

Northern Health

2018/19 – 2020/21 SERVICE PLAN

May 2018



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Board Chair Accountability Statement



On behalf of the Board of Northern Health, I am pleased to present Northern Health’s Service Plan for 2018/19 – 2020/21.

The past year has been very exciting for Northern Health as we are seeing clear and encouraging progress toward the vision established in our [2016-2021 Strategic Plan](#). The Board continues to be impressed with the organization’s ability to plan, implement and innovate on a variety of fronts.

In the last year Northern Health demonstrated yet again, the ability of our staff and physicians to respond to emergency situations when they arise. The summer wildfire season was one of the worst in history in

British Columbia, and Northern Health – actually much of northern British Columbia – was faced with the dual concerns of helping people from other regions/communities facing evacuation while dealing with “what if” scenarios as fires threatened their own communities. The Northern Health Board wishes to commend all staff and physicians involved in the province’s wildfire response. The responsiveness, collaboration and innovation of our people continues to be a source of pride for the Board and leadership.

At the same time, Northern Health has continued to lead the way in transforming the primary and community care services to be more integrated and patient-focused. Forty-two primary and community care teams have been established in collaboration with physicians to realign the way services are provided overall and particularly for individuals with complex needs including those with Mental Health and Substance Use (MHSU) issues and for frail seniors. Northern Health has undertaken considerable change in the way population and public health activities are envisioned and supported. Enhancements have been made in our ability to assess data to understand over-arching community and population health needs. Meanwhile, Northern Health has continued to strengthen its focus on quality improvement. There are many positive signs that a focus on quality and quality improvement action is becoming a more integral aspect of the organization’s culture.

Northern Health has worked with the six Regional Hospital Districts, Foundations and Auxiliaries to implement significant capital development projects across the region. In 2017/18 Northern Health was able to expand MRI diagnostic services to the Northwest and Northeast Health Service Delivery Areas through the purchase and installation of MRI machines in Terrace and Fort St. John respectively. At the same time service upgrades were made possible in the Northern Interior with a new MRI in Prince George. Other diagnostics upgrades include: SPECT CT in Terrace and a Fluoroscopy unit in Prince Rupert. Also in 2017/18 a much-needed emergency generator replacement was undertaken in Quesnel and electrical upgrades are in progress at the University Hospital of Northern British Columbia (UHNBC). Northern Health continues to look to the future with our partners; continuing to develop Master Plans, Functional Plans, Concept Plans and Business Plans for major developments across the region. In 2017/18 planning was undertaken in Terrace, Dawson Creek, Prince George, Quesnel, and Fort St. James. Further Master Planning efforts are planned for 2018/19 including the updating of concept plans previously submitted and the development of a business plan for Mills Memorial Hospital in Terrace. 2018/19 is also a year where several larger renovation projects will be completed, including the Pines Cafeteria Expansion in Burns Lake, Second Floor Medical Beds at UHNBC and a Medical Device Reprocessing renovation at the Dawson Creek

and District Hospital. On the topic of ‘partnership’, I would like to highlight our continuing work with communities to collaboratively identify and address the unique health needs of an aging population and the partnered work with the First Nations Health Authority (FNHA) and First Nations communities led by the Northern First Nations Health Partnership Committee to improve services and the cultural safety of these services for First Nations people.

Northern Health will develop and deliver balanced budgets for 2018/19 through to 2020/21. In upcoming years, Northern Health will face challenges as the organization seeks to ensure service levels that align with changing needs influenced by community size, demographics and socio-economic conditions. The Board and Executive are confident in the future of Northern Health, in our staff, physicians and volunteers, and in their ability to rise to these challenges. Northern Health will continue to respond to the people we serve, provide quality health services and continue to seek innovative solutions in order for Northern Health to lead the way in promoting health and providing health services for Northern and rural populations.

The *Northern Health 2018/19-2020/21 Service Plan* was prepared under the Board’s direction in accordance with the [Health Authorities Act](#) and the [Performance Reporting Principles for the British Columbia Public Sector](#). The plan is consistent with government’s strategic priorities and fiscal plan. As the Northern Health Board Chair, I am accountable for the contents of the plan, including what has been included in the plan and how it has been reported as well as responsible for the validity and reliability of the information included in the plan.

All significant assumptions, policy decisions, events and identified risks, as of March 31, 2018, have been considered in preparing the plan. The performance measures presented are consistent with the [Budget Transparency and Accountability Act](#) the Ministry of Health’s mandate and goals, and focus on aspects critical to the organization’s performance. The targets in this plan have been determined based on an assessment of Northern Health’s operating environment, forecast conditions, risk assessment and past performance.

The members of Northern Health’s Board and Executive wish to recognize the service of Dr. Charles Jago, as he stepped down as Northern Health Board Chair and member in 2017. Dr. Jago’s accomplishments during his long tenure with Northern Health are many. His commitment to the organization, and to the people and communities of northern British Columbia has been outstanding.

On behalf of the Board,



Colleen Nyce, Board Chair, Northern Health

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Organizational Overview

Northern Health provides a full range of health care services to the 285,254¹ residents of Northern British Columbia. Serving an area of 592,116 square kilometers², it is the largest geographic health region in the province covering over two-thirds of British Columbia and comprised largely of rural and remote communities.

The [*Health Authorities Act*](#)³ gives Northern Health the legislative authority to develop policies, set priorities, prepare budgets and allocate resources for the delivery of health services under a regional health plan that includes: (i) health services provided in the region, or in a part of the region, (ii) type, size and location of facilities in the region, (iii) programs for delivering health services in the region and (iv) human resources requirements under the regional health plan. Northern Health provides the following health services:

- Acute care services at 18 hospitals⁴ and nine diagnostic and treatment centres;
- Long term care at 13 complex care facilities, and in 10 acute care facilities;⁵
- Community health services including:
 - Home health services to clients in their homes;
 - MHSU services, including an extensive network of inpatient, clinic and community services; and
 - Population and public health services focusing on health promotion and injury prevention toward the improvement of health for people across the North.

Northern Health works collaboratively with a medical staff comprising some 250 family physicians and 125 medical and surgical specialists. Northern Health is organized into three Health Service Delivery Areas (HSDAs): the Northeast, the Northwest, and the Northern Interior. Each HSDA is led by a Chief Operating Officer, who has overall responsibility for the operations of the HSDA. Reporting to each Chief Operating Officer are Health Service Administrators, senior managers who handle the day-to-day provision of services in a community cluster. There are currently fifteen Health Service Administrators in Northern Health.

Northern Health is working with Divisions of Family Practice and primary care providers to establish teams of interprofessional community health services that are closely connected to primary care at the community level. The provision of specialized community health services will be designed through shared care conversations with specialists and will occur at the HSDA and regional level. Regional coordination and quality improvement will be undertaken through focused regional teams and through quality improvement programs.

Northern Health has entered into a Partnership Accord with the FNHA and the First Nations Health Council: Northern Regional Health Caucus. A Northern First Nations Health and Wellness Plan has been developed by the partners and is guiding the work underway across the North. Leadership of this work in Northern Health is led by a Vice President, Indigenous Health who coordinates partnerships and provides expert advice, guidance, and oversight. Focused work on improving Northern Health's cultural safety is being coordinated through local Aboriginal Health Improvement Committees (AHICs) or Indigenous Health Improvement Committees (IHICs).

A number of Regional services, including finance, human resources, information management, and information technology are based in Prince George. Northern Health has been an active partner in the province's B.C. Clinical and Support Services (BCCSS) Society.

