

Healthy Northern Communities 2011

*Fort Nelson
Local Health Area
(LHA 081)*

Revised
August 6, 2011

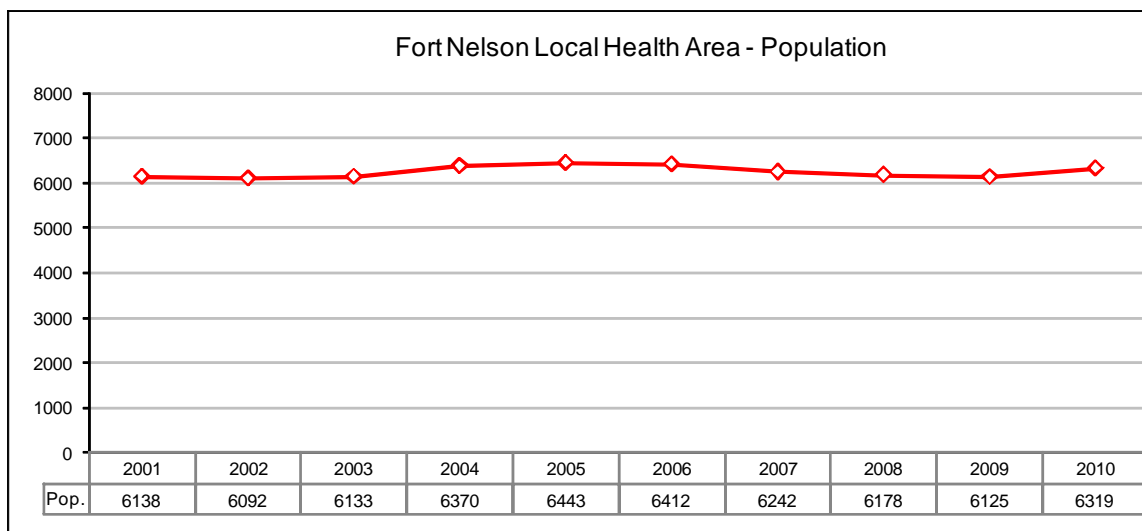


northern health
the northern way of caring

Fort Nelson Local Health Area

The Fort Nelson Local Health Area (LHA 081) is located in northeast BC and covers just over 98,327 square kilometers. It is home to approximately 6,319 people.¹

Several First Nations including the Fort Nelson First Nation, Prophet River First Nation, Kwadacha Nation and the Daylu Dene Council (formerly known as the Lower Post First Nation) call the Northeast home.^{2, 3}



During 2009, the Northern Rockies Regional Municipality (NRRM) was formed from an amalgamation of the Town of Fort Nelson with numerous surrounding areas. The NRRM is located within the Fort Nelson LHA. The 5,744 people living within the NRRM account for 92 % of the Fort Nelson LHA population (5,744 / 6,319 persons). People living within unincorporated areas, account for 8 % of the LHA population (465 / 6,319 persons). The population that is attributable to industrial work camps is uncertain.^{4, 5, 6}

During the 2009 calendar year, there were 94 births, 23 deaths and 25 marriages attributed to residents of the Fort Nelson LHA. The average life expectancy for these residents was 77.4 years. This is less than the BC life expectancy of 81.4 years.⁷

Community Information

Northern Rockies Regional Municipality <http://www.northernrockies.ca/>

Northern Rockies Official Community Plan (see Planning and Development)
<http://www.northernrockies.ca/EN/main/business/planning-development.html>

Daylu Dena Council (formerly Lower Post First Nation)
<http://www.kaskadenacouncil.com/communities/lower-post>

Fort Nelson First Nation <http://www.fnnation.org/>

Prophet River First Nation <http://www.treaty8.bc.ca/communities/prophet.php>

Tourism, Northern Rockies: <http://www.tourismnorthernrockies.ca/>

BC Stats Fact Sheets: <http://www.bcstats.gov.bc.ca/data/dd/facsheet/facsheet.asp>

Northern BC, Community Health Information Portal <http://chip.northernhealth.ca>

What Determines Health?

