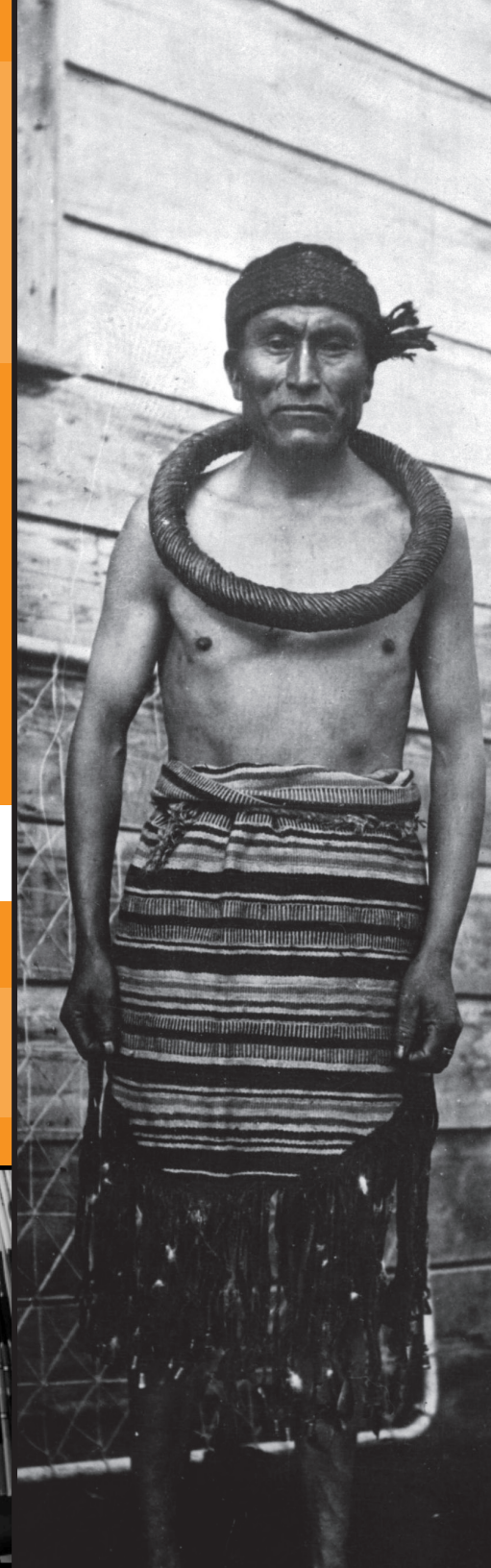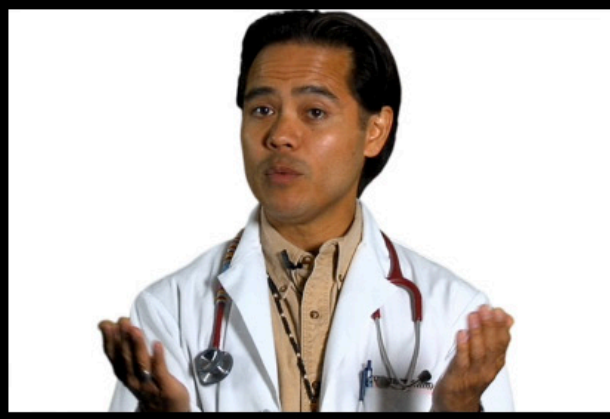# Developing Community eHealth

Starting the eHealth Discussion with BC First Nations

Tripartite First Nations Health Plan

First Nations Health Directors Association

Preface

Community based health services represent a unique service sector for BC First Nations. The services provided by First Nations Health Centres are rooted in an intimacy to their service population, and to the unique social and cultural contexts of the communities they serve. This significantly influences the types of services and the ways these services are organized and delivered.

While Health Centres excel at the shaping of appropriate and effective services for their members, they also continue to work to overcome a number of unique challenges stemming from a variety of factors, including economies of scale, isolation, funding limitations, infrastructure and capacity challenges, and jurisdictional barriers. To build on the strength of community Health Centres and to enhance the unique value proposition they represent in the improvement of the health of First Nations people in BC, resolution of these challenge areas facing Health Centres is a key priority.

Significant progress is being made in the current environment of tripartite collaboration between First Nations, the federal and provincial governments, to bring about the transformative change required to resolve these systemic barriers and challenges. This larger climate or environment of positive change enables the multiple types and levels of effort required for success to advance. One of the many efforts that can contribute to empowering Health Centres to overcome issues of isolation, economies of scale, infrastructure and jurisdictional barriers, is eHealth.

eHealth, the use of information management and communication technologies in health services, is an area of development that offers potential tools and strategies Health Centres can leverage to both enhance their unique service approaches as well as mitigate the particular challenges confronting their operations.