Northern Health is committed to providing health services based in the primary care home and linked to a range of specialized services which support people and their families over the course of their lives, from staying healthy to addressing disease and injury, to end-of-life care. The majority of northern physicians are appointed to Northern Health's Medical Staff and have privileges to practice within Northern Health facilities. These physicians are actively engaged in quality improvement and are participating with Northern Health to improve service delivery.

Long term care facilities in the North are operated by Northern Health, with the exception of two⁶ operated under contract. Most northern assisted living facilities are operated by non-profit societies, with Northern Health providing personal care support services and nursing care in these settings.

Northern Health is governed by a Board of Directors following the best practices outlined in Part 3 of the Board Resourcing and Development Office's [Best Practice Guidelines – B.C. Governance and Disclosure Guidelines for Governing Boards of Public Sector Organizations](#).

Strategic Direction and Alignment with Government Priorities

Northern Health receives its strategic direction from clearly identified government priorities and the [Health Authority Mandate Letter](#). Successfully achieving Northern Health’s strategic vision requires close collaboration with partners, including the Ministry of Health, First Nations, physicians and health care providers, unions, patients and other stakeholders, in shaping and implementing key areas of focus. This collaborative approach strengthens two-way communication between government and provincial public sector entities, promotes cost control and helps create a strong, accountable relationship between government and agencies.

Northern Health is aligned with the Government’s key priorities:

Government Priorities	Northern Health Aligns with These Priorities By:
Making life more affordable	<ul style="list-style-type: none"> • Providing innovative approaches to care that reduce the travel and time burden on patients and their families; and supporting these clinical approaches reliably with services and technology including outreach, tele- and video-health solutions and home health supports (Objective 1.1) • Offering Northern Connections, an innovative health transportation solution (Objective 1.1)
Delivering the services people count on	<ul style="list-style-type: none"> • Working in partnership with primary care providers, Divisions and specialists to strengthen primary care and community services and to develop strong care and information pathways across the system (Objective 1.1) • Optimizing access to and flow through facility-based care (Objective 1.2) • Optimizing access to and flow through surgical and diagnostic services; focusing particularly on improvements in wait times for surgical services, MRI and colonoscopy (Objective 1.3) • Ensuring a culture of quality improvement and safety (Objective 3.1) • Achieving required organizational practices and standards to ensure safe and high quality services (Objective 3.2) • Supporting the safe and effective use of medications (Objective 3.2) • Promoting work force safety and sustainability (Objective 3.3)
A strong, sustainable economy	<ul style="list-style-type: none"> • Recognizing northern British Columbia as an economic driver for the province and working with industry and researchers to understand and address health concerns arising from development (Objective 2.1) • Focusing on enhancing the health of the northern British Columbia population in partnership with industry, communities and other organizations (Objective 2.1) • Working in partnership to improve the health and well-being of Indigenous communities (Objective 2.2)

Strategic Context

The context for providing health services in British Columbia, and across northern British Columbia, is complex and ever-changing. Planning for the next three years takes into account both environmental factors and strategic advantages, as presented below.

Environmental Factors

Rural/Remote Nature of Northern British Columbia

Northern Health seeks to promote good health and provide health services to approximately seven per cent of the province's population over a vast geographic area (approximately two thirds of the province geographically). The challenges and opportunities in delivering a continuum of high quality health services in the rural and northern parts of Canada have been well articulated by many. The Romanow Report, Rural Health in Rural Hands and the Health Care in Canada series, amongst others, describe the opportunities and challenges inherent in rural and northern Canada.^{7 8 9 10} These reports and many others can be found on the "[Rural Living Circumstances](#)" page of the [Community Health Information Portal](#): a public resource that is maintained by Northern Health.¹¹

Challenges exist in northern British Columbia. Small clustered populations (less than 0.4 persons per sq. km)¹² scattered across vast geographies mean that economies of scale are difficult to achieve. The vast geography makes accessing services difficult and complicates the referrals and relationships that exist between practitioners.¹³ Additionally, many communities exist on the other side of the digital divide and lack other supporting infrastructures such as low cost public transit.¹⁴ Of particular concern is the recent loss of Greyhound bus services to rural communities in the Northwest. These challenges and others related to human resources, transient resource-sector populations, poorer health status and a rising burden of chronic diseases are discussed in greater detail later in this document.

As a highly distributed health region, relatively small facilities and services are a common element of Northern Health's service offerings. Smaller facilities and services can be difficult to sustain. The departure of a single practitioner, for instance, can have a significant impact on many northern communities. These facilities also operate with a cost structure that is "fixed." For such services, efficiencies are not available "on the margin" – the facilities and services are either open or they are not.

The distributed nature of the northern population creates challenges when considering service distribution and mix. Many types of service benefit both in efficiency and effectiveness from consolidation into service units that achieve critical staffing levels and patient volumes. It is often the case that service quality is related to volume of work and repetition of clinical skills. However, access to service closer to home is a critical factor contributing to health outcomes for the people who live in northern and rural communities. In addition, health services are often seen as essential to the sustainability of rural and northern communities. To address this paradox, Northern Health places considerable emphasis on dialogue with communities to collectively and creatively find the right balance of sustainable local service and reliable secondary and specialty services as close to home as possible.

For the North, opportunities lie in integrated, intersectoral, collaborative approaches where services are organized so that they address the needs and characteristics of the population and in a manner where teamwork and interprofessional collaboration are expected from providers.^{15 16 17} More and

more Northern Health seeks to establish and support strong networks of service built on the principle that all parts contribute to a strong whole.

Northern Health knows the rural landscape and is committed to further developing its system of high-quality, health service networks toward meeting the needs of northern communities, people and their families.

Human Resources and Health System Infrastructure

Despite expanded education and training programs for health professionals and health workers in British Columbia, ensuring the availability of human resources remains a challenge for the health care system.¹⁸ As the population ages, so too does the health care workforce. Looming retirements in the health workforce combined with the rising demand for services and increased national and international competition for health professionals impact the province's ability to maintain an adequate supply and mix of health professionals and workers for British Columbia's health system.

Given Northern Health's unique rural context and service mix, there will continue to be a need for ongoing development of northern education for northern students in partnership with community colleges, the University of Northern British Columbia (UNBC), and the Northern Medical Program (NMP).

Another challenge in delivering health services is the need to maintain and improve the health system's physical infrastructure. The health system is faced with the continuous need to update or expand health facilities, medical equipment and information technology to ensure it provides high quality and safe health care to British Columbians.

Socio-Economic Context

The northern rural economy is a significantly resource based economy. It has and continues to generate much of this province's revenue and wealth.¹⁹ Despite this contribution, some of the least diversified and vulnerable local economies in the province are found in the North.²⁰

Other dimensions of our uniquely rural and resource based economy are reflected in the Socio-economic Indices (SEI) that are produced by B.C. Stats. For example, during 2012, the SEI reported that there were no Local Health Areas (LHAs) in the North that performed above average on the composite index. The SEI also indicated that northern LHAs consistently ranked amongst the worst in British Columbia on the Education Risk Index, the Children at Risk Index and Youth at Risk Index.²¹

Transient Resource Sector Populations

The resource sectors have contributed greatly to the health and prosperity of communities in northern British Columbia and to British Columbia as a whole.²²

Underlying this growth is a fluid or transient workforce, including both men and women, many of whom have permanent homes elsewhere in B.C. and Canada. Northern communities, mayors and councils and others have raised concerns regarding the impact of resource sector projects on communities. Northern Health recognizes these concerns and views them as important considerations that merit attention, especially as these relate to the health of people and communities across the North.²³

Northern Health recognizes the need to work proactively with the resource sector to understand the health issues associated with resource development. To this end, an Office of Health and Resource Development has been created. Staff members within this office are monitoring the environmental assessment applications within Northern Health's geographic region. They are working with the resource based companies by sharing information regarding current health services capacity and establishing collaborative relationships to address environmental and health services issues related to individual projects. Northern Health continues to work with the Ministry of Health and other partners to establish and implement strategies for examining the cumulative effects of industrial development.

