year	2007		2008		2008		2009		2009		2010	
quarter	3	4	1	2	3	4	1	2	3	4	1	2
Actions												
1, 2, 3	■	■										
4, 5, 6	■	■										
7, 8	■	■										
9, 10			■									
11, 12, 13			■	■	■							
14, 15, 16			■	■	■							
17							■					
18, 19							■	■	■			
20											■	■

TABLE 5: DEADLINES

12 RISK MANAGEMENT

Risk	Probability	Management	Responsibility
The communities will not accept to participate in the telehealth projects because of the lack of on-site expertise	Low	The FNQLHSSC and the Telehealth Committee will be in charge of finding the funding required in order to hire the expertise needed.	FNQLHSSC and the Telehealth Committee
The telecommunications feasibility study will show that it is impossible to obtain the telecommunications infrastructure required in certain communities.	High	Help will be offered to the communities in order to search for the funding necessary to acquire the required telecommunications infrastructure.	FNEC - FNQLHSSC
The communities will not respond to the call for proposals for the strategic orientations 2, 3 and 4 or the responses will be inadequate.	Low	1) The communities that have expressed the need for telehealth services will be approached and will receive assistance in order to respond to the call for proposals. 2) Consolidate the strategic orientations in a project framework.	FNQLHSSC EHealth Coordinator
Inability to obtain access to the RTSS at a reasonable cost.	Medium	Negotiate a lower cost through group purchasing.	FNEC and/or FNQLHSSC
Access to the RTSS delayed because of constraints related to infrastructure.	High	Obtain a funding extension.	FNQLHSSC
Inability to find providers interested in the use of telehealth.	Low	Reach out to the *Agences* and the RUIS. Look for providers that stem from another RUIS. Sign letters of agreement before getting started.	FNQLHSSC and the Telehealth Committee
Inability to obtain enough funding to finance the costs that aren't covered by CHI.	Medium	Obtain signed commitments from the funding partners.	FNQLHSSC
Evaluation of the factors related to privacy in terms of Quebec telehealth that may not be applicable to FN.	Medium	Setting up of an evaluation of the factors related to privacy.	FNQLHSSC

TABLE 6: RISK MANAGEMENT

13 SUMMARY AND CONCLUSION

The strategic plan was developed starting from information gathered among the First Nations representatives and according to the results of an environmental scan. The strengths, weaknesses, possibilities and threats have been summarised, demonstrating the needs that can be addressed through the use of telehealth, as well as the strengths and weaknesses related to the adoption of telehealth.

On the other hand, the environmental scan includes a review of selected literature, the holding of consultation workshops as well as individual interviews with key interveners and experts in the telehealth domain. The results of the workshops have shown that there is especially a need to improve access to health services, chronic disease management as well as the employment, retention and training of personnel. As for the challenges related to the adoption of telehealth, these include the need for connectivity, equipment, training and technical support within the communities. On the other hand, it is expected that the development of telehealth will occur in two phases – the first will be based on the use of videoconferencing for distance training purposes and the second will be to develop clinical applications.

The vision supporting this plan looks to create, exploit and manage an equitable, virtual and viable network that will be coordinated by the FNQLHSSC in partnership with the FNEC and other privleged partners. This network will be integrated into the current Quebec telehealth networks in order to facilitate exchange, hiring and training of health personnel as well as to provide access to health information, improve the management of chronic diseases and access to health services.

Four strategic orientations are proposed, the first being to provide distance training possibilities. In the second phase, an access to the RTSS network will need to be negotiated in order to access a series of clinical applications that will allow to reduce the prevalence of diabetes and to better manage the complications of chronic diseases, improve access to mental health professional services and, finally, to plan the selective tele-consultation offer for the communities that need this service.

Furthermore, in the plan there is a list of ways to ensure permanence and manage the organisational change. A governance model proposes that the FNQLHSSC coordinate the preparation of the project plans, in collaboration with the communities, and ensure the coordination, management as well as the continuity of the telehealth activities. However, responsibility for the technical aspects of the telehealth network management would be under the responsibility of the FNEC. As for the management and the coordination of the individual projects, they would be carried out by the local team – in the communities in which the projects are implemented.

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APPENDICE

APPENDICE 1: TELEHEALTH ADVISORY COMMITEE

Mandate of the First Nations of Quebec Steering Committee:

- Direct the developmental process for a First Nations telehealth strategic plan;

- Provide ongoing assistance and support to the advisors and research team of the FNQLHSSC;

- Collaborate in a First Nations strategy for the training of health professionals with the use of the technology;

- Ensure that the appropriate and necessary standards and policies are in place in order to ensure the inter-operability of the activities;

- Attack the barriers and eliminate them for success in terms of the integration of care services;

- Monitor, measure and evaluate the telehealth activities and make improvements as needed;

- Provide centralised support services to the participating communities for the provincial telehealth applications (bridge, deadlines, technical support);

- Assist in the development of telehealth business possibilities in order to maximize the use of existing and new equipment, while placing an emphasis on primary care, health in rural regions and the management of chronic diseases;

- Ensure, whenever possible, that a process of collaboration and coordination is used by the First Nations and provincial and federal governments with respect to funding sources;

- Provide information to the key interested parties at the provincial and federal levels on the ongoing evolution of telehealth.

MEMBERS

Catherine Power	FNQLHSSC
Sophie Picard	FNQLHSSC
Mamadou Drave	Health Canada - FNIH
Yvan Therrien	Health Canada - FNIH
Christian-Marc Lanouette	MSSS, Inter-RUIS Committee
Donald-Daniel Picard	Canada Health Infoway
Kim Hervieux	*Comité des responsables en soins infirmiers des Premières Nations du Québec*
Lise Bastien	FNEC
Patrick Dumont jr.	FNQLHSSC EHealth Regional Advisory Committee
Sandro Echaquan	Manawan telehealth project (observer)

APPENDICE 2: PARTICIPANTS IN THE CONSULTATION WORKSHOP

Montreal

Anichinapéo	Catherine	Kitcisakik	
Awashish	Alexandra	Wemotaci	Health Advisor
Beaulac	Marielle	Timiskaming	Head Nurse
Bobbish	Mariette	Winneway	Head Nurse
Boileau	Julie	Kanesatake	Nurse
Nelson	Gloria	Kanesatake	Health Director
Bordeau	Patsy	Kahnawake	
Boudrias	Maryann	Winneway	Nurse
Caron	Jenny	Wemotaci	Head Nurse
Chachai	Yvette	Opitciwan	Health Director
Commanda	Shirley	Eagle Village	Community Health Nurse
Dumont	Mélanie	Lac Simon	Nurse
Hervieux	Kim	Uashat Malioténam	Head Nurse
Kistabish	Malik	Pikogan	Assistant Health Director
Labillois	Lynn	Listuguj	Head Nurse
Mc Gregor	Jane	Kitigan Zibi	Head Nurse
McLaren	David	Eagle Village	Health Director
Metallic	Donna V.	Listiguj	Health Director
Michel	Hélène	Kitcisakik	Community Health Representative
Ottawa	Maxime	Manawan	Health Director
Perron	Janine	Opitciwan	Head Nurse
Swasson	Sheila	Gesgapegiag	Health Director
Young	Sonia	Wolf Lake	Health Director
Mitchell	Marlene	Lac Simon	Community Health Representative
Echaquan	Sandro	Manawan	Nurse

Sept-Îles

Driscoll	Nicole	Pakua Shipi	Health Director
Faucher	Lucie	Pakua Shipi	Head Nurse
Jourdain	Nicole	Betsiamites	Head Nurse
Malec	Annette	Natashquan	Health Director
Mark	Reno	Unamen Shipu	Computer Technician
Rock	Nancy	Uashat Malioténam	Nurse
St-Onge	Anne	Betsiamites	Health Director