We don't have to look far to find ways that information and communications technologies have become important tools, both in our personal lives and in the work place. Mobile phones, email, even fax machines have transformed the way we communicate and work. Even in our day to day commercial transactions: debit cards (Interac) was only introduced in 1994, and by 2001 it had already become the most popular payment method in Canada.

eHealth development holds the potential to enable the unique approach that Health Centres bring to their service delivery. Like in any creation, the tools should enable the process, not dictate the outcome. In other words, an important principle of eHealth is that the health service needs and approaches dictate technology, not the reverse. This is important to recognize in relation to First Nations health, for the unique community based and holistic approaches each Health Centre brings can and should be enhanced through the proper application of eHealth.

eHealth entails a unique interplay between local community based eHealth development and regional level collective support, collaboration, and investment. In what forms and ways First Nations eHealth will evolve depends to a significant degree on where community level developmental efforts and interest and requirements lead it. Health Centres across the province are engaged in the early steps of charting their eHealth paths.

Introduction

The document is intended as a discussion document to identify and build consensus around the key eHealth development areas that First Nations can explore in terms of the value of eHealth for their community health services, and develop approaches that make sense for their organizations.

Community level services are self-directing, each with their own planning processes and cycles, and with accountabilities to their Health Board and/or Chief's and Councils, and members. As such this document is not intended as an eHealth plan. Rather, its purpose is to identify viable and relevant entry points through which communities can pursue their developmental paths with respect to eHealth.

While First Nations Health organizations and departments share many commonalities, they are also unique in many ways. Therefore, the answer to the questions of if-where-how eHealth can add value and be of assistance to these services, will vary across communities. By creating a dynamic and non-linear picture of eHealth development areas, we hope that this document will continue to be of value for communities in different ways at different points in their journey as health service providers.

["eHealth Development Areas" – a phrase used in this document to refer to a general direction community health centres and deparments may pursue.]

4

Why an eHealth Document?

The identification of key eHealth Development Areas for First Nations Health helps enable and advance a collective conversation and understanding of:

- What is meant by "eHealth";
- Meaningful opportunities for eHealth to support health services;
- The priority areas towards which eHealth investments should be directed.

It is hoped this document is the start of a conversation with communities, and that ongoing discussions and community input will help revise, refine, and shape a shared picture of the eHealth Development Areas for First Nations eHealth and British Columbia. This picture becomes a foundational pillar for First Nations eHealth planning in BC.

Perspective and Audience

The First Nations community based health services sector is the intended audience for this document: management (Health Directors, Health and Band Managers, Executive Directors), and those directly providing health services under their leadership. Every effort therefore has been made to look at eHealth from a Health Centre perspective.

Document Organization

The document highlights specific concrete challenge areas faced by community Health Centres, and links these to eHealth opportunities with the potential to help overcome or mitigate these challenges. These opportunities are in turn typified into key eHealth Development Areas for communities.

For each of the 6 challenge areas, in the left hand column the percentage of Health Directors/Senior Health Leads who reported the challenge as being either a "significant"or "very significant" challenge for Health Centres is indicated. The FNHDA feedback survey received Fifty–eight (58) feedback responses, the majority of responses being from Health Directors (70%).

Health Centre Challenges in an eHealth Context: Report on Health Directors/ Senior Health Leads Feedback. *FNHDA/FNHC, Oct 7 2010*
Refer to: http://fnhc.ca/index.php/initiatives/e_health/

CHALLENGE #1 - **Accountability Reporting Burden**

DESCRIPTION/ANALYSIS

- First Nations Health services currently carries a substantial reporting burden to funders (predominantly to FNIH).
- The relative burden of reporting carried by First Nations has been well documented as unreasonably high, and the Auditor General of Canada has repeatedly advanced the need to reduce and rationalize this burden.
- Despite this, reporting requirements appear to becoming more of a load and drain on community level staff. FNIH, working from within a federally focused Results Based Management Framework, is in the midst of transitioning communities to a new reporting regime, which for majority of First Nations represents a significant increase in complexity, level of detail and overall effort required.
- There has been relatively little to no investment made at a community operational level to establish or sustain the capacity and tools to make the execution of this reporting burden reasonably manageable.

EXAMPLES

1. Health Canada, FNIH, Community-based Reporting Template 2008-2009: a six part, thirty-six (36) page reporting template (inclusive of "cluster reporting" requirements) all First Nations community health services are required to complete. Requirements entail a complicated array of variables, levels of specificity, categorization, aggregation and cross-tabulation that would challenge the ability of any organization to track accurately, let alone organizations with little or no information management infrastructure.

"These reports are too time consuming...While myself and my staff spend hours reporting the community is doing with out [our] service. Some of our people do not want us to report on the cultural activities we do, they say it is private and none of your business."

2. The Health Canada e-SDRT reporting requirements and tool for Home and Community Care is a heavy reporting requirement, with multiple variables being tracked in 15-minute service intervals. As well, communities are required to utilize a relatively awkward FNIH data entry tool based on excel spreadsheet macros. This particular report is perhaps the single most burdensome reporting demand on communities, and the one that seems to cause the most frustration at the service level.