A good strong start in life, early and enriching experiences, educational opportunities and achievement, a sufficient and equitable distribution of employment and income, housing, food, interactions with the natural and human built environments, our choices towards certain risk factors and lifestyles, as well as access to high quality health services, are just a few of the many determinants of health and wellbeing.^{8, 9}

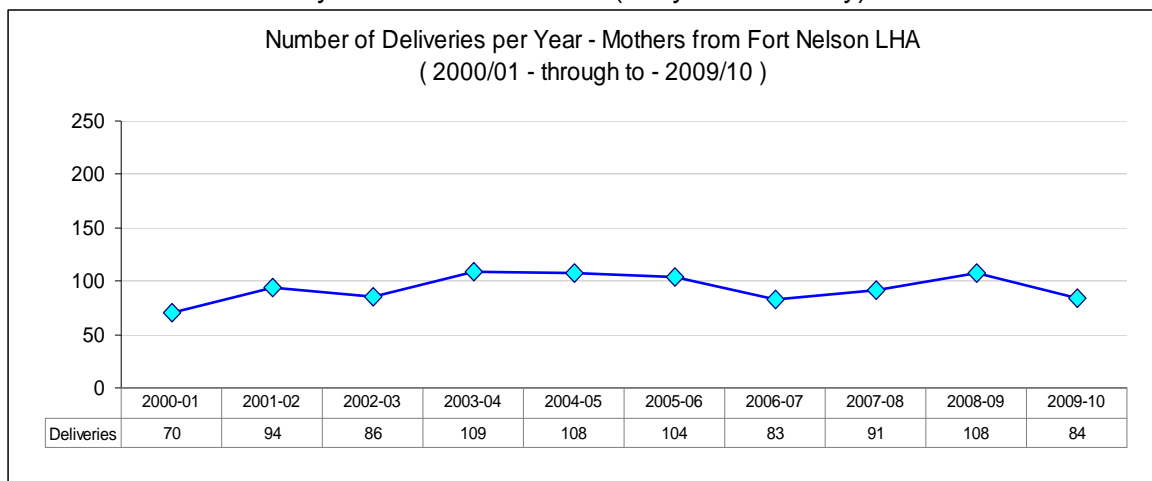
Selected Determinants of Health		
Demographics	LHA ¹⁰	BC ¹¹
Percent of population who are 0 – 19 yrs old	29.8	23.2
Percent of population who are ages 65+	4.1	15.0
Percent of population who are Visible Minorities	5.0	24.5
Percent of population who are Aboriginal Identity	20.8	4.8
Income		
Percent of families earning < \$20,000 per year	2.9	8.0
Percent of families earning from \$20,000 - \$80,000 per year	36.5	53.8
Percent of families earning > \$80,000 per year	60.3	38.1
* Percent of population receiving Income Assistance > 1 yr.	0.2	1.0
Early Development and Educational Achievement		
Percent of kindergarten children vulnerable:1 or more EDI scales ¹²	23.6	28.6
† Percent of Grade 4 & 7 students below standard on FSA - Reading	18.6	20.7
† Percent of Grade 4 & 7 students below standard on FSA - Writing	21.7	17.9
† Percent of Grade 4 & 7 students below standard on FSA - Math	21.5	23.4
† Grade 10 Provincial-exam non-completion rate - English	31.6	15.9
† Percent of 18 yr olds who did not graduate	33.6	29.0
Percent of persons ages 25 to 54: without high school completion	20.5	11.1
Percent of persons ages 25 to 64: with university degree or above	9.5	24.1
Housing		
Percent of households that are renting	26.4	30.4
Percent of tenants paying 30 % or more of income towards housing	17.1	43.4
Percent of owners paying 30 % or more of income towards housing	13.6	22.7
Children and Youth at Risk		
* Children (ages <15) receiving Income Assistance > 1 year	n/a	1.7
* Youth (ages 15 - 24) receiving Income Assistance > 1 yr	n/a	0.9
Children in care rate per 1,000 population, ages 0 – 18	7.2	9.2
Teen pregnancies per 1,000 women ages 15 – 19 (2007-2009)	79.1	26.3
Other Indicators		
Alcohol sales per capita in 2010 (Dollars Spent)	1,640	790
Alcohol sales per capita in 2010 (Litres Consumed)	227	107
nca = means this level of data detail or data aggregation is "not currently available."		
EDI = the Early Development Index is an early child development assessment tool. http://www.earlylearning.ubc.ca		
LHA = Local Health Area. In this table we are referring to the Fort Nelson Local Health Area (LHA - 081).		
* Income Assistance figures may be understated as they do not include Aboriginal people who are living on reserve.		
† education measures shown are an average for the period 2007/08 - 2009 /10. The LHA and BC figures were obtained from BC Stats Socio-economic profiles . Please also see BC Ministry of Education http://www.bced.gov.bc.ca/reporting/		