APPENDICE 3: WORKSHOP AGENDAS
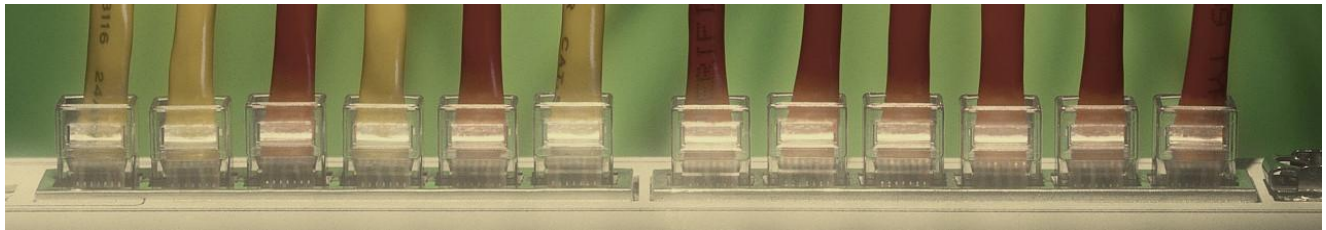
Tuesday, March 27, 2007

8:30 am	Reception of the participants
8:45 am	Words of welcome
9:00 am	Presentation on telehealth and the telehealth strategic plan
	Ms. Jocelyne Picot – Infotelmed Communications Inc.
9:45 am	Presentation on the key success factors for the achievement of the telehealth projects
	Mr. Mamadou Drave – EHealth Solutions Unit – Health Canada - FNIH
10:15 am	Break
10:45 am	Presentation of Canada Health Infoway
	Mr. Donald-Daniel Picard – Canada Health Infoway
11:15 am	Presentation of the RUIS telehealth projects
	Ms. Madeleine St-Gelais – RUIS McGill
Noon	Lunch
1:15 pm	Group discussions
	Questions on the development of the telehealth strategic plan
2:45 pm	Break
3 pm	Group discussions (cont'd)
4:30 pm	Adjournment
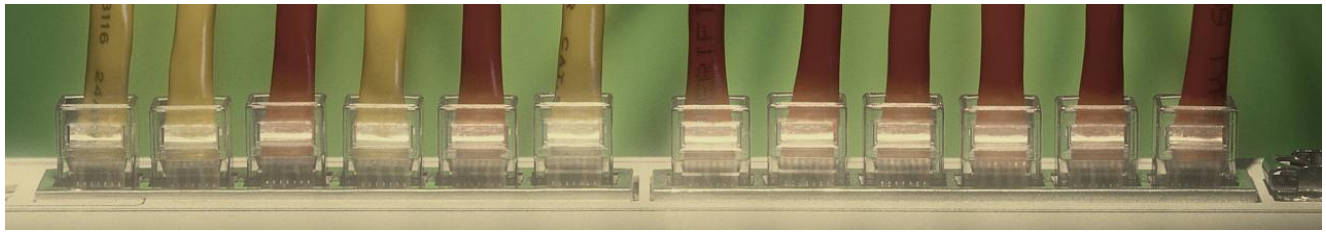
Tuesday, April 3, 2007

8:30 am	Words of welcome
8:45 am	Presentation on telehealth and the telehealth strategic plan
	Ms. Jocelyne Picot – Infotelmed Communications Inc
9:15 am	Presentation on the key success factors for the achievement of the telehealth projects
	Mr. Mamadou Drave – EHealth Solutions Unit – Health Canada - FNIH
9:45 am	Presentation of Canada Health Infoway
	Ms. Jocelyne Picot for Mr. Donald-Daniel Picard – Canada Health Infoway
10:15 am	Break
10:30 am	Presentation on the *Ministère de la Santé et des Services sociaux*
	Mr Christian-Marc Lanouette - MSSS
11:00 am	Presentation on the RUIS telehealth projects from the *Université de Montréal*
	Mr. Lanouette for Ms. Stéphanie Froissart – RUIS of the *Université de Montréal*
11:30 am	Presentation on the group discussion process and first part of the group discussions
11:45 am	Lunch
1:00 pm	Group discussions (cont'd)
2:45 pm	Break
3:00 pm	Group discussions (cont'd)
4:30 pm	Adjournment
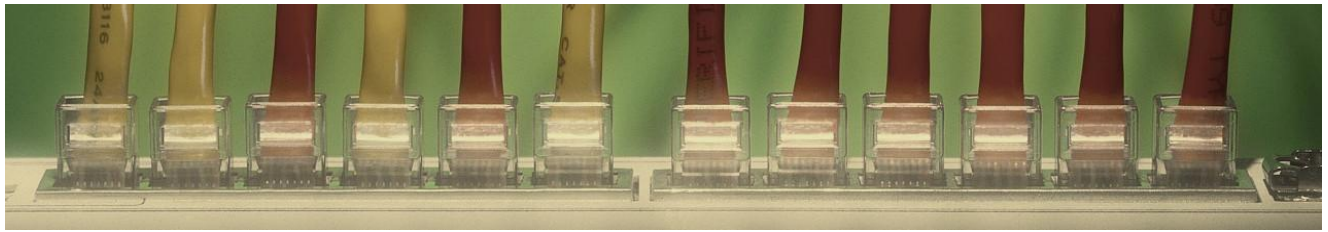
Wednesday, April 4, 2007

8:30 am	Video: Turning the Corner
9:00 am	Presentation of the McGill University RUIS telehealth projects
	Ms. Johanne Desrochers – RUIS McGill
	Ms. Madeleine St-Gelais – RUIS McGill
	Group discussions (cont'd)
10:30 am	Break
10:45 am	Group discussions (cont'd) and summary
Noon	Adjournment

APPENDICE 4: DOCUMENT TO BE DISTRIBUTED BEFORE THE WORKSHOPS

WORKSHOP INTRODUCTORY DOCUMENT

FOR THE DEVELOPMENT OF A TELEHEALTH STRATEGIC PLAN
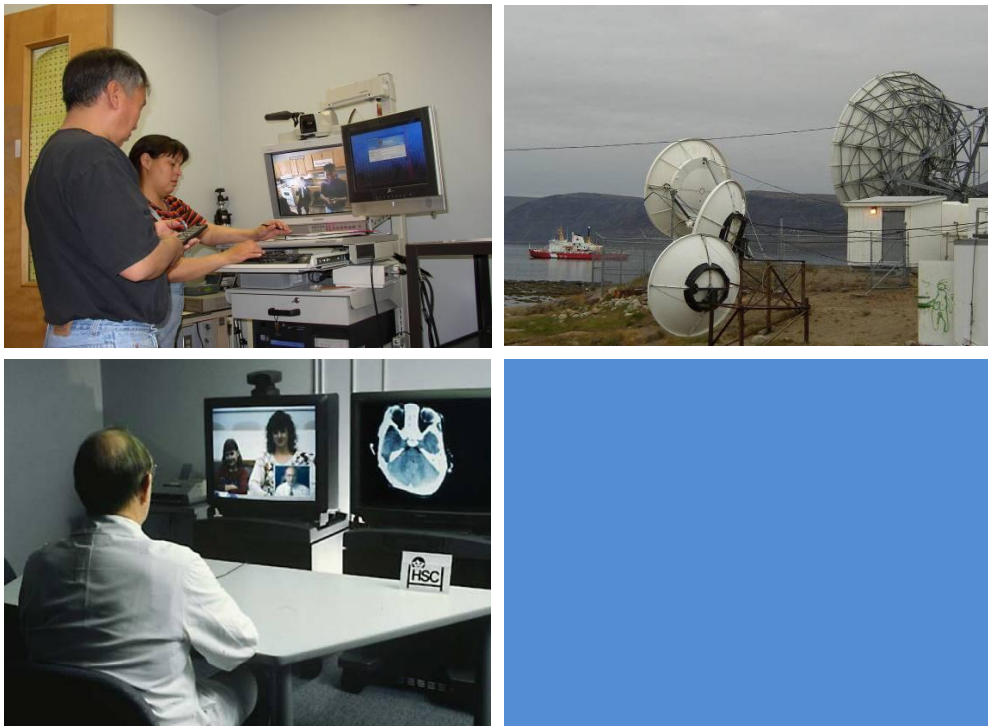
This document was prepared by Ms. Jocelyne Picot, Communications Infotelmed Inc.
in the framework of a contract with the FNQLHSSC.