3. The variety of other mandatory reporting requirements to FNIH for specific program areas with unique reporting requirements: Public Health, NIHB, Indian Residential Schools Resolution Health Support Program, etc. each with their own, reporting requirements.

IMPLICATIONS & IMPACTS

- Increased administrative overhead downloaded onto communities in terms of unfunded human resource time.
- Consumption of limited service provider time on protracted accountability reporting requirements rather than services to members.
- High likelihood of both inaccurate and meaningless data – both for the funder and community.

RELATIVE NEED

- Need for rationalized accountability reporting regime and proportionate investment in tools and associated human resource overhead.

CULTURAL LENS

- Services are both conceived and delivered in a dynamic and fluid manner within context of a holistic conception of health. Service and activity fragmentation to the level of detail currently required by funder reporting is not compatible or consistent with this.

70%

rate **Accountability & Reporting** as a 'very significant' or 'significant' challenge

6

OPPORTUNITY #1 - **Accountability Reporting Burden**

OPPORTUNITIES

Two core target areas for transformation and development lay at the heart of the accountability reporting burden challenge for community Services: Policy & Practice, and Information Management.

POLICY & PRACTICE

The nature of this challenge is largely the result of pressures within the federal bureaucracy being transferred to the First Nations Health sector, to counter-productive effect. Addressing the challenge at this level is a policy undertaking. Because of the current tripartite environment and commitment to transformative change by the federal, provincial and First Nations leadership, including commitment to innovation in the areas of performance monitoring and reciprocal accountability, this is the right time to move this policy discussion forward relative to this challenge.

- eHealth is a contributing voice in the efforts underway in BC to transform approaches to monitoring and measurement of change and outcome.
- eHealth bridges Health Centre information management requirements with technical solutions. In this process there is the opportunity to inform and shape policy and practice. This presents an important opportunity for Health Centres to become involved in the dialogue and efforts to create change that can resolve the challenge they face with respect to the accountability-reporting burden.

An overemphasis on the funder's need for attributing impact to funding and a concern over risk management has detracted from the learning potential of Evaluation & Monitoring. This has lead to an over reliance on bureaucratized "logical framework analysis" models and "results based management' frameworks. (Outcome Mapping, Earl, Carden & Smutylo, 2001)

INFORMATION MANAGEMENT

Most Health Centres continue to operate in primarily paper based operational environments. The ability therefore to capture and retrieve the level of detail currently required in reporting becomes difficult and inefficient, with lower accuracy levels.

- eHealth is the primary domain that Health Centres can become engaged in to advance their information management capacity development efforts.
- Active involvement by Health Centres in this aspect of eHealth can help ensure appropriate e-tools are available to effectively manage related accountability data and reporting processes in ways that are well integrated with other aspects of the unique workflow of Health Centres and the breadth of their information management needs.

"Health Informatics capacity and infrastructure…must be properly resourced for First Nations and their mandated health organizations, in terms of human resources, operations, and capital. Health Information Systems that are rooted in the principles of OCAP…must be supported and funded for First Nations use.

(First Nations Health Blueprint for British Columbia, 2005)

CHALLENGE #2 – **Access to Services**

"Access to services is a challenge especially for high-risk prenatals. Our most recent client spent time in 3 different hospitals causing her spouse to miss work and spend a lot of time traveling to different locations."

DESCRIPTION / ANALYSIS

- It is well documented that impeded access to the range of primary health care services adversely impacts health status. This is particularly evident in such measures as rates of preventable hospital admissions.
- A number of BC First Nations communities are very remote, making accessibility to primary health care service centres difficult and costly.
- Funded health services within communities have historically been limited in the range of primary health care they offer, focusing predominantly on primary prevention and considerably less on primary care, tertiary and secondary prevention.
- The tightening guidelines around the use of patient transportation benefits from FNIH have made it increasingly difficult to obtain support for transportation costs for community member's medical travel.

EXAMPLES

1. Need to access a physician or specialist – consider having to first take a ride in a small open boat down a glacial fed river with debris and log hazards, and then into the open inlet to a dock to catch a float plane to the nearest town, and then jump on a taxi or bus to the hotel, as you wont be able to see the doctor today as the travel time has ruled that out. This three day adventure can be a lot more effort during those times in the winter that the river has frozen, or is in flood mode, or the wind is has made flying a hazard, or when the service you are seeking is only offered in urban areas and you have to tack on an additional three one-way hour bus ride.

2. The social cost to a community member living in a remote First Nation to travel to primary care services also has to be taken into account. The time, effort, not to mention cost, the impact on work and family life, all have to be taken into account as both costs and barriers to accessing services regularly.