Variations in Health Status

Residents of northern British Columbia have poorer health status than residents of British Columbia as a whole. This burden of poorer health is broadly distributed throughout the population and is not only associated with poorer health status amongst Indigenous people.

This poorer level of health in northerners is reflected across all health status indicators including the internationally recognized Standardized Mortality Ratio (SMR). The SMR compares the actual number of deaths in a population to the number of deaths that are expected to occur. This measure is also consistently correlated with higher burdens of population illness, higher unmet health needs and, correspondingly, with higher health service utilization.

During the five year period of 2010 – 2014, based on national averages, we would have expected to see 7,314 deaths within the population of northern B.C. In reality, there were 9,349 deaths. In other words, we experienced over 2,000 more deaths in this five year period than would have been expected based on the national average.^{24 25 26 27}

Indigenous Peoples and Communities

Northern British Columbia's landscape is home to the highest proportion of First Nations people of all the provincial health authorities in BC. Within northern BC, 18% of the population identifies as First Nations. Within BC overall, over 35% of the First Nations population live in the north. There are 54 First Nations, 9 Tribal Councils and 17 distinct linguistic groups. Eighty communities are continuously inhabited and range in size from less than a hundred to several thousand people. There are also 11 Métis Chartered Communities²⁸.

While the health status of Indigenous people has improved in several respects over the past few decades, the Indigenous population in British Columbia continues to experience poorer health and a disproportionate rate of chronic diseases and injuries compared to other British Columbia residents.²⁹
³⁰ Northern Health continues to work with Indigenous people and First Nations communities on approaches that better address their health needs and to provide services in a culturally safe manner.

Addressing the unique needs of First Nations and Indigenous populations is a high priority for Northern Health and for the B.C. health system as a whole. NH is a signatory to the [*Declaration of Commitment to Cultural Safety and Cultural Humility in BC Healthcare Services*](#) (in 2015). Northern Health is also moving towards fully adopting and implementing the [*United Nations Declaration on the Rights of Indigenous Peoples*](#), the [*Truth and Reconciliation Commission of Canada: Calls to Action*](#), and the [*Metis Nation Relationship Accord II*](#).

On October 1, 2013, Health Canada's First Nations Inuit Health Branch B.C. Region transferred responsibility for health services in First Nations communities to the FNHA. The FNHA plans, designs, manages, and funds the delivery of First Nations health programs and services in B.C. These community-based services are largely focused on health promotion and disease prevention including: Primary Care Services, Children, Youth and Maternal Health, Mental Health and Addictions Programming, Health and Wellness Planning, Health Infrastructure and Human Resources, Environmental Health and Research, First Nations Health Benefits, and eHealth Technology.

Northern Health will work in partnership with the FNHA to coordinate planning and service delivery efforts in support of B.C. First Nations health and wellness objectives.

Population Change

Northern British Columbia faces considerable change in its population and demographics. These changes can be overlooked in province-wide analyses as the numbers are small in proportion to the larger population bases in the lower mainland. They are significant, however, from a northern perspective and from the perspective of the economic activity they represent.

Official population projections are slow to recognize some aspects of change in the population. The Northwest and Northeast Health Services Delivery Areas are experiencing industrial and economic development growth in the longer run. Yet the path forward is volatile – ebbing and flowing based on global economic conditions. The recent decrease in global oil prices is a reminder of the impact of the global economy on the local and regional economy.

In spite of evident uncertainty, Northern Health continues to plan for anticipated growth and industrial development in the Northwest and Northeast. In the Northwest activity is expected particularly in the Prince Rupert, Kitimat, and Terrace areas. Development in the Northwest is projected to have the following impacts:

- Industrial activity oriented toward liquid natural gas processing and transport
- Some downsizing of the forest sector in relevant communities
- Large influx of temporary workers related to construction and development with significant permanent job growth
- Cost of living impact

In the Northeast, this growth is expected to continue once resource pricing stabilizes, particularly in the North Peace. Development in the Northeast is projected to have the following impacts:

- Industrial activity oriented toward natural gas and hydro-electric energy production
- Short and long-term workforce increases
- Continued cost of living impact

These pressures will require focus and flexibility as there are many variables that will determine the short and long-term impact of this development on Northern Health's services.

Anticipated changes in population related to industrial development in both Health Service Delivery Areas highlight the need for capital redevelopment of Mills Memorial Hospital in Terrace and the Dawson Creek Hospital. These facilities are in planning stages for capital redevelopment. Based on current analysis both these facilities are inadequate to meet the expected demands over the next five to ten years.

In addition to the pressures described above, an aggregate analysis masks two challenges facing Northern Health: a rapidly aging population (with the population age 75+ nearly tripling in the next 20 years), bringing with it a variety of health challenges including frailty, chronic disease and dementia, and proportionately more children and youth, many of whom are considered "at risk."

A Rising Burden of Chronic Disease

Chronic diseases are prolonged conditions such as diabetes, depression, hypertension, congestive heart failure, chronic obstructive pulmonary disease, arthritis, asthma and chronic pain. People with chronic conditions represent approximately 34 per cent of the B.C. population and consume approximately 80 per cent of the combined physician payment, PharmaCare and acute (hospital) care budgets.³¹

The evidence points to opportunities to prevent these diseases and that many deaths, hospitalizations and costs can be attributed to a handful of risk factors: smoking, obesity, physical inactivity, and poor nutrition. Addressing these risk factors can prevent or delay the onset of many chronic conditions.³² The evidence also shows that there are opportunities to better manage these conditions and to improve outcomes through integrated approaches that include patient self-management strategies.^{33 34 35}

With the recent advances in health, we might consider the impact of expanding the existing definition of chronic diseases to include certain cancers, mental illnesses, HIV, and Hepatitis C, as people with these conditions can often live productive and rewarding lives if their care is well managed.^{36 37 38}

Mental Health and Substance Use Disorders

In addition to the pressures arising from the upcoming demographic changes, MHSU issues continue as endemic factors in northern rural communities. MHSU issues pose significant challenges for the health care system an example of this is the ongoing opioid overdose public health emergency. These substance use challenges are, in and of themselves, difficult to address and relapse rates are high, especially where affected individuals cannot easily leave a high risk environment. Homelessness and low standards of housing and minimal positive family and social networks expose individuals to risk and offer little in the way of reliable support. MHSU issues also present as underlying complications in other clinical problems, preventing or impeding successful treatment and management. MHSU is the focus of a new government Ministry with which Northern Health will work closely to address needs in this area.

Strategic Advantages

Northern Health faces a variety of challenges given the dispersed population and the higher incidence of illness and risk across northern British Columbia. But a number of unique "strategic advantages" also exist that will be helpful as Northern Health works with physicians, staff and other organizations to address the health needs of the region.