March 2007

1. INTRODUCTION

You have been invited to participate in one of two **workshops** that will serve to guide the preparation of a three-year First Nations of Quebec telehealth strategic plan. As a key intervener in your community[2], your contribution is essential for the preparation of this plan. Your suggestions and recommendations will constitute the foundations of the **2007-2010 First Nations of Quebec Telehealth Strategic Plan**. The plan will be then used in order to create partnerships, look for funding and obtain the support of Canada Health Infoway, Health Canada and the *Ministère de la Santé et des Services sociaux* (MSSS) for the approved telehealth projects.

2. TELEHEALTH STEERING COMMITTEE

The process for the creation of the strategic plan is directed by the **Telehealth Steering Committee**. Once it has been completed, the plan will be presented to the Committee for revision and approval. The committee is composed of:

Name	Represented organisation
Ms. Catherine Power	FNQLHSSC
Mr. Mamadou Drave	Health Canada
Mr. Christian Marc Lanouette	RUIS-telehealth sectorial table, MSSS, Québec
Mr. Donald Daniel Picard	Canada Health Infoway
Ms. Lise Bastien	First Nations Education Council
To be determined	First Nations EHealth Committee
Ms. Kim Hervieux	*Comité des responsables en soins infirmiers des Premières Nations du Québec*
Mr. Sandro Echaquan	Observer – Telehealth Project Manager in Manawan

3. PARTNERS IN THE PLANNING PROCESS

The following organisations are partners in the strategic planning process:

▪ **FNQLHSSC**: the *First Nations of Quebec and Labrador Health and Social Services Commission* directs the planning process and manages the project on behalf of its member communities.

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[2] In the current context, a key intervener is defined as any person, group or organisation that has a right to the health resources, current and future, of a community, or that has an interest in these resources.

- **Health Canada - FNIH**: *Health Canada – First Nations and Inuit Health* provides resources and direction. The offices of the EHealth Solutions Unit at both the national and regional levels collaborate together in the development of this plan.

- **Canada Health Infoway**: *Canada Health Infoway* provides the largest portion of the funding that is used for the development of the strategic plan. Once it has been approved by the Telehealth Steering Committee, the plan will be submitted to *Canada Health Infoway*. The following step will be the research for funding for the telehealth activities that will be determined in this plan.

- **MSSS:** the *Ministère de la Santé et des Services sociaux* is responsible for the coordination of the telehealth activities in Quebec through the *Réseaux universitaires intégrés de santé* (RUIS). Regardless of what the telehealth activities that are formulated in the First Nations strategic plan are, they will have to be integrated into the RUIS.

Before participating in the workshops, <u>please answer the questions on page 15</u>. Bring this document and the completed questionnaire with you to the workshops. For any questions regarding this document or the location and time of the workshops, please contact:

Catherine Power,
EHealth Program Agent, FNQLHSSC
Tel.: 418 842-1540   Fax: 418 842-7045
Email: cpower@cssspnql.com

4. WHY PREPARE A STRATEGIC PLAN?

The development of a telehealth strategic plan is the first step in a process that aims to help your community adopt telehealth in order to address the health needs. A strategic plan allows for a concrete visualisation of the objectives targeted by a community with regards to the health and well-being of its members, as well as to determine how telehealth will be used in order to attain this vision. The plan allows for the identification of objectives that can be achieved over a three-year span through the carrying out of concrete projects. It determines the path to be taken in order to obtain the resources necessary to reach the set objectives. The plan is also required in order to convince the government organisations to invest the funding required for the implementation of telehealth projects.

5. DEFINITIONS

In Quebec, Act 83 replaces the *Loi sur les services de santé et les services sociaux* and updates practices that are associated with telehealth by starting from the following definition: "**By telehealth services, we mean an activity, service or system related to distance social services, that are practiced in Quebec, through information and communications technologies for the purposes of education, diagnosis, treatment, research, clinical management or training**." (Free translation)

5.1. EHEALTH

EHealth is generic term used by Health Canada, Canada Health Infoway as well as other organisations to describe the exchange and transfer of health information through a network of secure networks with the objective of improving the health care delivery system and access to the health care system. EHealth includes connectivity and infrastructures: it's telehealth in addition to information systems - including electronic health files.

5.2. TELEHEALTH

The term "telehealth" has several similar definitions. We use the following general definition:

Telehealth is the use of information and communication technologies (ICT) in order to provide health services and transfer health information over large and short distances.

There are many ways to use telehealth. It allows for the improvement of access to information, education and care by:

- Improving access to services that are not available in the isolated communities;

- Providing access to information in order to prevent diseases;

- Improving access to the expertise of specialists and other health professionals.

For the purposes of these workshops, we consider telehealth to be a term that includes at least four fields of application:

1. tele-medicine;

2. tele-triage;

3. tele-home care;

4. tele-health for community members and health professionals.

6. MAIN FIELDS OF APPLICATION

6.1. TELE-MEDICINE

Tele-medicine and tele-health are terms that are often used to describe similar activities. Tele-medicine is not a distinct medical specialty, but rather many specialties use tele-medicine in order to improve access to medical care. Tele-medicine is medicine that is practiced from a distance.

This practice is possible because of:

- tele-consultation, which is a practice through which the nurses and physicians can consult with each other with regards to a patient, or that enables a patient to consult a physician or another type of health professional;

- the possibility to send and receive sounds, set or moving images, including X-rays, ultrasound images and anything that can be seen or heard through medical instruments.

Videoconferencing is one of the tools that is the most commonly used for tele-medicine.

6.2. TELE-TRIAGE

Triage by telephone is a service through which nurses provide support over the telephone for clients who have a health problem. In Quebec, this service is provided by *Info-santé*.

6.3. HOME TELE CARE

Patients who are suffering from a chronic disease can be followed-up on at home thanks to a telephone connection. They can use a simple device to send data on a regular basis regarding their disease (weight, blood pressure, blood sugar level, medication, diet, vital signs, etc.) to a nursing station. This communication allows the nursing staff to monitor the state of health of a patient and intervene if necessary. Patients who have complex wounds or who are recovering from surgery can also be monitored from home by sending information and digital images to a health professional.

6.4. TELE-EDUCATION FOR HEALTH PROFESSIONALS, PATIENTS AND CLIENTS

Telehealth is a tool that allows the members of a community to access health-related education and information. The health professionals who work in remote or isolated regions do not have easy access to educational material or courses that allow them to keep up-to-date on new practices. Telehealth provides them with an opportunity to access continuous health and medical education without the need to travel.