T he geographical barriers for our First Nations in rural, remote and isolated regions of the province are significant with respect to the availability of health services for their people, most of whom must leave their communities to access any services at all. (First Nations Health Blueprint for British Columbia", 2005)

IMPLICATIONS & IMPACTS

- Services are accessed less frequently, and usually late in the disease/condition process, rather than being screened and caught early or prevented – hence higher preventable hospital admissions.

CULTURAL LENS

- Separation of community members from natural support systems in their family and community when accessing outside services. In particular, this presents a challenge in areas such as mental health/addictions and maternal health.

…A gap still remains between the populations [status and other Canadians] …One reason for the gap could be the lack of access to primary health care for Status Indians in doctors' offices, clinics, or other community settings. (British Columbia Provincial Health Officer, 2009)

82%

rate **Access to Services** as a 'very significant' or 'significant' challenge

OPPORTUNITY #2 – **Access to Services**

OPPORTUNITIES

There are several opportunities to improve access to services and improve the quality of services delivered. These opportunities come in the form of things like alternative service delivery models, support for self-managed care solutions and the enablement of peer support between local providers.

ALTERNATIVE SERVICE DELIVERY MODELS

Many existing health services for community are reliant on patient or provider travel. The circumstance of a patient receiving care is solely dependant on either a) the patient travelling for a face to face encounter with a provider, or b) the provider travelling into community to visit a number of patients.

There are many eHealth-enabled solutions, which can support alternative delivery models:

- Real-time telehealth services via either tele- or video-conference;
- Store-forward telehealth services via remote information capture and communication;
- Home-based telehealth solutions for remote care monitoring.

SUPPORT FOR SELF-MANAGED CARE

Self-managed care provides opportunities for the empowerment of patients. Some of the most efficiently managed care is self-managed care, which draws on the power of each individual to direct their own healing. Self-managed care models are becoming prevalent in areas such as chronic disease management, home and community care, people with disabilities and elder care. eHealth opportunities to support self-managed care include:

- Access to appropriate and validated health information sources;
- Patient-accessible medical records or Personal Health Records to support patient self-monitoring; and
- Technology-enabled peer support groups

ENABLEMENT OF SUPPORT BETWEEN LOCAL PROVIDERS

Better support for local service providers can greatly improve the quality of care they provide. Access to adequate service delivery best practice information, education and curriculum offerings, and supported peer-to-peer communications are amongst the many ways in which local providers can be supported to improve service effectiveness and quality. eHealth can help by:

- Providing access to best practices;
- Enable distance education and skills updates via video-conference or web accessed solutions;
- Enabling peer-to-peer engagement and consultation via video-conference.

CHALLENGE #3 – **Fragmented Health Record**

DESCRIPTION / ANALYSIS

- The current paper based charting and records systems, used by most Health Centres, is not conducive to their commitment to holistic health.
- Client information becomes fragmented by service provider: each provider keeping isolated case notes – this leads to a provider-centric record rather than a client-centred record.
- This limits the overall Health Centre capacity to access information efficiently and effectively when it is needed – both in the provision of care and in the administration and management of the Health Centre.
- The ability of the Health Centre to assess services, evaluate, and plan and adjust accordingly is limited.

EXAMPLES

1. A new client visits the nurse for the first time, and even though the client has accessed services of the CHR and NNADAP workers for a long time, the nurse knows nothing of the details of the client's health and service history.

2. The nursing clerk is sending out reminder notices to those registered in the monthly new parents celebration gathering, but has to search and enter the information manually for each attendee.

3. The Health Director is asked by the school what percentage of the students from her community have received the flu vaccine. The Health Director has to work with multiple nurses to do an up to date compilation and identify those who attend the school in question manually.

IMPLICATIONS & IMPACTS

- The continuity of care across providers both within the Health Centre and externally is impeded by a lack of continuity of health information.
- Health information is less frequently available when and where it is needed. This negatively impacts client care.
- Inefficiencies both administratively and clinically.

RELATIVE NEED

- Health Information management systems/solution(s) suitable for Health Centres
- Supported migration from paper based to electronic based health information management.
- Recognition by funders of operating costs required to implement and sustain Health Centre information management infrastructure and services.
- Knowledge sharing and generation around best practices, policies and standards.