Motivated Communities, Staff and Physicians

Northern British Columbia is comprised of a large number of relatively geographically defined communities. While there are residents spread across a vast geographic area, northern residents hold a strong sense of community and are highly motivated to sustain and enrich their communities.

This presents opportunities for Northern Health to enter into an ongoing dialogue with communities about health in order to work in partnership to promote health and wellbeing and to plan and support high quality sustainable health services.

The sense of community exists at the level of Northern Health's staff and the physicians of northern British Columbia as well. Rural community living brings a spirit of common interest and creativity to staff and physicians. New approaches, new roles and team approaches are often established by local groups as a way to overcome challenges.

Northern Health is in the midst of implementing a team-based, inter-professional approach to service delivery focused on people and their families.

A team-based approach allows nurses, nurse practitioners, allied health professionals including physiotherapists, occupational therapists, social workers and others to work to their optimal scope of practice, enhancing the workforce environment, the quality of care, and the patient's experience.

Established Foundation of Primary Health Care

Northern British Columbia is unique in British Columbia in the degree to which primary health care has evolved as the foundation of our health service delivery system. In general, physicians across the North are committed to quality improvement in their primary care practices and to ensuring service comprehensiveness and continuity after hours. Approximately 98 per cent of the physicians practicing in northern British Columbia have a relationship with Northern Health, usually holding hospital privileges and often providing emergency care, obstetrical care and service to people residing in long term care facilities. Divisions of Family Practice are developing across the north and are establishing processes for joint planning, improvement and communication.

Northern British Columbia physicians have adopted electronic medical records (EMRs) at a higher rate than other jurisdictions and have availed themselves of opportunities to integrate with Northern Health information systems. Recent indications suggest that approximately 75 per cent of the physicians practicing in northern British Columbia are making meaningful use of EMRs through such processes as drawing laboratory test results from Northern Health's information system into their electronic records. Many of these physicians are also actively using information from the EMR to monitor quality of care and outcomes for patients.

Northern Health and northern British Columbia physicians place considerable emphasis on work toward healthy communities and populations. With strong existing relationships Northern Health has a great opportunity to further partner with physicians and communities to make improvements that will lead to healthier people in healthier communities.

A Spirit of Partnership

While the majority of health issues faced by residents of northern British Columbia can be addressed within the North, Northern Health does not provide specialized tertiary and quaternary services. Neurosurgical and thoracic surgical services, cardiac surgery and transplant services are some examples where Northern Health lacks the professionals and infrastructure to offer these services. For

such services, Northern Health works in partnership with other Health Authorities, particularly the Provincial Health Services Authority and Vancouver Coastal Health Authority, to plan and ensure a strong continuum of care. It is with this spirit of partnership that Northern Health is able to provide quality services in the areas of cancer care, renal care, maternal and neonatal care, trauma care and HIV management.

Goals, Objectives, Strategies and Performance Measures

Northern Health is responsible for providing health services based on government goals and directions. The Ministry of Health has established three overarching goals that set the strategic stage for Northern Health:

- Ensure a focus on cross sector change initiatives requiring strategic repositioning
- Support the health and well-being of British Columbians through the delivery of responsive and effective health care services
- Deliver an innovative and sustainable health system.

Northern Health Implementation Strategy

Under these provincial goals, Northern Health has established a 2016-2021 implementation strategy that is guided by a clear mission, vision and directions that reflect our northern/rural context and our existing challenges and strengths.

Mission

Through the efforts of dedicated staff and physicians, in partnership with communities and organizations, we provide exceptional health services for Northerners.

Vision

Northern Health leads the way in promoting health and providing health services for northern and rural populations.

Strategic Priorities

- **Healthy people in healthy communities:** Northern Health will partner with communities to support people to live well and to prevent disease and injury
- **Coordinated and accessible services:** Northern Health will provide health services based in a Primary Care Home and linked to a range of specialized services, which support each person and their family over the course of their lives, from staying healthy, to addressing disease and injury, to end-of-life care
- **Quality:** Northern Health will ensure a culture of continuous quality improvement in all areas

Enabling Priorities

- **Our people:** Northern Health provides services through its people and will work to have those people in place and to help them flourish in their work
- **Communication, technology and infrastructure:** Northern Health will implement effective communications systems, and sustain a network of facilities and infrastructure that enables service delivery

Northern Health has identified a number of critical priorities and tactics related to our provincial strategic goals. These priorities are described briefly below.

Goal 1: Ensure a focus on cross sector change initiatives requiring strategic repositioning

The Ministry of Health has established a number of directions that will be pursued collectively by the many sectors of the British Columbia health system. The directions involve:

- the transformation of the primary and community care sectors to align with specialized services to provide better care for people with complex needs (including seniors with complex needs and those with MHSU issues); and
- Ensuring timely access to appropriate surgical services.

Following is a description of the objectives that Northern Health has established and is pursuing in response to the Ministry's goals and within the Health Authority's northern and rural context.

Objective 1.1: Strengthen Primary Care and Community Services

Northern Health continues to realign community services in partnership with primary care providers and specialized services to ensure better support for people and families through their lifelong health journey. Services are being realigned and supported to ensure greater focus on population health, strong interprofessional care planning and service delivery and to improve flow and coordination among service providers in various parts of the health system.

Key Strategies:

Northern Health is building on the work of several years to continue to advance primary and community service transformation following Ministry of Health policy direction. For 2018-2021 key strategies include:

- Build effective interprofessional primary and community care teams. Northern Health has created 42 teams that will continue to partner and align with physician/nurse practitioner practices to form Interprofessional Teams (IPTs) in northern British Columbia communities. IPTs consolidate care delivery from public health, home and community care and MHSU. The 2018-2021 planning timeframe will see continued work in partnership with physicians/nurse practitioners to provide better, more integrated support for people with complex health needs
- Work with physicians to plan and align IPTs to a service model recognizing the Patient Medical Home as a foundational component. Patient Medical Homes will be networked along with Northern Health staff into Primary Care Networks and linked to and supported by clearly described Urgent Care Centres and Specialized Community Service teams with a particular emphasis on Mental Health & Substance Use and Seniors supports. Given Northern Health's rural nature, we will work with physicians/specialists and the Ministry of Health to identify the most effective configurations for Urgent Care and Specialized Services building from recent work to establish logical geographic population groupings (Community Health Service Areas) that align with Northern Health's Service Distribution Framework.
- Northern Health recognizes that the establishment of teams is the first step toward the envisioned primary and community care model of service delivery. Team members and teams must be supported to develop role clarity and competency and to move along a team based

care maturity gradient that involves building interprofessional relationships, embedding person- and family-centred care planning and support, incorporating practice reflection and improvement and using evidence-informed standards and approaches. Team supports will include: Interprofessional team development training; aligned professional learning pathways beginning with the Primary Care Nurse development pathway: quality improvement skill development and support; and practice automation to enhance meaningful use of data. Training will also include Electronic Medical Record using the Community Medical Office Information System