6.5. OTHER TELEHEALTH APPLICATIONS

Telehealth has been used as a communications tool by support groups that are composed of members who reside far away from each other. Telehealth has also been useful by allowing administrators to avoid travel in order to participate in meetings, particularly in cases where visual presentations are necessary.

7. TELEHEALTH IN CANADA TODAY

Nowadays, telehealth is present everywhere in Canada, since it has proven to allow:

▪ to reduce costs related to health care and to improve the efficiency of the health care system;

▪ to provide an improved continuity of care by facilitating the organisation of follow-up visits;

▪ to reduce the number of hospitalisation days;

▪ to help address the shortage of health professionals.

In Nova Scotia, Manitoba and Northern Ontario, close to 10 000 telehealth sessions have taken place over the course of one year. More than half of these sessions were clinical sessions.

8. WHY IS TELEHEALTH IMPORTANT FOR THE FIRST NATIONS COMMUNITIES?

Access to care: In Quebec, as is the case in other regions in Canada, the First Nations communities are often too small in order to allow for the establishment of a hospital. The communities are also often remote or isolated. Furthermore, the climate conditions may make travelling during certain times of the year impossible. Telehealth provides improved access to care since, in some situations, the patients or health professionals do not need to travel for a consultation or a follow-up visit.

Health status: There are important gaps between the health status of First Nations and that of the Canadian general population as a whole[3]. In 2002, barely 38% of surveyed First Nations declared that they were in very good or excellent health, compared to 61,4% of the Canadian general population in 2000-2001. Quicker and improved access to appropriate health information would allow the members of the communities to become healthier and maintain their health.

Community empowerment: Telehealth is a tool that serves to empower the communities by enabling them to have greater control over, and access to, required health care services. Some have used telehealth as a tool in order to create support groups both inside and outside of their own community and to inform these groups and maintain contact.

Access to continuing education and training related to health: For the patients, consumers and clients as well as for the nurses and health professionals, telehealth provides access to courses and continuing education opportunities that are not available in the community.

9. EXAMPLES OF TELEHEALTH APPLICATIONS IN THE OTHER FIRST NATIONS COMMUNITIES IN CANADA

Today, there are First Nations telehealth programs and projects in all of the provinces and territories in Canada. You will have the opportunity to see some examples during the workshops.

Ontario: The First Nations communities in the Kenora region have taken an extra step in order to provide care to those who have eye problems related to diabetes through the Teleophthalmology Program. In collaboration with KO Telehealth (KOTH), the program provides diabetic clients with the possibility of obtaining an appointment with an eye specialist without needing to leave their community. In addition to the cutting-edge teleophthalmology technology that has been provided for more than two years by KOTH in three communities, the program allows for the possibility to learn more about diabetes and the prevention of its complications. (http://telehealth.knet.ca)

Manitoba: Ten remote First Nations communities in northern Manitoba are connected by way of satellite to the MB Telehealth network (Manitoba Telehealth). These communities can use videoconferencing to improve access to specialised services, health-related information or for meetings or visits with loved ones in a tertiary care centre. The communities have used telehealth and expressed their satisfaction in terms of this addition to their nursing station that will improve the services that they currently receive. (www.mbtelehealth.ca/innovation_research.php)

The Aboriginal Telehealth Knowledge Circle (ATKC) offers other examples of uses for telehealth by First Nations (www.atkc.ca). ATKC is a special interest group of the Canadian Society of Telehealth. The website's portal for this organisation offers a toolkit that serves to help First Nations adopt telehealth (www.cst-sct.org).

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[3] *Healthy Canadians: A Federal Report on Comparable Health Indicators 2002*. http://www.hc-sc.gc.ca/hcs-sss/pubs/system-regime/2002-fed-comp-indicat/index-eng.php

10. TELEHEALTH IN QUEBEC

Telehealth has existed for almost fifty years in Quebec. A list of telehealth activities reveals approximately 35 projects[4]. In the framework of a co-funding agreement with Canada Health Infoway[5], the MSSS launched a large project to computerise the socio-sanitary network, which includes the development of telehealth through several large projects that are currently in progress that are sponsored by the *Réseaux universitaires intégrés de santé* (RUIS).

10.1. THE FIRST NATIONS ON QUEBEC TELEHEALTH PROJECTS

During the workshop, you will have the opportunity to learn more about the First Nations projects that already exist in Quebec. The goal of Winneway's project is to improve access to services and service delivery through selective consultations. The first steps that have already been taken include tele-psychiatry in partnership with the Sainte-Justine Hospital and tele-training. Manawan's project allowed for the establishment of a telehealth network for GYN/OBS and ORL and will commence its activities next April.

10.2. THE RUIS

In 2005, the *Ministère de la Santé et des Services sociaux* created the *Réseaux universitaires intégrés de santé* (RUIS) in order to better address the needs of the population. The RUIS were formed around the four faculties of medicine in Quebec (Laval, Sherbrooke, Montreal and McGill) and each RUIS connects the faculty of medicine, university health centres and affiliates, institutes and the *Agence de développement*.

The *Ministère* has developed a map that displays the territory limits for each of the four RUIS and their respective borders. The RUIS have the mandate to plan, implement, manage and evaluate the telehealth activities.

Representatives of the RUIS will present examples of their telehealth activities during these workshops.

11. THE NEED FOR PARTNERSHIPS

One of the fundamental principles with respect to the implementation of telehealth is that it cannot be achieved without assistance. Telehealth must be implemented with the help of at least three types of partners: the communities that require the services, the partners that are capable of providing the services and expertise and the partners that invest and commit to sharing the costs associated with the installation and use of telehealth.

11.1. THE PARTNERSHIPS WITH THE PROVIDERS

Telehealth cannot be implemented without reaching agreements between the parties and the communities, people and establishments involved. Linkages must be made between the communities that are in need of services and the service providers. In Quebec, the service providers are usually the RUIS. The First Nations telehealth activities must be integrated into this network of services.

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[4] MSSS, *Plan d'informatisation du réseau de la santé et des services sociaux*, general presenation, March 2004.

[5] CHI funded 50% of the costs of the projects.

In Quebec, Act 83 states that any establishment or professional that offers or obtains telehealth services must reach an agreement to that effect with another establishment, organisation or person.[6]

11.2. FINANCIAL PARTNERS

There is a certain level of funding sources for the telehealth projects. For the most part, the telehealth programs and projects will require funding from three sources – Health Canada, MSSS and Canada Health Infoway. Canada Health Infoway is a strategic investor that participates in projects that:

Deploy telehealth solutions into the northern communities, remote or isolated, and within cultural communities (Aboriginals and linguistic minorities);

Have a clinical impact that can be demonstrated and guarantee the adoption of telehealth while protecting the personal information of the patients;

Master the management issues with regards to sustainability, governance, partnerships and resources;

Demonstrate that they are in line with the architecture and technological standards of *Infoway* (the interoperability and linkages with the electronic health file).[7]

12. THE TELEHEALTH STRATEGIC PLAN

12.1. THE ORIGIN AND GOAL OF THE WORKSHOP

In December 2005, the FNQLHSSC organised a forum[8] in which more than 80 participants attended. The goal of the forum was to provide an opportunity for discussion and sharing on the issue of telehealth in order to implement sustainable and durable telehealth projects in the First Nations and Inuit communities of Quebec. It was determined that the development of a telehealth strategic plan was a priority for the First Nations. Other important steps were taken in terms of facilitating the implementation of telehealth in the First Nations communities

▪ The FNQLHSSC obtained funding for the development of the strategic plan.

▪ An inventory of information and communications technologies (ICT) was carried out in all of the communities.

▪ Videoconferencing is now available in most of the communities.