Promoting Health and Delivering High Quality Services

A good strong start in life is more likely if infants, children and family members are healthy. Towards this, we consider community characteristics (Determinants of Health), the number of mothers delivering infants and where these infants are being delivered.

This type of information informs services such as prenatal education, parenting skills programs, post delivery follow-ups for moms, immunizations, as well as the screening services intended to detect and address vision, hearing and dental health concerns.

Number of deliveries by Fort Nelson mothers (ten year summary).¹³



Delivery locations for Fort Nelson mothers (five year summary).¹⁴

Mothers Living within the Fort Nelson LHA: 2005/06 – 2009/10 (5 years)						
Mother's Home community	Deliveries in British Columbia					
	Ft Nelson	Ft St John	Dawson Creek	Prince George	Other BC Location	Total
Ft Nelson	250	121	33	25	31	460
Northern Rockies (B)	4	1	0	0	0	5
Others	0	2	0	1	2	5
Total	254	124	33	26	33	470 *

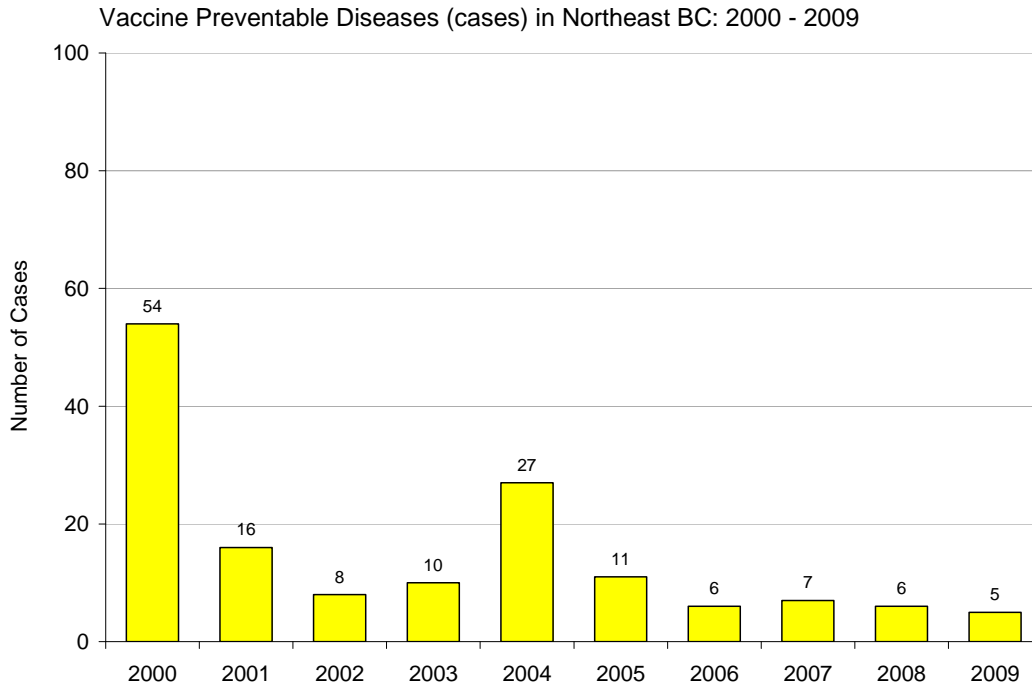
* There were an additional 28 deliveries in Alberta by mothers from Fort Nelson LHA.¹⁵