- **Service Alignment:** Support for planning and improvement for identified patients with complex health care needs including those experiencing MHSU, frail elderly, chronic disease, children & youth, and families expecting babies (perinatal population). Critical in this work will be the clarification and strengthening of the relationship with physician specialists and Northern Health’s specialty services and the shared understanding of service flows, communication flows and support requirements necessary to meet the complex needs of these population groups. With our partners, Northern Health has gained considerable experience in the past year about how “shared care” conversations can be supported toward the development of service/function clarity, new pathway development and information support
- **Transitions in Care:** Ongoing progress toward integrated primary and community care with strongly aligned shared care involving specialists and specialty services will require a methodical approach to clarifying functions, roles and relationships. Northern Health will continue to advance our capacity in and support for the use of “Layered Enterprise Architecture” which will enable clarification of:
 - Population based service flows for the people we serve who are living with these complex needs (e.g., MHSU, Perinatal, Frailty, Chronic Disease)
 - Focused examination of the flow of people to and from generalists and specialists and their respective roles and expectations
 - Examination, improvement and standardization of evidence-informed clinical and support processes
- **Practice Support Program:** Across Northern Health, there are currently 20 Practice Support Coaches who interface with the collective interprofessional team inclusive of the primary care home physician to support quality improvement and identify complex patients for the physician to link with the interprofessional team

Performance Measure(s)	2016/17 Baseline	2017/18³	2018/19 Target	2019/20 Target	2020/21 Target
1.1a Number of people with a chronic disease admitted to hospital per 100,000 people aged 75 years and over ¹	4,323	4,716	4,243	4,204	4,164
1.1b Percent of people admitted for mental illness and substance use who are readmitted within 30 days, 15 years of age and older ²	10.1%	11.6%	9.9%	9.9%	9.9%

^{1&2} Data Source: Discharge Abstract Database, Hospital, Diagnostic and Workforce Branch, Health Sector Information, Analysis and Reporting Division, Ministry of Health.

³ Up to and including the third quarter.

Linking Performance Measures to Objectives:

1.1 Patients can be attached to family practices or patient homes through a Primary Care Network, meaning they have ongoing care relationships with primary care providers such as family doctors or nurse practitioners, who work in team-based practices that include nurses and other health professionals. Benefits of having a continuous relationship with a primary care provider include improved disease management, health outcomes and experience of care.

Discussion:

Northern Health is working in collaboration with Divisions of Family Practice and northern British Columbia physicians to redesign services in the primary and community sector in a way that will help people stay healthy and that is more responsive to patient needs. It is anticipated that this change will lead to a net reduction (recognizing growth in need as the population ages) in patients accessing emergency and inpatient hospital services. This transformation is in its early stages. While there are some examples where the transformation has led to changes in some communities the overall regional impact is not yet evident. For the past few years, Northern Health has been focusing on improving the linkage for patients between MHSU hospital services and services in their home communities. Specifically, Northern Health has ensured that the vast majority of patients discharged from MHSU services receive follow-up in their communities within 30 days. Through this multi-year effort, Northern Health achieved a decrease in readmission rates – reaching the lowest level of readmission in the province. Efforts will continue to reduce these readmission rates as readmission within 30 days is suggestive of a lack of patient stabilization within their home environment which is, for the most part, avoidable.

Objective 1.2: Optimize Access to and Flow Through Facility-Based Care

The focus on the flow of patients and residents through hospitals and long term care facilities is intended to improve appropriateness, access and timeliness of specialty and facility-based care. The objective of this work is to provide services that are of high quality and are as efficient as possible so the growing health needs of an aging population can be met.

Key Strategies:

To improve flow through Northern Health facility-based care the following key strategies are being pursued:

- Enhance rehabilitative aspects of facility-based care. With an aging population and an increasing incidence of chronic disease, Northern Health will need to strengthen our approaches to rehabilitation in acute and residential care to optimize quality of life and to help reduce the burden of demand on these high cost, highly specialized services

- Appropriately match service to need. Northern Health will examine facility-based care from a person- and family-focused service orientation to identify and implement changes that will meet needs in the most effective manner
- Optimize efficiencies of services. Northern Health has a variety of tools (e.g., benchmarking, modeling, business process mapping) to support the examination of services to ensure that they are as efficient as possible. As the most expensive component of our health care system, facility-based services must be regularly reviewed to ensure efficiency and, where appropriate, implement standard and industry leading practice
- Design and spread of innovative service delivery approaches. Northern Health's distributed, rural nature and complex service pressures calls for innovation in a variety of areas across the system. During the service plan timeframe Northern Health will:
 - Spread prototype models for rapid mobilization of home support as they have proven effective in early implementations
 - Examine innovative care models in each HSDA related to: dementia care, assisted living and supportive housing, Mental Health service provision, and convalescent care.
 - Seek innovative approaches to meeting provincial service enhancement commitments regarding addictions recovery and palliative care.
 - Conduct a review of home based services and explore potential redesign options that would provide efficiency and service improvements for current clients and result in earlier identification of individuals living at home who would benefit from home based services.

Objective 1.3: Optimize Access to and Flow Through Surgical and Diagnostic Services

In alignment with the Ministry of Health's strategic priorities, this initiative is designed to enhance surgical and diagnostic care in northern British Columbia by clarifying service distribution and pathways, addressing barriers to wait time improvement and working with our Provincial counterparts to understand and respond to regional variations in service.

Key Strategies:

To improve flow through Northern Health facility-based care the following key strategies are being pursued:

- Enhance timely access to surgical care. Northern Health will continue to work with our internal stakeholders and with the Ministry of Health to achieve targeted improvements in surgical wait times. In 2017/18 Northern Health demonstrated the province's best performance on surgical wait times (% of surgeries completed within 26 weeks) and targets have been established in collaboration with the Ministry of Health for 2018/19 that will enable continued wait time improvement. By the end of the 2018/19 fiscal year Northern Health will have increased hip, knee and dental surgical volumes by 25-30% over 2016/17 actual volumes while "keeping up" with other surgeries. Volumes for hip/knee replacement will have increased by almost 60% during this time period

- Work with the Ministry of Health to continue to spread the various elements of the Surgical Services Program (SSP). The SSP is a multi-pronged strategy for enhancing surgical service quality and safety by:
 - Providing clear pathways for surgical patients (beginning with those requiring hip/knee replacement) that include central access options that enhance access, health education and pre-habilitation, post-surgical follow-up and rehabilitation strategies
 - Enhancement of communication with surgical clients regarding their upcoming surgery including confirmation of receipt of booking and wait time estimation
 - Expansion of standard practices including centralized booking and spread of the Enhanced Recovery After Surgery quality strategy
- Enhance access to MRI diagnostic services across the region. In 2017 Northern Health added MRI services in the Northwest and Northeast, while enhancing the service in the Northern Interior. In the upcoming years volumes will be increased appreciably to respond to increasing need. Volume targets established for MRI for 2018/19 reflect a doubling of capacity across the region
- Improve access to colonoscopy services through clarification referral and information pathways and through volume expansion to achieve wait time targets. In 2018/19 colonoscopy volumes will be increased by approximately 8% across the region to meet established wait time targets.

Performance Measure(s)	2016/17 Baseline	2017/18 Actual	2018/19 Target	2019/20 Target	2020/21 Target
1.3 Surgeries in targeted priority areas completed ¹	1,849	2,077	2,383	2,429	2,475

¹ Data Source: Surgical Patient Registry – includes hip, knee and dental surgeries, Hospital, Diagnostic and Workforce Branch, Health Sector Information, Analysis and Reporting Division, Ministry of Health.

Linking Performance Measures to Objectives:

1.4 The completion of additional surgeries in the areas of hip, knee, and dental reflects efforts to allocate surgical resources in specific areas to focus on patients waiting for those procedures. These efforts are concentrated in 2018/2019 and show progress to “catch up” and “keep up” volumes in priority areas. Targets for this performance measure will be adjusted in the future as new priority surgical areas are identified and targeted for improvements.