▪ The FNQLHSSC, in partnership with the FNEC, owns and uses a multipoint conferencing bridge.

The goal of the workshops is to develop a three-year Quebec telehealth strategic plan that is realistic and based on the contribution of the participants and representatives of the First Nations communities. The plan will then be used to

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[6] Act 83, article 108.1.

[7] Canada Health Infoway, Guide for Telehealth Investment, 2006.

[8] Connected Communities: First Nations and Inuit Regional Health Forum on December 7 and 8, 2005. Prepared by Richard Gray for the FNQLHSSC.

obtain funding and support from Canada Health Infoway and other funding partners such as the MSSS, Health Canada and other organisations in order to develop and implement the approved telehealth projects.

12.2. THE PREPARATION OF A TELEHEALTH STRATEGIC PLAN

The strategic plan allows for the determination of the vision of the organisation or community for the future and the ways to achieve that vision. The strategic planning process demands that information be acquired, that different options be explored and that the repercussions of the decisions that are made now be carefully studied. The First Nations telehealth strategic plan will cover a three-year period – from 2007 to 2010.

Even though it can be difficult to develop a plan that can be applied to many communities, together, we will attempt to present a **vision** and set objectives that will lead to the development of a good number of achievable and sustainable projects. The proposed telehealth solutions must address the identified **community health needs**. The community must also be ready to adopt telehealth.

The following proposed table of contents presents what the strategic plan should usually include. It can be modified following the research projects and in accordance with the results of the workshops.

2007-2010 First Nations of Quebec Telehealth Strategic Plan
Proposed table of contents

1. Introduction

    1.1. Steps – Methodology used for the development of the plan

        1.1.1. Workshops and interviews

        1.1.2. Overview of the literature

        1.1.3. General overview of telehealth in the other First Nations communities

2. Context

    2.1. External environmental scan – possibilities and threats and their repercussions on the development of telehealth in the First Nations communities (political, economical, social, technological – competitive and collaborative strengths)

    2.2. Internal environment – strengths and weaknesses and their impacts on the development of telehealth (technology and human resources, competencies, needs, health care organisations, governance)

3. Strategic challenges

4. Vision (image of the future that we want to achieve through the implementation of telehealth – statement of positive results)

5. Objectives – overview of what the telehealth services or projects will allow to be accomplished

6. Strategic orientations

    6.1. Alternative solutions, obstacles

    6.2. Important projects or proposals – actions to undertake for their development

    6.3. Impacts on use (governance, management change, technological aspects)

    6.4. Next steps

7. Vision of success – The First Nations communities of the future

8. Summary and conclusion

Vision examples:

Telehealth: closing the distances by bringing quality health services and information to all people in New Brunswick.

++

The vision of the provincial strategy consists of fostering the use of telehealth applications and technology in order to contribute to the equitable delivery of health services among the provincial residents, regardless of the location in which they live.

The **strategic orientations** are general statements that focus on the response of an organisation or community with respect to a change of environment. They include the setting of objectives and the development of a process in order to achieve those objectives – and they underline the importance of making decisions that will give the organization the capacity to react to change in a positive manner. The strategic orientations can focus on the resolution of important issues, the adjusting of new products or service delivery methods or the revision of the number of clients.

Examples of strategic orientations:

- *Increase telehealth awareness through leadership.*

- *Facilitate the integration of services in the regional and provincial programs.*

- *Establish capacity in terms of human resources at the community level.*

- *Plan a sustainable project.*

12.3. UNFOLDING OF THE WORKSHOPS

The workshops will start with presentations:

1) on telehealth;

2) by sponsors and partners that participate:

▪ In the funding of the telehealth strategic plan and projects;

▪ In the delivery of services through telehealth.

Following the presentations, the participants will be asked to break up into small groups in order to perform a brain-storming session on one or two questions at a time. These types of discussions will occur several times during the workshops and will always be followed by a short report on behalf of each team.

12.4. AFTER THE WORKSHOPS: THE NEXT STEP

Completion of the conception of the strategic plan.	Presentation for the Steering Committee

Submission of the plan to Canada Health Infoway, Health Canada, MSSS and the RUIS for approval.

Preparation of the actions plan, including detailed project plans

Securing of the funding required for phase 1 of the projects.

Evaluation of phase 1 – securing of funding for phase 2.

12.5. SCHEDULE FOR THE WORKSHOPS (SUBJECT TO MODIFICATIONS)

Day 1 – from 8:30 am to 4:30 pm

Presentations (10 minutes) – a question and answer period will follow each presentation (15 minutes):

Reception, opening words, objectives of the workshops

Presentation of the participants

What is telehealth? Presentations (videos, FN examples)

Presentation by Health Canada

Canada Health Infoway

MSSS

Presentations by the RUIS representatives

12:00 to 1:30 pm - Lunch

Allocation of the issues to be discussed in groups: questions to answer.

Discussion on two or three questions at a time – at one hour intervals. Each group will report their answers. The answers will be summarized on a flip-chart.

Once each group has finished, a brief summary of the answers will be provided.

Day 2 – from 8:30 am to noon

Summary of the first day's discussions.

Sessions in small groups in order to finish answering the questions, if necessary.

Development of a vision statement.

Summary of the workshops and discussion on the next steps.

To prepare for the workshops, please answer the questions on the following page. You are not required to hand in your answers. Bring your answers with you in order to facilitate the discussion.

Preparatory questions for the workshops

The following questions will be discussed during the workshops. In order to facilitate the discussion, write your answers down. You can answer your questions in accordance with your own point of view or you can obtain the opinion of the members in your community. You are not required to hand in your answers.

1. What are the most significant challenges or needs in your community with respect to health care, health services or health-related information?

2. Are you experiencing a shortage of resources in the health field – be they human, material, technological, etc. in your community?

3. If so, in which particular fields or domains is this shortage?

4. Do you believe that telehealth can be used to help overcome and address these shortages?

5. Does your community currently use telehealth technologies? (such as videoconferencing, for example)

6. If not, what is the main reason?

7. If so, for which purpose? Clinical consultations? Education? Meetings?

8. If you have never used telehealth, would you, your colleagues and other members of your community be open to using it?

9. Why would you use it?

10. In your opinion, what are the main advantages and benefits related to the adoption of telehealth?

11. When you consider adopting telehealth, what are the main challenges and obstacles that your community is faced with?

12. Do you believe that your community can overcome these challenges and obstacles?

13. In your opinion, what are the risks associated with the adoption of telehealth?

14. What changes are you expecting if telehealth is adopted in your community?

15. Are these changes manageable?

16. Are there other options besides telehealth that are more appropriate to address the needs in terms of health care for your community?