CULTURAL LENS

- Health Information solutions/systems need to meet and support the unique requirements of First Nations Health Centres, as opposed to indirectly reshaping practice towards mainstream workflows.
- Health information solutions/systems and approaches need to accommodate local information governance and control.
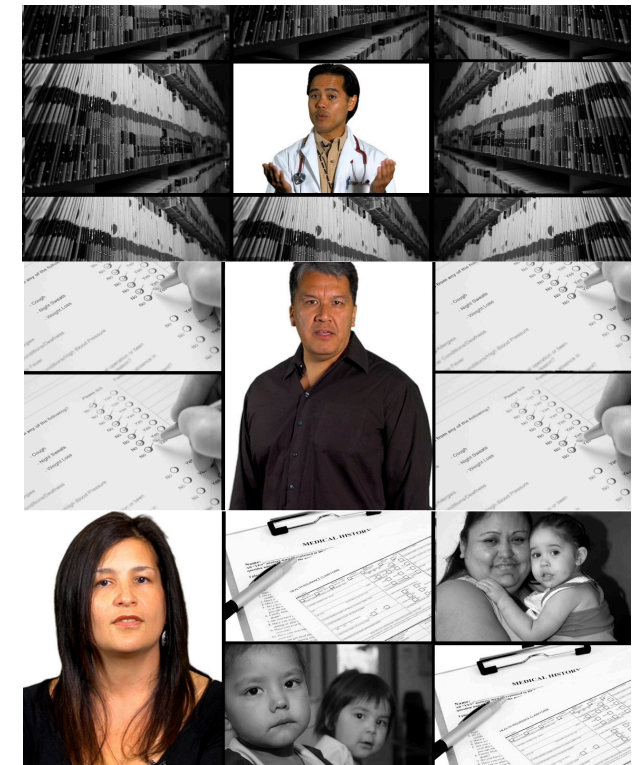
"Few individuals using EMR...creating fragmented case management. Inputting data could be offset if all sites had resources person[s] to transcribe and input charting information. Also standardized charting format needed."

72%

rate **Fragmented Health Records** as a 'very significant' or 'significant' challenge

10

OPPORTUNITY #3 – **Fragmented Health Record**

OPPORTUNITIES

eHealth is the primary domain to support efforts of First Nations Health Centres moving from paper based to electronic health information management. Effective health information management within the Health Centre is a critical step in moving towards the vision of a truly client centred health record.

Before steps can be taken to create seamless continuity of health information across organizations and jurisdictions, Health Centres need a strong foundation of practice within their own organizations.

There are a number of development areas that will be needed to achieve this end:

HEALTH CENTRE IT INFRASTRUCTURE DEVELOPMENT

- Many Health Centres have underdeveloped IT infrastructure in terms of local office networks, up to date workstations, proper server rooms, etc.
- Understanding current state within Health Centers, and establishing a standard level or bar for communities and funders to achieve, is fundamental.
- Health Centre infrastructure also requires proper management and services. Establishing the corresponding standards of service and related performance criteria will help Health Centres maintain functioning and efficient systems.
- Looking for ways to leverage economies of scale in terms of both infrastructure and services will be an important part of this development.

SOLUTIONS THAT FIT

- Information management solutions are a response to specific requirements and needs. The requirements driving procurement of solutions /systems should be principally the Health Centre's, not that of funders or other jurisdictions.
- Creating a clear picture of shared requirements amongst Health Centres will help shape standards and selection criteria in determining the right solutions.

Benefits of Health Centre electronic Health Information Management

- Improved quality of care.
- Timely access to client information.
- Supports collaborative care across the health centre.
- Decision Support to providers and management.
- Efficiencies across the Health Centre freeing up more time for service delivery.
- Readiness for cross-organizational & cross-jurisdictional information management.

POLICY AND PRACTICE

- There are a number of policy and practice areas that can be developed to support the effective use of electronic health information management within Health Centres.
- In particular, the policies and practices related to privacy, security, data sharing are important capacity development areas.

FUNDING & RESOURCING

- For the most part, community level funding is based on 1996 service population levels. Additionally these funding formulas did not meaningfully take into account the operating and capital costs associated with effective information management.
- Consequently, as community populations increase, the relative financial position of Health Centres in terms of their capacity to meet demand/need is diminished.
- Ways to ensure Health Centres have the resources necessary to implement and maintain information management efforts will be a critical success factor.

Community Success Story

Cowichan Tribes has developed, and operates, a health information management system specifically designed for Health Centres. A number of other communities across the province, and in other provinces, have also adopted this system.

CHALLENGE #4 – **Service Referrals**

DESCRIPTION / ANALYSIS

- Health Centres encounter difficulties and inefficiencies when referring their clients to external service providers – both in terms of making the referral and in terms to receiving follow–up information in terms of acceptance, admission, and appropriate level of outcome information.
- There is a disconnect between provincial health service providers and Health Centre providers in terms of an understanding of the service assets each represents and in terms of the pathways of linking clients to service points in each of these sectors.
- Existing referral processes, where they are known, are often burdensome requiring significant administrative overhead.
- The continuity of relevant health information across organizations in the referral process is limited and inconsistent.

EXAMPLES

1. Mental health workers at Health Centres make client referrals to a number of First Nations Treatment Centres across the province. Each Treatment Centre/ program has unique and varied referral processes, admissions criteria, and information requirements. These processes, and those relating to follow–up and communications, add considerable administrative overhead to the Health Centre providers.

2. Provincial service providers may have a client whom would benefit from a particular program or resource offered by a Health Centre, but they have no way of knowing this nor an easy way to make a connection and referral.