Promoting Health and Delivering High Quality Services

Immunizations are some of the best health investments that we can make. Along with better sanitation and clean drinking water, immunizations have been responsible for the huge increases in life expectancy that we have seen around the world.^{16, 17}

Because they are such a good investment and the protection they provide to individuals and communities as a whole is so important, we actively monitor whether certain target populations are fully immunized. For example, we know that the percent of 2 year old children in the Fort Nelson LHA, who are fully immunized, is 87.2%.¹⁸

Vaccine Preventable Diseases are illnesses that may have been avoided if individuals and communities were sufficiently immunized. These cases are summarized below.



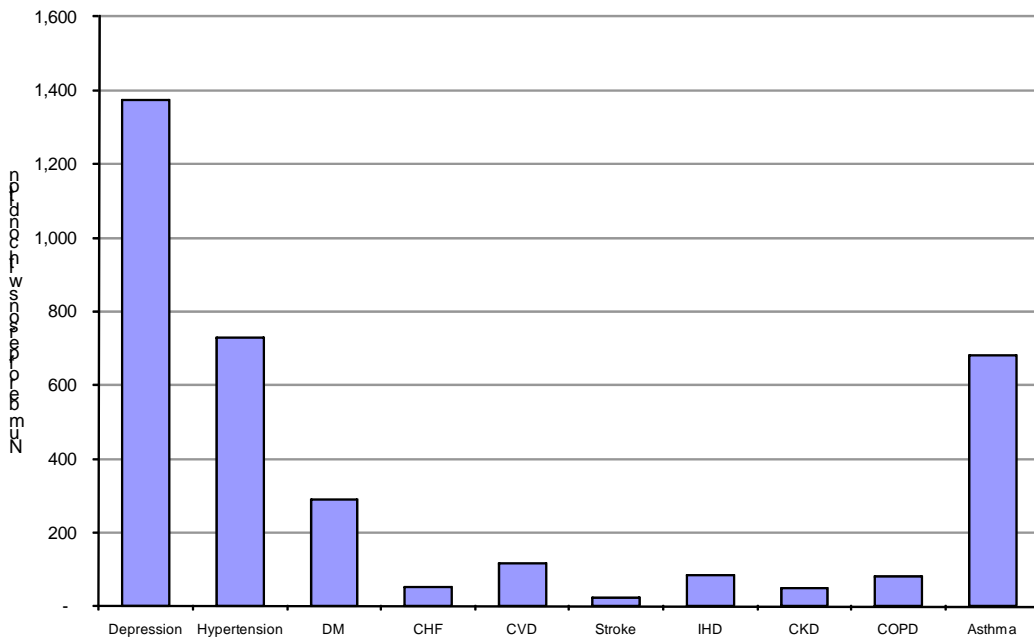
Vaccine Preventable Diseases (cases) in Northeast BC: 2000 - 2009 ¹⁹											
Community	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
Chetwynd	1	4	2	1	2	1	1	0	1	1	14
Dawson Cr.	7	10	3	2	21	3	1	3	2	1	53
Fort Nelson	3	0	1	0	1	1	0	3	0	2	11
Fort St John	43	2	1	7	3	5	4	1	2	1	69
Hudson's Hope	0	0	1	0	0	0	0	0	1	0	2
Tumbler Ridge	0	0	0	0	0	1	0	0	0	0	1
Total	54	16	8	10	27	11	6	7	6	5	150