References:

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http:// knet.ca/documents/Final-Workshop-Report-Dec-02.pdf

APPENDICE 5: LIST OF THE PEOPLE WHO WERE INTERVIEWED

Trevor Cradduck, Keston Group

Ernie Dal Grande, FNIH, EHealth Solutions Unit, Health Canada, Ottawa

Johanne Desrochers, MUHC

Mamadou Drave, FNIH, EHealth Solutions Unit, Health Canada, Regional Office in Montreal

Sandro Echaquan, Manawan telehealth project

Richard Gray, FNQLHSSC

Valerie Hagerman, Telehealth Director, River Valley Health Region, Fredericton

Eric Labbe, Telecommunications and Computer Technician, Manawan telehealth project

Christian-Marc Lanouette, MSSS

Diane Maude-Martel, RUIS - Université Laval

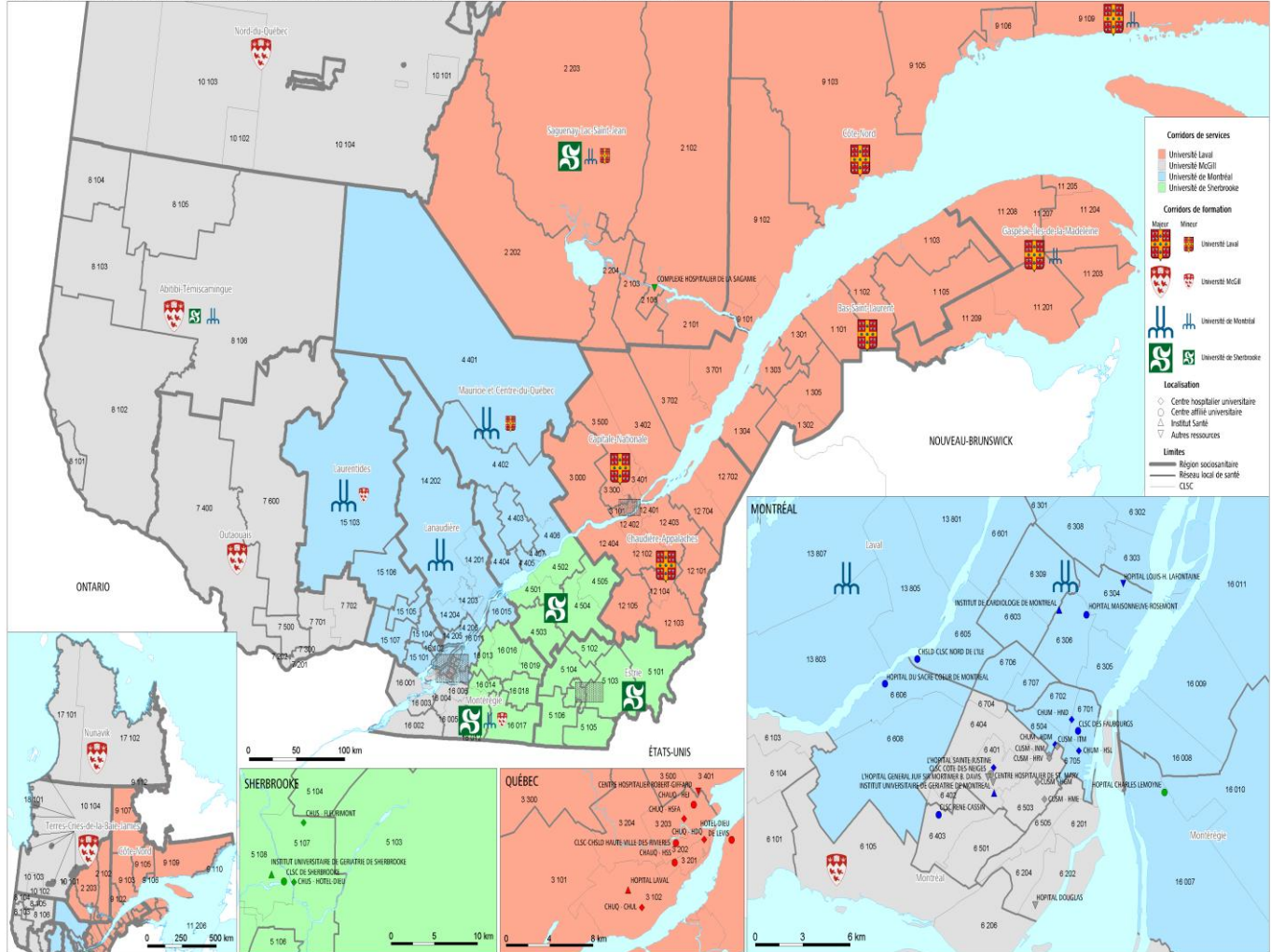Donald-Daniel Picard, Canada Health Infoway

Madeleine St-Gelais, Telehealth Coordinator, MUHC

Roger St Gelais, Agence Côte-Nord

Tim Whiteduck, FNEC

APPENDICE 6: MAP OF THE RUIS TERRITORY BORDERS

PROJET DE RÉPARTITION DES TERRITOIRES ENTRE RUIS POUR L'OFFRE DES SERVICES DE 2IÈME ET 3IÈME LIGNE (SURSPÉCIALISÉS) ET DE FORMATION

APPENDICE 7: MAP OF THE CONNECTIVITY OF THE FIRST NATIONS COMMUNITIES
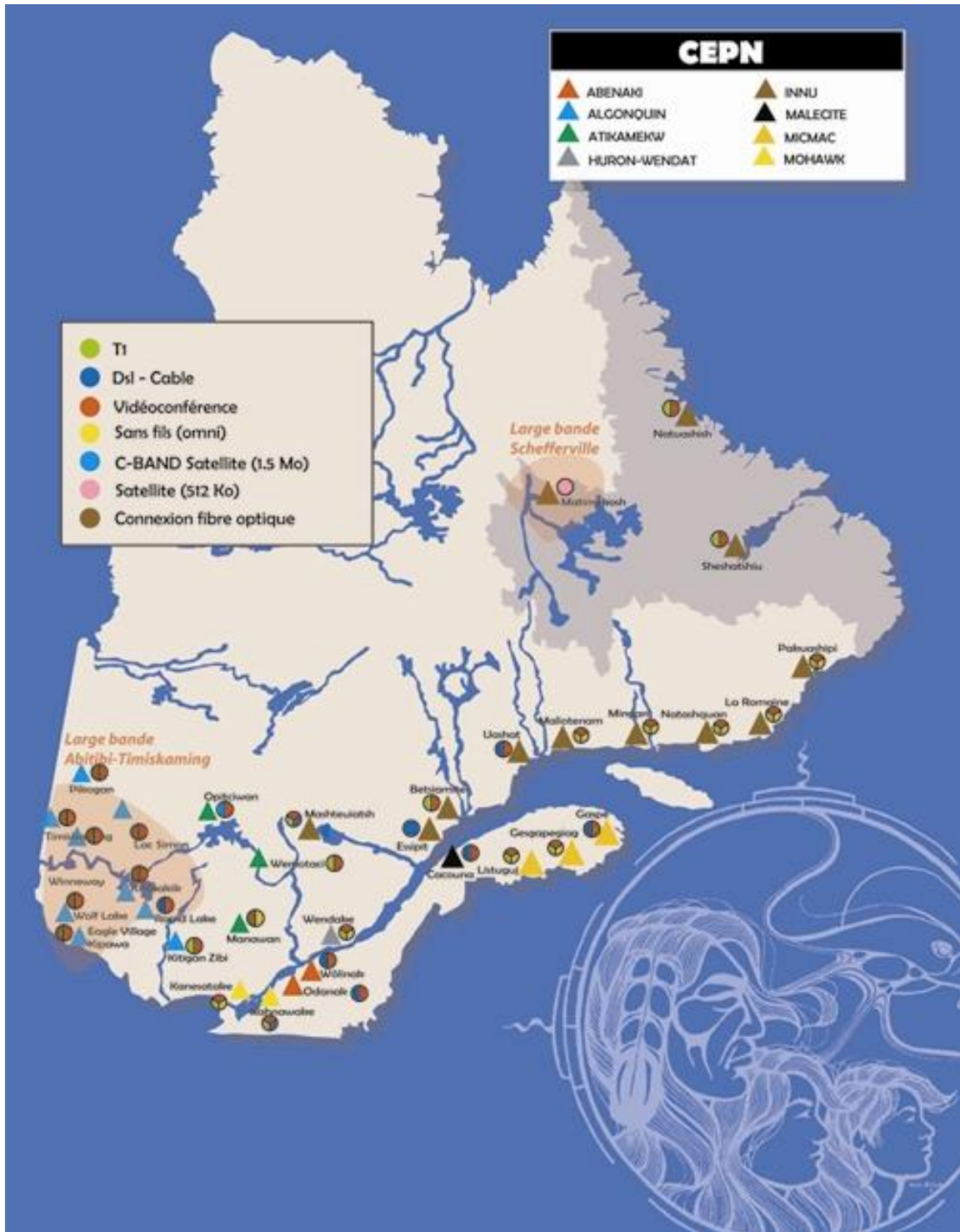
APPENDICE 8: COMMUNITIES THAT ARE REPRESENTED DY THE FNQLHSSC

By nation, population, isolation or remoteness and the type of health establishment.