3. There is a range of specialty services, including in public health, that Health Centres do not have the economies of scale to provide. The processes of how and when to link clients to these service opportunities are not evident or efficient to support seamless client navigation of services.

IMPLICATIONS & IMPACTS

- Lack of clarity or information regarding available service points, when referrals are appropriate, and how to make these referrals.
- Varied referral and admissions documentation adding complexity and administrative overhead to service providers.
- Lack of mechanisms for follow–up of referred clients. Easier for clients to fall through the service "cracks" or be shuffled inappropriately through the system.
- Ineffective management of client safety/risk in the referral process.

RELATIVE NEED

- Electronic referral tools that can integrate with local Health Centre health information management.
- Electronic referral tools that are solution/system independent for Health Centres with no electronic information management capacity.
- Integration of service awareness and referral processes between relevant provincial services and Health Centres.

CULTURAL LENS

- Respect and recognition between providers in provincial health services and the Health Centre in terms of the credibility and appropriateness of services of each, is an important requirement for improved coordination of continuity of care.
- Opportunities for enhanced cross–jurisdictional cultural competencies will strengthen relationships and help shape service appropriateness.

"Using assertive and integrated case management processes across all health fields could reduce this. no one "owns" a client or their information. Need to shift the mindset to client centered with service providers providing an integrated, connected web of support. Any door needs to be the right door and all the doors need to be open to other services."

68%

rate **Service Referrals** as a 'very significant' or 'significant' challenge

12

OPPORTUNITY #4 – **Service Referrals**

OPPORTUNITIES

The use and development of e-referral tools is relatively new to health services. This offers an opportunity for provincial health service areas and Health Centres to build capacity jointly around this enhancement in the continuity of care. There are a number of development areas related to e-referral development.

DATA SHARING

- One of the challenges facing the full realization and value of eHealth is clarity and structure around data sharing. This is particularly true when it comes to cross-jurisdictional data sharing.
- Recent tripartite progress in providing an overarching agreement for data sharing and use between provincial, federal and First Nations levels will help move change forward here.
- Work is still required on the ground in terms of service level data sharing mechanisms. Because e-referral is an area in which the information being shared is specific and limited, it offers a "safe" development area to work out how to break the "glass ceiling" of policy barriers to provincial-Health Centre data sharing.

STANDARDIZATION

- The gradual development and standardization of referral and admissions processes and information requirements and structuring, will benefit service providers in terms of efficiency and reduced duplication.
- This will also benefit both management and planners in terms of consistent information to capture outcome in terms of expressed need and met need.

DECISION SUPPORT

- Effective means for service providers to acquire knowledge of the dynamic range of services available, their specific admission requirements and wait-times, etc. would be of significant value.

- E-referral tools can help provide decision support to service providers in terms of these service variables, and assist in the effective navigation of clients through services by helping matching client needs to potential service points.
- This type of decision support can also directly help in the management and monitoring of wait-times.

INTEGRATION

- Effective referral pathways are not the only barriers to Health Centre clients accessing various provincial services. Another barrier is actual and perceived cultural inappropriateness of services.
- Closer working relationships formed through co-development of e-referral mechanisms is an opportunity for shared learning and enhancement of cultural competency between Health Centres and provincial health service points.

FIRST NATIONS TREATMENT CENTRES

- The unique relationship between Health Centres and First Nations Treatment Centers offers an opportunity to develop effective e-referral mechanisms.
- There is an opportunity for a collective effort of the individual treatment centres, and supporting organizations like the Association of BC First Nations Treatment Programs, to work with Health Centers in creating a unique e-referral approach.

Community Success Story

The Hul'qumi'num' Community Engagement Hub is currently working with the Vancouver Island Health Authority towards integrating mental health services at Health Centres with the VIHA mental health e-referral system. This will be an important opportunity to create improved referral pathways between provincial and First Nations services, and work through long-standing policy and data sharing barriers.

13

CHALLENGE #5 – **Connectivity & Infrastructure**

DESCRIPTION / ANALYSIS

- Many eHealth solutions are dependent on adequate connectivity to support the high data transmission requirements of applications like video conferencing and some web-accessed eHealth systems.
- Often communities that would benefit the most from solutions like telehealth are usually the most remote and isolated.
- Implementing sufficient connectivity to support eHealth in these remote communities can be extremely challenging and can cost in the millions of dollars for a single community.
- Despite some advances in community connectivity in some regions, many challenges around interoperability (sharing of information between organizations) still exist due to both policy and infrastructure barriers to integration.

EXAMPLES

1. A remote community in the north has a strong working relationship with a regional physician that visits the community for 4 hours every month. The physician has indicated that she would like to explore the opportunity to provide additional consults for her high-risk diabetes patients via videoconference. Unfortunately, the community is out of reach for all connectivity providers, and the providers are unwilling to extend due to low return on investment opportunity.