Discussion:

While requiring continued improvement Northern Health demonstrates the highest performance on surgical wait times among the province’s geographic Health Authorities. 2018/19 will see the continuation of considerable focus on surgical wait times (along with MRI and colonoscopy) as part of a provincial improvement collaborative. Northern Health is committed to improvement targets in surgical wait times and has planned to vastly increase volumes for specific services (hip and knee replacements particularly) to address our greatest wait time challenges. Northern Health recognizes that surgical patients want and should receive better information about their upcoming surgery. With

that in mind, Northern Health has led the way in initiating patient notification – providing patients with assurance that their booking has been received and indicating an estimated wait time.

Goal 2: Support the health and well-being of British Columbians through the delivery of responsive and effective health care services

The health system tends to focus on the provision of health services for those who are injured or ill. Acute care interventions will continue to be critical to the people of northern British Columbia and the focus of the system needs to shift to place considerably more emphasis on wellness and staying healthy while meeting a person's health needs at the earliest possible stage. This focus on wellness, prevention and early intervention is known as "moving upstream."

Objective 2.1: Improve the Health of the Population

Northern Health seeks to help people in northern British Columbia to stay as healthy as possible by promoting healthy environments and behaviours through the ongoing implementation of B.C.'s Guiding Framework for Public Health. The objective of the following strategies is to build health surveillance capabilities and to partner with communities and the FNHA to promote health and wellness and foster practices that support a healthy environment.

Key Strategies:

- Undertake transformational work in population and public health to align with the "Primary Care Home" (physician(s)/nurse practitioner(s) practice with Northern Health interprofessional staff). Northern Health will place an early focus on change supports to enable local team development and strong regional leadership and support with respect to public and population health. This will involve extensive work to clarify primary care and specialty functions and roles. In parallel, new innovative service delivery models will be developed to support public and population health activities regionally and to capitalize on opportunities to embed population health principles within the primary care and community health service delivery model
- Northern Health will conduct focused work to enhance immunization services across the region. Revolving around a target to increase 2-year-old immunization coverage, detailed partnered work will be undertaken to understand and realign roles and functions to strengthen immunization adherence and information flow as part of the primary care and community service transformation in 2018/19
- Design and implement focused health promotion and prevention initiatives aligned with the Primary Care Home. In concert with the above transformational work Northern Health will plan and pursue public and population health activities in a focused, thoughtful manner. Priorities have been identified as follows:
 - Based on the potential health benefits for the people of northern British Columbia (and the potential for system use mitigation) system-oriented prevention and health promotion approaches will focus on the inter-related targets of: increasing healthy eating and access to healthy food; increasing physical activity; and reducing the use of tobacco products
 - Northern Health works with industry leaders to assess and monitor issues related to health industry driven health service needs and environmental health factors. In this planning horizon Northern Health will partner to begin to understand the long term, cumulative impacts of industrial development and to work with partners to ensure safe drinking water.

- Strengthen Northern Health’s communicable disease and broader health surveillance systems. Strong surveillance of health status and various conditions including transmission of communicable disease is critical to an ability to respond early and effectively. Northern Health has made considerable progress toward enhanced surveillance capabilities and will continue to develop in this regard over the next three years.
- Working with the Ministries of Health and Mental Health and Addictions, Northern Health will continue to expand efforts to combat the ongoing opioid overdose public health emergency and, ultimately, build this response into the Health Authority’s overall MHSU service model

Performance Measure(s)	2011/12 Baseline	2017/18 Actual	2018/19 Target	2019/20 Target	2020/21 Target
2.1 Percent of communities that have completed healthy living strategic plans ¹	15%	63%	63%	72%	75%

¹ Data Source: Preventive Public Health, Health Living and Health Promotion Branch, Population and Public Health Division, Ministry of Health.

Linking Performance Measures to Objectives:

2.1 This performance measure focuses on the proportion of the 162 communities in B.C. that have been developing healthy living strategic plans, in partnership with the Ministry and health authorities since 2010/11. Healthy living strategic plans include measureable actions or milestones that the health authority and community will use to collectively address chronic disease risk factors and prioritize areas for the reduction of incidences of chronic diseases. Community efforts to support healthy living through planning, policies, built environments and other mechanisms are critical to engaging individuals where they live, work and play. Sustained community level actions will encourage more active lifestyles while decreasing the risk factors and chronic diseases and injury.

Discussion:

Northern Health continues to be a leader in efforts to engage communities and partners toward effective needs identification, service planning, and collaborative service delivery. Northern Health’s Improve the Health of the Population strategies along with our ongoing work with communities through community roundtables, regular community consultations, North Central Local Government Association community meeting sessions and regular meetings among NH staff and community members will continue to be critical to the organization’s service development and community responsiveness.

Objective 2.2: Improve the Health and Well-Being of Indigenous Communities through Partnerships

These strategies are to ensure that all NH employees have an opportunity to better understand contemporary and historical factors that impact Indigenous peoples and the impacts of those realities on their health and well-being. This work focusses on privileging Indigenous knowledge systems and

contributions to health.

Key Strategies:

- Continue to partner with First Nations communities and the FNHA to implement the First Nations Health and Wellness Plan including priority work in primary care, MHSU, health of the population, maternal child health and well-being, and cultural safety and humility.
- Early partnered work continues to support the development of MHSU Mobile Support Teams and improving the provision of primary care for First Nations communities.
- An over-arching emphasis on cultural safety and humility will promote movement toward a health service environment that is safe, respectful and equitable. With this in mind Northern Health will focus on implementing cultural safety and humility education strategies and developing and implementing community-based cultural resources – internal and external to Northern Health services
- Northern Health continues to partners with First Nations communities and Indigenous peoples through AHICs/IHICs – Aboriginal Health Improvement Committees/Indigenous Health Improvement Committees. Northern Health will continue to implement actions emerging from these collaborative groups
- Continued development and use of knowledge translation resources (e.g. Complaints booklet, Cultural Safety, quarterly newsletter, website, etc.)
- Create partnerships necessary to support employment of locally representative workforces.

Goal 3: Deliver an innovative and sustainable health system

Northern Health seeks to optimize system performance based on a balanced framework known as the “triple aim.” This framework describes a desired balance between improving the health of the population, ensuring strong patient outcomes and patient/provider satisfaction, and reducing the cost per capita of the health system. It is within this framework that Northern Health seeks to ensure system quality/safety and sustainability and to facilitate innovation where appropriate.

Objective 3.1: Establish a Culture of Quality Improvement and Safety

Northern Health strives to ensure high quality services by monitoring our performance and by promoting continuous quality improvement throughout the organization. This quality assurance and improvement effort is focused at ensuring that supports are in place to enable quality monitoring (assurance) and improvement across the organization and to identify and structure our approaches to improvement priorities where they have been identified.

Key Strategies:

- Align system processes and decision-making to be increasingly service oriented to enable person and family centred care. Health service planning and monitoring always benefits when patients and their families are involved in these processes. Northern Health will draw from the wisdom of a strategic advisory group to identify opportunities to further embed patients and families in these processes, and to identify some key areas within the organization that would benefit from improvement approaches known to enhance person and family centred care
- Further define and measure aspects of organizational culture that best align with Northern Health strategy and values
- Develop and implement mechanisms to engage point of care/service level in quality improvement. In 2018/19 Northern Health will complete a pilot of the Quality Management System (QMS). Results to-date have been very positive. Based on learnings from the pilot Northern Health will look to spread the QMS to other sites
- Enhance physician leadership and engagement in quality improvement
- Develop and align organizational quality structures and supports based on a common vision. Northern Health has a number of established clinical programs. This model will be expanded and consistently supported in upcoming years as a foundation for clinician-led quality improvement across the organization
- Partner to continue to align research, education and service delivery. In conjunction with a number of provincial developments (Academic Health Science Network, Strategy for Patient Oriented Research) and in collaboration with academic and other partners, Northern Health will strengthen our capacity to act as a Learning Health System
- Drawing from the experience in British Columbia with wildfires in 2017/18, Northern Health will improve application of standards in a variety of emergency situations.