Communities	Region	Pop.	Type	Nursing station	Health centre	Treatment centre	Long-term care centre
ABENAKIS							
Odanak	17	299	4		✓		
Wôlinak	17	69	4		✓		
ALGONQUINS							
Kipawa	8	263	4		✓		
Kitcisakik	8	329	2		✓		
Wolf Lake	8	0	4	✓			
Kitigan Zibi	8	1486	4		✓	✓ (Maniwaki)	✓
Lac Simon	8	1201	4		✓		
Pikogan	8	546	4		✓		
Barriere Lake	8	481	3	✓			
Timiskaming	8	544	4		✓		✓
Winneway	8	355	3	✓			
ATIKAMEKW							
Manawan	14	1915	2	✓			
Obedjiwan	4	1902	2	✓			
Wemotaci	4	1190	2	✓		✓ (La Tuque)	
HURONS-WENDAT							
Wendake	3	1273	4		✓		✓
MALECITES							
Viger	1	0	4				
MICMACS							
Gaspé	11	0	4				
Gesgapegiag	11	541	4		✓	✓	
Listuguj	11	1908	4		✓	✓ (Maria)	
MOHAWKS							
Kahnawake	16	7323	4	Hospital			✓
Kanesatake	15	1345	4		✓	✓	✓
INNUS							
Betsiamites	9	2670	3	✓			
Essipit	9	178	4		✓		
Unamen Shipu (La Romaine)	9	928	2	✓			
Mashteuiatsh	2	2024	4		✓		✓
Matimekosh	9	715	2	✓			
Ekuanitshit (Mingan)	9	499	3	✓			
Natashquan	9	849	2	✓			
Pakua Shipi	9	267	2	✓			

Communities	Region	Pop.	Type	Nursing station	Health centre	Treatment centre	Long-term care centre
Uashat/Maliotenam	9	2766	4		✓	✓ (Moisie)	✓
NASKAPIS							
Kawawachikamach	9	564	2	CLSC			
Total establishments				12 +hospital and CLSC	15	6	7
Total FNLQHSSC population		34430					
Type of community							
Non-isolated		4	1.00	Total:	18		
Semi-isolated		3	1.07	Total:	4		
Isolated		2	1.13	Total:	9		
Remote and isolated		1	1.20	Total:	0		

APPENDICE 9: ORGANISATION OF THE QUEBEC HEALTH AND SOCIAL SERVICES NETWORK

In 2004-2005, the Government of Quebec created an organisational structure in order to facilitate the transition for people between the primary services (general medicine and social services), secondary services (specialised medicine and social services) and tertiary services (highly specialised medicine and social services) provided by the local service networks. The restructuration process included the creation of 18 agencies called the *Agences de développement de réseaux locaux de services de santé et de services sociaux* (ADRLSSS) – each composed of local service networks. Each of the 18 public sanitary regions is equipped with at least one of each of the following establishments: *Centre de services sociaux et de services de santé* (CSSS), hospital, rehabilitation centre, long-term care centre and a youth protection centre. At the local level, the 95 CSSS and their local service network partners (like family doctors and establishments that provide specialised services) share a collective responsibility with regards to the population on their territory.

APPENDICE 10: VIDEOCONFERENCING STATIONS IN HEALTH ESTABLISHMENTS

Community	Type of connection	Model	Bandwidth capacity	Network provider
Kitigan Zibi Health Centre P.O. Box 160 8, Kikinamage Mikan Maniwaki (QC), J9E 3B2	IP (T1 service with Bell Canada)	Polycom VSX 7000	384 kbps	Bell Canada
Kitigan Zibi Education Centre 41, Kikinamage Mikan Maniwaki (QC), J9E 3B2	IP (FNEC T1)	Polycom VSX 7000	384 kbps	FNEC
Temiscaming Notre-Dame-Du-Nord Health Centre 14, Algonquin Avenue P.O. Box 336 Temiskaming (QC), J0Z 3B0	IP (Fiber)	Polycom VSX 7000	384 kbps	Telebec (RISQ for Internet)
Temiscaming Community Training Center Notre-Dame-Du-Nord	IP (Fiber)	Polycom Ipower 9000	384 kbps	Telebec (RISQ for Internet)
Eagle Village (Kipawa) Health Centre Eagle Village First Nation 3, Ogima Street Kipawa (QC), J0Z 2H0	IP (Fiber)	Polycom VSX 7000	384 kbps	Telebec (RISQ for Internet)
Eagle Village (Kipawa) Education Centre (FNEC VC System)	IP (Fiber)	Polycom Ipower 9000	384 kbps	Telebec (RISQ for Internet)
Wolf Lake Health Centre P.O. Box 998 5 Riordon, Hunters Point Timiskaming (QC) J0Z 3R0 (FNEC VC SYSTEM)	IP (Fiber)	Polycom Ipower 9000	384 kbps	Telebec (RISQ for Internet)
Winneway (Long Point) Health Centre 207, Pawitig Street Winneway River (QC), J0Z 2J0	IP (Fibre)	Polycom VSX 7000	384 kbps	Telebec (RISQ for Internet)
Winneway (Long Point) Amo Ososwan School 117 Kakinwawigak P.O. Box 43 Winneway, QC J0Z 2J0 (FNEC VC System)	IP	Polycom Ipower 9000	384 kbps	Telebec
Barriere Lake Health Centre Parc de la Vérendrye, General Delivery Parc de la Vérendrye (QC), J0W 2C0	ISDN (3 x ISDN BRI)	Polycom Ipower 9000	384 kbps	Telebec
Barriere Lake Band Council Parc de la Vérendrye, (FNEC VC SYSTEM)	ISDN (3 x ISDN BRI)	Polycom Ipower 9000	384 kbps	Telebec