2. A small community providing limited health services out of a multi-purpose facility wishes to begin utilizing and Electronic Medical Record (EMR) system to support capturing, managing and utilizing community health information. The community does not have the capacity required to implement and support the infrastructure or the connectivity to enable a remotely hosted solution.

"There should be someone that assists and visits communities on development of proper connectivity, as there are a lot of small communities that do not have the proper staff for this."

IMPLICATIONS & IMPACTS

- Inaccessibility to eHealth for communities with highest potential for benefit.
- Inability to realize full benefits of some eHealth solutions due to interoperability barriers.

RELATIVE NEED

- Need for continued investment in community connectivity, ensuring adequate bandwidth and quality of service.
- Most importantly, need for continued advocacy for these investments, both from community and their partners.

CULTURAL LENS

- Infrastructure developments, and associated implications, need to be developed and managed in a way that supports local control and protections for community.

66%

rate **Connectivity & Infrastructure** as a 'very significant' or 'significant' challenge

"...in order to enhance our Health Programs and to be able to have Nurses and Doctor[s] in our community[ies] depends on Connectivity and Infrastructure."

14

OPPORTUNITY #5 – Connectivity & Infrastructure

What is the definition of 'Infrastructure'?

Infrastructure can be defined as the computer and communication hardware, software, databases, people, and policies supporting a community's communication and information management functions, including:

- Internet connectivity
- Local area network
- Data storage/management
- Desktop/laptop computers
- Security devices
- Backup solutions

OPPORTUNITIES

Gaps in community connectivity and infrastructure present one of the largest barriers to First Nations pursuing options to improving health and wellness in their communities. Access to adequate broadband connectivity can become a tipping point for a community to explore a variety of other eHealth opportunities and begin to decrease the challenges associated with isolation.

COMMUNITY CONNECTIVITY

In a word, community connectivity is about access. Connectivity enables a community to access a variety of resources and services not only in health, but also in areas like education, culture and language, and economic development.

FIRST NATIONS EHEALTH NETWORK

A First Nations eHealth Network is an opportunity to leverage the connectivity work being done to a greater benefit of being able to receive and share eHealth enabled services.

A unique First Nations eHealth Network will become the supporting mechanism for things like:

- Exchange of information and access to other health information sources (primary care, public health surveillance, laboratory, pharmaceutical, etc.);
- Development of comprehensive provincial First Nations Telehealth Network;
- Hosting and shared support of Electronic Medical Record solutions for those communities still building their own capacity.

INFASTRUCTURE MANAGEMENT AND SHARED SERVICES

- As First Nations eHealth capacity is still a high-demand and growth area in BC, Shared Services offers an opportunity to both a) share scarce resources between communities, and b) leverage existing provincial resource and infrastructure for communities.

Community Success Story

Carrier Sekani Family Services is currently pursuing the development of an eHealth Network to support their telehealth and EMR initiatives. Once completed, the network will connect 10 communities and support the sharing of an Electronic Medical Record systems between the communities, and enable video-conference enabled telehealth services. In addition, CSFS is contributing to the development of the provincial framework by sharing lessons learned and setting a foundations for other communities in the northern region.

15

CHALLENGE #6 – **Interoperability**

DESCRIPTION / ANALYSIS

- Interoperability is a broadly defined property referring to the ability of diverse systems and organizations to work together (inter-operate).
- Interoperability is often a barrier to communities improving their health services because of the inability to inter-operate with their partners in social, political and organizational – and now systems domains.
- Communities desperately need to achieve interoperability with their partners in areas such as policy development and systems integration.

EXAMPLES

1. A community wishes to connect their health centre video-conference unit to their regional health authority to access existing telehealth services offered by health authority to its rural facilities. But as the community network configuration and privacy/security policies are not to the level of health authority standard, the service is denied.

2. A community has recently adopted their own EMR solution and has begun collecting demographic and basic health information on its members. The community now wishes to begin sharing and exchanging specific encounter, diagnosis and treatment plan information with the physician that visits the community bi-weekly. But the community and physician EMR systems do not utilize the same data communication and integration standards and as such cannot exchange records.

IMPLICATIONS & IMPACTS

- Despite community advances in eHealth uptake, full benefit realization is not possible without interoperability with key service providers.
- Gaps or duplication in service delivery due to lack of information communication between community and supporting service providers – particularly in areas such as immunizations and screening.

"Co-operating with external health organizations at a technical or policy level would save a lot of stress, time and work if we shared data. To re-invent the wheel is extra."

RELATIVE NEED

- Need for commitment to the advancement of interoperability work, not as an after though, but as a priority and end-state vision.
- Need for community and provider participation in facilitated standards development in areas like telehealth, EMR, and other eHealth domains.

CULTURAL LENS

- Interoperability is an alignment process that needs to occur at the service provider, organizational, technical and cultural levels.

> Interoperability is a broadly defined property referring to the ability of diverse systems and organizations to work together (inter-operate).