Objective 3.2: Achieve Required Organizational Practices and Standards

In many areas of health service, both clinical and support, research has led to known ways of

operating that will lead to optimal outcomes. Variation from these norms can lead to waste and even patient harm. The objective of this initiative is to support the pursuit of selected evidence based standards (e.g., standards, guidelines, required organizational practices) across the organization. Included among such standards are the Accreditation Canada Required Organizational Practices (ROPs).

Key Strategies:

In addition to meeting ROPs, Northern Health annually identifies a small number of regional improvement priorities toward which we can align plans and resources. Priorities identified for 2018/19 include:

- Reduce 30-day readmission rates for people with Mental Health and Addiction issues
- Reduce the rate of hospital admissions due to falls in northern British Columbia
- Reduce the rate of harm-related falls in Northern Health care settings
- Increase the percentage of vaginal delivery
- Ensure timeliness of hip fracture fixation
- Reduce the percentage of patients waiting 26 weeks or more for elective surgery
- Reduce mortality resulting from sepsis within NH facilities
- Achieve trauma distinction program accreditation in 2018/19
- Increase the rate of hand hygiene in Northern Health facilities/services.

Northern Health has also established a quality improvement priority: Support the Safe and Effective Use of Medications. In the upcoming fiscal year considerable focus will be placed on ensuring wide use of the best medication history and rigorous application of medication reconciliation at all points of transition.

Objective 3.3: Enhance Workforce Safety and Sustainability

The objective of this initiative is to define the workforce design strategies that will improve efficiencies and system sustainability. In addition to ongoing efforts to improve the safety of Northern Health work environments, key regional priorities will be identified and supported on an annual basis. During the upcoming service plan period (2018-2021) the focus will be on preventing workplace violence in order to increase the safety of staff and physicians.

Key Strategies:

- Understand workforce planning needs within the context of northern populations. Northern Health will build on the provincial Health Human Resources (HHR) collaborative work to ensure a clear understanding of HHR needs now and in the future
- Stabilize and sustain Northern Health’s workforce to achieve regular consistent attendance as well as manage appropriate use of overtime and agency staff
- Design and implement an innovative recruitment and retention strategy. Northern Health will complete and finalize a Health Human Resources Plan that identifies workforce planning needs, appropriate recruitment, retention, and overall workforce sustainability strategies

- Reduce the number of occupational injuries related to workplace incidents of violence
- Reduce the number of long-term disability claims
- Support the implementation of Northern Health’s new onboarding program and ensure a comprehensive and consistent orientation program for new staff across Northern Health
- Education and Human Resources will collaborate to enhance training and support for frontline leaders. Northern Health will expand and implement a program for frontline leader development including approaches for orientation, training and ongoing support (e.g., coaching, mentoring)
- Implement strategy to enhance cultural safety of Northern Health sites and services
- Continue to review and implement Northern Health’s physician human resource plan including efforts to support physicians in taking leading roles in quality improvement and the establishment supportive environments and practice models for physicians.

Performance Measure(s)	2016 Baseline	2017	2018 Target	2019 Target	2020 Target
3.3 Nursing and allied professionals overtime hours as a percent of productive hours ¹	6.6%	7.0%	6.6%	6.6%	6.6%

¹ Data Source: Health Sector Compensation Information System (HSCIS), Health Employers Association of British Columbia (HEABC). Includes Providence Health Care.

Linking Performance Measures to Objectives:

3.1 Overtime is a key indicator of the overall health of a workplace. Maintaining overtime rates, with expected growth in demand, by addressing the underlying causes helps promote both patient and caregiver safety while also reducing unnecessary costs to the health system.

Discussion:

Overtime rates continue to be high at Northern Health as operational leaders seek to ensure safe and effective staffing in the face of limited worker availability and increasing demand for services. In 2018/19 Northern Health will align a strengthened recruitment and retention strategy/plan with focused work to assess and manage overtime and agency staff usage to ensure that services are provided in the most effective and efficient manner possible.

Resource Summary

(in millions)	2017/18 Actual	2018/19 Budget	2019/20 Plan	2020/21 Plan
OPERATING SUMMARY				
Provincial Government Sources	766.8	797.5	816.9	833.9
Non-Provincial Government Sources	76.2	77.4	78.0	76.0
Total Revenue	843.0	874.9	894.9	909.9
Acute Care	463.3	470.1	480.7	488.6
Residential Care	114.2	123.6	126.6	128.9
Community Care	120.4	135.0	138.2	140.7
Mental Health & Substance Use	44.0	47.9	49.0	49.8
Population Health and Wellness	27.3	29.5	30.2	30.7
Corporate	70.6	68.8	70.2	71.2
Total Expenditures	839.6	874.9	894.9	909.9
Surplus (Deficit)	3.4	0	0	0
CAPITAL SUMMARY				
Funded by Provincial Government	14.3	12.5	13.5	13.9
Funded by Regional Hospital Districts, Third Parties, Foundations, Internal Funds and all other sources	15.5	50.9	19.7	23.5
Total Capital Expenditures	29.8	63.4	33.2	37.4

*Due to rounding to the nearest million, numbers in columns may not appear to total.

Major Capital Projects

Major Capital Projects (over \$50 million)	Targeted Completion Date (Year)	Project Cost to Dec 31, 2017 (\$ millions)	Estimated Cost to Complete (\$ millions)	Approved Anticipated Total Capital Cost of Project (\$ millions)
Queen Charlotte/Haida Gwaii Hospital	2016	48	2	50
<p>Construction on the new Queen Charlotte Hospital completed in September 2016 and patients moved in November 16, 2016. The existing hospital will be demolished to make way for parking. The new Queen Charlotte Hospital replaces an aging facility and consolidates health services into one location. The facility consists of 17 beds in a 2-storey, 5,000 square metre Leadership in Energy and Environmental Design (LEED) Gold facility. The new hospital will provide adequate space to enable client-focused care delivery, as well as specialized care services such as low-risk maternity, obstetrics, and cancer care. The capital cost of the project is estimated at \$50 million and is cost shared with the North West Regional Hospital District.</p> <p>For more information, please see the website at: http://www.health.gov.bc.ca/library/publications/year/2012/qch-replacement-project-capital-plan.pdf.</p>				

Significant IT Projects (where applicable)

Northern Health does not have any current, approved IT projects that are over \$20 million in total capital cost.

Appendix A: Health Authority Contact Information

For more information on Northern Health, please visit www.northernhealth.ca, send an email to hello@northernhealth.ca or call 250-565-2649.