Community	Type of connection	Model	Bandwidth capacity	Network provider
Kahnawake Kateri Memorial 10 River Road Kahnawake (QC), J0L 1B0	IP (Fibre)	Polycom VSX 7000	384 kbps	Bell Canada
Kahnawake Business Centre 2, River Road (FNEC VC SYSTEM)	ISDN (3 x ISDN BRI)	Polycom Ipower 9000	384 kbps	Bell Canada
Kanesatake Health Centre 12, Joseph Swan Road P.O. Box 59 Kanesatake (QC) J0N 1E0	Wireless 5.4 Ghxz (54 MB) FNEC T1 service	Polycom VSX 7000	384 kbps	FNEC
Listuguj Health Centre 6, Pacific Drive P.O. Box 338 Listuguj (QC) G0C 2R0	Wireless 5.4 Ghxz (54 MB) FNEC T1 service	Polycom VSX 7000	384 kbps	FNEC
Gesgapegiag Health Centre 95, Main Street Box 1450 Gesgapegiag (QC) G0C 1Y0	Wireless 5.4 Ghz (54 MB) FNEC T1 service	Polycom VSX 7000	384 kbps	FNEC
Mawiomi Treatment Center 85, School Street Gesgapegiag (Maria) (QC) G0C 1Y0	Wireless 5.4 Ghz (54 MB) FNEC T1 service			FNEC
Wôlinak Health and Social Services 10120, Kolipaio Wôlinak (QC) G0X 1B0	DSL	Polycom VSX 7000		Telebec
Wolinak Band Council Education Sector 10120, rue Kolipaïo (FNEC VC SYSTEM)	ISDN	Polycom Ipower 9000	384 kbps	Telebec
Odanak Health and Social Services 105, Sibosis Odanak (QC), J0G 1H0	DSL	Polycom VSX 7000		Bell Canada
Odanak Band Council 102, rue Sibosis Education Sector Odanak (QC), J0G 1H0 (CEPN VC System)	ISDN	Polycom Ipower 9000	384 kbps	Bell Canada
Pikogan Abitibiwinni (Pikogan) Health and Social Services 35, Migwan Pikogan (QC), J9T 3A3	IP (Fibre)	Polycom VSX 7000	384 kbps	Teledistribution AMOS

Community	Type of connection	Model	Bandwidth capacity	Network provider
Education Sector **Pikogan** Migwan School 70, rue Migwan Pikogan (Québec) J9T 3A3	IP (Fibre)	Polycom Ipower 9000	384 kbps	Teledistribution AMOS
Kitcisakik Kitcisakik Health and Social Services C.P. 5206 — Lac Victoria Val d'Or (QC), J9P 7C6 (FNEC System)	IP (Fibre)	Polycom Ipower 9000	384 kbps	Telebec (RISQ for Internet)
Kitcisakik Administrative Office 615, Avenue Centrale Val d'Or (QC), J9P 1P9	IP (Fibre)	Polycom VSX 7000	384 kbps	Telebec (RISQ for Internet)
Lac Simon Lac Simon Health and Social Services 1020, ave. Amik-Wiche C.P. 133 Lac Simon (QC) J0Y 3M0	IP (Fibre)	Polycom VSX 7000	384 kbps	Telebec (RISQ for Internet)
Lac Simon Training Centre	ISDN (3 x ISDN BRI)	Polycom Ipower 9000	384 kbps	TELEBEC
Wemotaci Wemotaci Health Services 89, Kenosi Wemotaci (QC), G0X 3R0	ISDN (Proposed)	Polycom VSX 7000		TELEBEC
Wemotaci Nikanik School C.P 43 Wemotaci (Québec) G0X 3R0	ISDN (3 x ISDN BRI)	Polycom Ipower 9000	384 kbps	TELEBEC
Opiticiwan Health Services 15, Wapistan Obedjiwan (QC) G0W 3B0	IP (C-Band-satellite)	Polycom VSX 7000	384 kbps	FNEC (KNET)
Opiticiwan Education Service (FNEC VC System)	IP (C-Band – Satellite)	Polycom Ipower 9000	384 kbps	FNEC (KNET)
Manawan Health Services 135, Kicik Manawan (QC) J0K 1M0	IP (Fibre)	Polycom VSX 7000	384 kbps	Manawan Fibre
Manawan Education Services 135, Kicik Manawan (QC) J0K 1M0	IP (Fibre)	Polycom VSX 7000	384 kbps	Manawan (Centre de production-fibre)
Wendake Health and Social Services Huronne-Wendat Nation Band Council 255 Place Chef Michel Laveau Wendake (QC), G0A 4V0	IP (FNEC T1)	Polycom Ipower 9000	384 kbps	FNEC

Community	Type of connection	Model	Bandwidth capacity	Network provider
Viger Band Council 112 rue de la Grève Cacouna (QC), G0L 1G0 (FNEC VC System)	ISDN (3 x ISDN BRI)	Polycom Ipower 9000	384 kbps	CEPN – FNEC
Essipit Health and Social Services 32 rue de la Réserve Essipit (QC), G0T 1K0	DSL (or Cable-modem)	Polycom VSX 7000	Public DSL (384 kbps not assured)	Bell Canada
Betsiamites Health and Social Services 2 rue Ashini Betsiamites (QC), G0H 1B0	CEPN – FNEC T1	Polycom VSX 7000	384 kbps	FNEC
Mingan (Ekuanitshit) Health and Social Services 27 Rue Mathias-Uahauna C.P. 357 Mingan (QC), G0G 1V0	Wireless 5.4 Ghz (54 MB) FNEC T1 service	Polycom VSX 7000	384 kbps	FNEC
Uashat Mak Mani-Utenam Health and Social Services 596, Ennuat Mani-Utenham, G4R 4K2	Wireless 5.4 Ghz (54 MB) FNEC T1 service	Polycom VSX 7000	384 kbps	FNEC
Unamen Shipu (La Romaine) Health Centre La Romaine, Cté Duplessis (QC), G0G 1M0	Wireless 5.4 Ghz (54 MB) FNEC T1 service	Polycom VSX 7000	384 kbps	FNEC
Natashquan Health and Social Services 184, rue Pashin Natashquan (QC), G0G 3E0	Wireless 5.4 Ghz (54 MB) FNEC T1 service	Polycom VSX 7000	384 kbps	FNEC
Mashteuiatsh Education Sector Kassinu-Mamu School 1743, rue Amisk Mashteuiatsh (Qc) G0W 2H0 (FNEC VC System)	IP (FNEC T1)	Polycom VSX 7000	84 kbps	FNEC
Pakua Shipi (St-Augustin) Health and Social Services C.P. 39 Pakua Shipi (QC), G0G 2R0	Wireless 5.4 Ghz (54 MB) FNEC T1 service	Polycom VSX 7000	384 kbps	FNEC
Gespeg (Gaspé) Band Council 783, boul. Pointe-Navarre C.P. 69 Fontenelle (Gaspé), (QC), G4X 6V2	ISDN (3 x ISDN BRI)	Polycom Ipower 9000	384 kbps	TELUS FNEC

APPENDICE 11: DEADLINES

Task	8/7	1/8	6/8	12/8	6/9	12/9	6/10	12/10
Telecommunications feasibility study	█	█						
Communications plan		█						
Memorandums of understanding and sustainability plan		█	█	█	█	█	█	█
Strategic orientation 1: Tele-education								
Evaluate the community's education needs								
Update the telecommunications installations in order to obtain access	█							
Prepare and disseminate a calendar	█							
Complete phase 1, obtain the funding		*						
Offer courses and programs (OIIQ-MUHC)	█	█	█	█	█	█		
Evaluate the results							█	█
Strategic orientation 2: Diabetes								
Criteria, call for proposals – select 5	█	█						
Obtain approval – Agences, RUIS: memorandums of understanding – CSSS	█	█						
Complete phase 1, obtain the funding		*						
Acquire telehealth mobile units for retinopathy			█					
Commence the screening program			█	█				
Initiate the tele-home care programs				█	█			
Evaluate the results							█	█
Strategic orientation 3: Mental health								
Criteria, call for proposals, choose 1	█	█						
Obtain approval – Agences, RUIS: memorandums of understanding – CSSS		█						
Complete phase 1, obtain the funding			*					
Equip appropriate rooms for distance mental health care				█				
Evaluate the results							█	█
Strategic orientation 4: Selective tele-consultations								
Criteria, call for proposals, select 3	█	█						
Obtain approval – Agences, RUIS: memorandums of understanding – CSSS		█						
Complete phase 1, secure the funding			*					
Renovate the rooms for telehealth				█	█			
Evaluate the project							█	█

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