76%

rate **Interoperability** as a 'very significant' or 'significant' challenge

16

OPPORTUNITY #6 – **Interoperability**

OPPORTUNITIES

Interoperability is an important change opportunity in itself. Interoperability presents opportunity for system−based eHealth efforts to fully realize their value by creating the potential for integration between disparate systems and organizations. For eHealth generally, development in this area presents an opportunity to address issues of interoperability, both in policy and in a systems context.

TELEHEALTH

Telehealth has a dependency on many aspects of interoperability, particularly in policy development where it relates to privacy and security standards, but also in systems and network integration. The work done in Telehealth must be supported by extensive work in interoperability with participation and guidance by community, service providers and provincial entities.

ELECTRONIC MEDICAL RECORDS (EMR)

EMRs provide considerable challenge, and opportunity when it comes to interoperability. Because EMR can mean very different things to communities and providers, it makes it even more challenging to properly define and garner consensus on the standards contained within them. But achieving interoperability between community and provider in medical records will become the tipping point for community owned and managed health information. In this area in particular, collaboration will be key.

PUBLIC HEALTH INFORMATION

The adoption of Panorama by communities is a unique opportunity to actually circumvent technical interoperability issues for one dimension of information management. By implementing and utilizing the same provincial system health authority providers use, communities will be able view and update the same information sets maintained and used by public health providers. The use of Panorama by communities will allow them to track and input information on public health issues such as immunizations, communicable disease and health surveillance.

17

EHEALTH OPPORTUNITIES

This section provides next steps in regards to eHealth, based on the information provided in the 6 Challenge areas. They have been separated into 4 eHealth Development areas to better support participation, foundation, effiiciency and implementation.

1 EHEALTH DEVELOPMENT AREAS 1

Participating in policy forums & knowledge generation

- Policy & Practice
- Funding & Resourcing
- Standardization
- Data Sharing

2 EHEALTH DEVELOPMENT AREAS 2

Laying foundations & achieving economies of scale

- Connectivity
- Health Centre Infrastructure
- eHealth Network
- Infrastructure Management
- Shared Services
- Integration

3 EHEALTH DEVELOPMENT AREAS 3

Improving the efficiency & effectiveness of health service delivery

- Alternate Service Delivery Models
- Decision Support
- Telehealth
- Supported Peer Collaboration

4 EHEALTH DEVELOPMENT AREAS 4

Implementing community appropriate information management solutions

- Electronic Medical Records (EMRs)
- Public Health Information (Panorama)
- Administrative Systems
- Performance Monitoring & Benefits evaluation

EHEALTH DEVELOPMENT AREAS 1 -

Participating in Policy Forums & Knowledge Generation:

A number of key eHealth opportunity areas across the identified Health Centre challenges can be categorized as requiring active policy discussions and advocacy by communities and supporting stakeholders. This dialogue and development effort will need to take place at a number of forums and tables. This area signifies an entry point into this process and development.

EHEALTH DEVELOPMENT AREAS 2 –

Laying Foundations & Achieving Economies of Scale:

A number of key eHealth opportunity areas across the identified Health Centre challenges can be categorized as building foundational infrastructure both locally and regionally. Closely related with this, both in terms of infrastructure and associated services, will be the need to create economies of scale, where it makes sense, to ensure sustainability of collective and local efforts. This area signifies an entry point into these developmental processes.

EHEALTH DEVELOPMENT AREAS 3 –

Improving Efficiency and Effectiveness of Service Delivery:

A number of key eHealth opportunity areas across the identified Health Centre challenges can be categorized as directly related to service delivery to clients; more specifically, to opportunities where eHealth offers a supplemental or enhancement to client services. This area signifies an entry point into these innovations in service delivery.

EHEALTH DEVELOPMENT AREAS 4 –

Implementing community appropriate information management solutions:

A number of key eHealth opportunity areas across the identified Health Centre challenges can be categorized as relating to the active identification and implementation of appropriate Health Centre information management solutions. This area signifies an entry point into these identification and deployment efforts.

19

ADDITIONAL DISCUSSIONS

Recent Feedback from the FNHDA and First Nation Health Leads across BC, in addition to confirming the primacy of these six challenge and opportunity areas in relation to eHealth, underscored an additional challenge to be kept in mind as eHealth moves forward – namely, the fundamental dependency of eHealth development on sufficient resources at the Health Centre level.

Current funding for community level health services is constrained, and has been for a number of years, with funding levels changing very little if at all to acknowledge the growing populations and service demands. Although eHealth is a tool that will help create efficiencies at Health Centres, it needs to be understood that corresponding investments must be provided at the community level to accommodate the operational and capital impacts eHealth implementation will undoubtedly have on Health Centres.

It is hoped that this document assists in the ongoing discussion and development of a shared picture of First Nations eHealth in British Columbia, and provides focus to the determination and advancement of eHealth development opportunities both at the community level and provincially.

20

Notes

Developing Community eHealth

Starting the eHealth Discussion with BC First Nations