For information specific to this service plan or other Northern Health plans, please contact:

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Appendix B: Hyperlinks to Additional Information

- 1 B.C. Stats: Sub Population Population Projections P.E.O.P.L.E. 2017): <https://www.bcstats.gov.bc.ca/apps/PopulationProjections.aspx>
- 2 Statistical Profile for Northern Health: 2009. B.C. Stats:
<http://www.bcstats.gov.bc.ca/StatisticsBySubject/SocialStatistics/SocioEconomicProfilesIndices/Profiles.aspx>
- 3 *Health Authorities Act*. Chapter 180 http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_96180_01
- 4 As at April 1, 2012 there are 525 acute care beds open and in operation
- 5 As at April 1, 2012 there are: 1,062 complex care beds and 35 respite care beds provided in the 23 noted facilities. Also allocated across northern British Columbia are 307 assisted living units
- 6 Simon Fraser Lodge operated by Buron Health Care; and complex care beds within Wrinch memorial Hospital Hazelton operated by United Church Health Services and affiliated with Northern Health.
- 7 Health Care in Canada: A Decade in Review. Canadian Institute for Health Information: 2009.
<https://secure.cihi.ca/estore/productFamily.htm?pf=PFC1380&lang=fr&media=0>
- 8 Building on Values: the Future of Health Care in Canada. Final Report: Roy J. Romanow. November 2002.
<http://publications.gc.ca/site/eng/237274/publication.html>
- 9 Rural Canada: Access to Health Care: Government of Canada, Economics Division 2002
<http://dsp-psd.pwgsc.gc.ca/Collection-R/LoPBdP/BP/prb0245-e.htm>
- 10 Rural Health in Rural Hands: Strategic Directions for Rural, Remote, Northern and Aboriginal Communities. 2002.
<http://publications.gc.ca/site/eng/306146/publication.html>
- 11 What is Rural - Community Health Information Portal, Northern Health : 2012.
<https://chip.northernhealth.ca/CommunityHealthInformationPortal/WhatDeterminesHealth/RuralLivingCircumstances.aspx>
- 12 Statistical Profile for Northern Health: 2009. B.C. Stats:
<http://www.bcstats.gov.bc.ca/StatisticsBySubject/SocialStatistics/SocioEconomicProfilesIndices/Profiles.aspx>
- 13 Health Care in Canada: A Decade in Review. Canadian Institute for Health Information: 2009. (p. 64).
<https://secure.cihi.ca/estore/productFamily.htm?pf=PFC1380&lang=fr&media=0>
- 14 What is Rural - Community Health Information Portal, Northern Health : 2012.
<https://chip.northernhealth.ca/CommunityHealthInformationPortal/WhatDeterminesHealth/RuralLivingCircumstances.aspx>
- 15 Rural Health in Rural Hands: Strategic Directions for Rural, Remote, Northern and Aboriginal Communities. 2002. (p.4)
<http://publications.gc.ca/site/eng/306146/publication.html>
- 16 Building on Values: the Future of Health Care in Canada. Final Report: Roy J. Romanow. November 2002. (p.117)
<http://publications.gc.ca/site/eng/237274/publication.html>
- 17 What is Rural - Community Health Information Portal, Northern Health, 2012.
<https://chip.northernhealth.ca/CommunityHealthInformationPortal/WhatDeterminesHealth/RuralLivingCircumstances.aspx>
- 18 Rural Health Services In B.C: A Policy Framework To Provide A System Of Quality Care; B.C. MoH 2015
<http://www.health.gov.bc.ca/library/publications/year/2015/rural-health-policy-paper.pdf>
- 19 Regions and Resources: Foundation of British Columbia's Economic Base; B.C. Urban Futures Institute: 2005.
http://static1.squarespace.com/static/52012782e4b0707e7a30fda8/t/5240c1c2e4b0eb37f4220fd2/1379975618159/ufi_regions_resources.pdf
- 20 British Columbia Local Area Economic Dependencies. B.C. Stats, March 2009.

- <http://www.bcstats.gov.bc.ca/StatisticsBySubject/Economy/BCInputOutputModel.aspx>
- 21 B.C. Stats: Regional Socio-economic Profiles and Indices; 2011.
<http://www.bcstats.gov.bc.ca/StatisticsBySubject/SocialStatistics/SocioEconomicProfilesIndices.aspx>
 - 22 Regions and Resources: Foundation of British Columbia's Economic Base; B.C. Urban Futures Institute: 2004.
http://static1.squarespace.com/static/52012782e4b0707e7a30fda8/t/5240c1c2e4b0eb37f4220fd2/1379975618159/ufi_regions_resources.pdf
 - 23 Understanding the State of Industrial Camps in Northern B.C: Background Paper. Northern Health, 2012.
https://www.northernhealth.ca/sites/northern_health/files/about-us/leadership/documents/industrial-camps-bkgrd-p1v1.pdf
 - 24 Birch S, Chambers S: To Each According to Need: A Community-Based Approach to Allocating Health Care Resources. Canadian Medical Association Journal 1993; 149(5): p .609.
 - 25 Prince George Regional Hospital Role Review. Joint MOH-NIRHB Steering Committee, Final Report. January 25, 1998.
 - 26 B.C. Health Atlas Second Edition. Section 2.1 Premature Mortality: UBC Center for Health Services Policy and Research: 2004
<https://open.library.ubc.ca/cIRcle/collections/facultyresearchandpublications/52383/items/1.0048358>
 - 27 B.C. Vital Statistics VISTA Data Warehouse. UCOD 358 All Causes of Death. Accessed February 28, 2017
 - 28 Fact Sheet: https://indigenoushealthnh.ca/sites/default/files/2017-01/Fact%20Sheet%20-%20Governance_web.pdf
 - 29 The Crisis of Chronic Disease Among Aboriginal Peoples: CAHR; University of Victoria
<https://dspace.library.ubc.ca/bitstream/handle/1828/5380/Chronic-Disease-2009.pdf?sequence=1>
 - 30 Pathways to Health and Healing: 2nd report on the Health and Wellbeing of Aboriginal People in British Columbia. B.C. Provincial Health Officer's Annual Report 2007. <http://www.health.gov.bc.ca/pho/pdf/abohlth11-var7.pdf>
 - 31 Discharge Abstract Database (DAD), Medical Service Plan (MSP) and B.C. Pharma-care data 2006/07.
 - 32 Population Patterns of Chronic Health Conditions in Canada. Health Council of Canada.
<https://healthcouncilcanada.ca/files/2.23-Outcomes2PopulationPatternsFINAL.pdf>
 - 33 Why Health Care Renewal Matters: Lessons from Diabetes. Health Council of Canada.
https://healthcouncilcanada.ca/files/2.24-HCC_DiabetesRpt.pdf
 - 34 Primary Health Care Charter: a collaborative approach. British Columbia Ministry of Health: 2007.
http://www.health.gov.bc.ca/library/publications/year/2007/phc_charter.pdf
 - 35 Healthy Pathways Forward: A Strategic Integrated Approach to Viral Hepatitis in B.C. B.C. Ministry of Health: 2007.
<http://www.health.gov.bc.ca/library/publications/year/2007/healthypathwaysforward.pdf>
 - 36 Public Health Agency of Canada: Chronic Disease Surveillance.
<http://www.phac-aspc.gc.ca/cd-mc/index-eng.php>
 - 37 Healthy Pathways Forward: A Strategic Integrated Approach to Viral Hepatitis in B.C. B.C. Ministry of Health: 2007.
<http://www.health.gov.bc.ca/library/publications/year/2007/healthypathwaysforward.pdf>
 - 38 Primary Health Care Charter: a collaborative approach. British Columbia Ministry of Health: 2007.
http://www.health.gov.bc.ca/library/publications/year/2007/phc_charter.pdf