Promoting Health and Delivering High Quality Services

We know that many factors influence our health. Our choices in lifestyle and towards a handful of well known risk factors: tobacco use; physical inactivity; poor dietary choices; obesity; inappropriate alcohol and drug use; certain sexual activities; and, excessive sun exposure can greatly determine whether we remain healthy and free from certain types of cancers and other chronic illnesses.^{20, 21, 22, 23}

Chronic Disease Estimates

Estimated prevalence (number of existing cases) of selected chronic conditions
Fort Nelson Local Health Area 081: 2009 - 2010



Chronic Disease Estimates for Fort Nelson Local Health Area residents: 2009 - 10 ²⁴			
Selected Chronic Conditions	Existing cases	New cases / yr	Cost / patient / yr
Depression	1,375	77	\$2,558
Hypertension	728	80	\$4,374
Diabetes	290	33	\$4,837
Congestive Heart Failure (CHF)	53	6	\$21,636
Cardiovascular Disease (CVD)	116	11	\$11,339
Stroke	25	5	\$7,656
Ischemic Heart Disease (IHD)	84	11	\$6,323
Chronic Kidney Disease (CKD)	50	6	\$12,718
COPD	82	8	\$15,124
Asthma	682	36	\$1,228

These community level estimates are based upon each community's relative share of the total Local Health Area (LHA) population and reflect what "might be expected" at the community level, given the known experience of the larger LHA.

Promoting Health and Delivering High Quality Services

Healthy and independent northerners is what we want to see when we look around northern BC communities. Indeed, that is a large part of what we do see. However, we know that our population is aging very quickly and that with increasing age there often comes an accumulation of chronic health conditions that inhibit independence.

Long-term home support and other services provided by northern health intend to keep people healthy and independent. During 2011, there were 379 residents of northeast BC receiving home-support services. Here is a clinical profile of these residents.²⁵

Male	32.5%	Married	31 %	Aged 75+	68 %
Female	67.5%	Widowed	44 %	Aboriginal	7 %
Frequently Noted Health Conditions					
Hypertension	57 %	Depression	42 %	Chronic Arterial	22%
Arthritis	51 %	Diabetes	24 %	Congestive Heart	20 %
Clients with Multiple Health Conditions					
≤ 3 Conditions	27 %	3 - 5 Conditions	37 %	≥5 Conditions	36 %
Clients with Cognitive Impairment (Cognitive Performance Score)					
No impairment	39 %	Borderline /mild	49 %	Mod- Very Severe	12 %
Clients with independence difficulty in 1- 3 daily activities (IADL Difficulty Scale)					
No difficulty	30 %	Some difficulty	25 %	Great difficulty	45 %

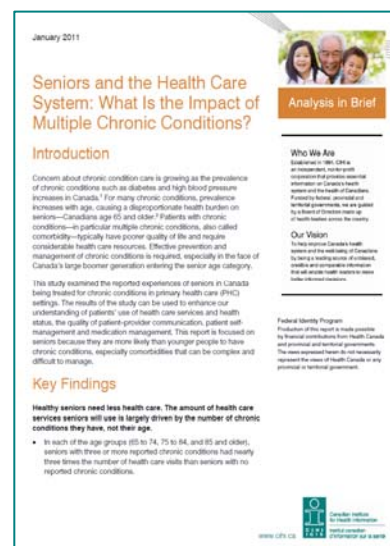
How do we compare to the rest of Canada?

The most frequently reported chronic conditions affecting Canadian seniors overall are:

- Hypertension (47%)
- Arthritis (27%)
- Hypertension and arthritis (14%)
- Hypertension and heart disease (12%)
- Hypertension and diabetes (11%)

The amount of health care that Canadian seniors need as they age is largely driven by the number of chronic conditions that they have, not their age.²⁶

These are just a few of the many findings contained in the report: *Seniors and the Health Care System: What is the Impact of Multiple Chronic Conditions?*



Promoting Health and Delivering High Quality Services

We employ the best available information related to community characteristics and the determinants of health, population trends, disease occurrences, health needs and health services utilization when assessing services and when planning for the future.

These tables provide a glimpse into some of the inpatient and facility activity.

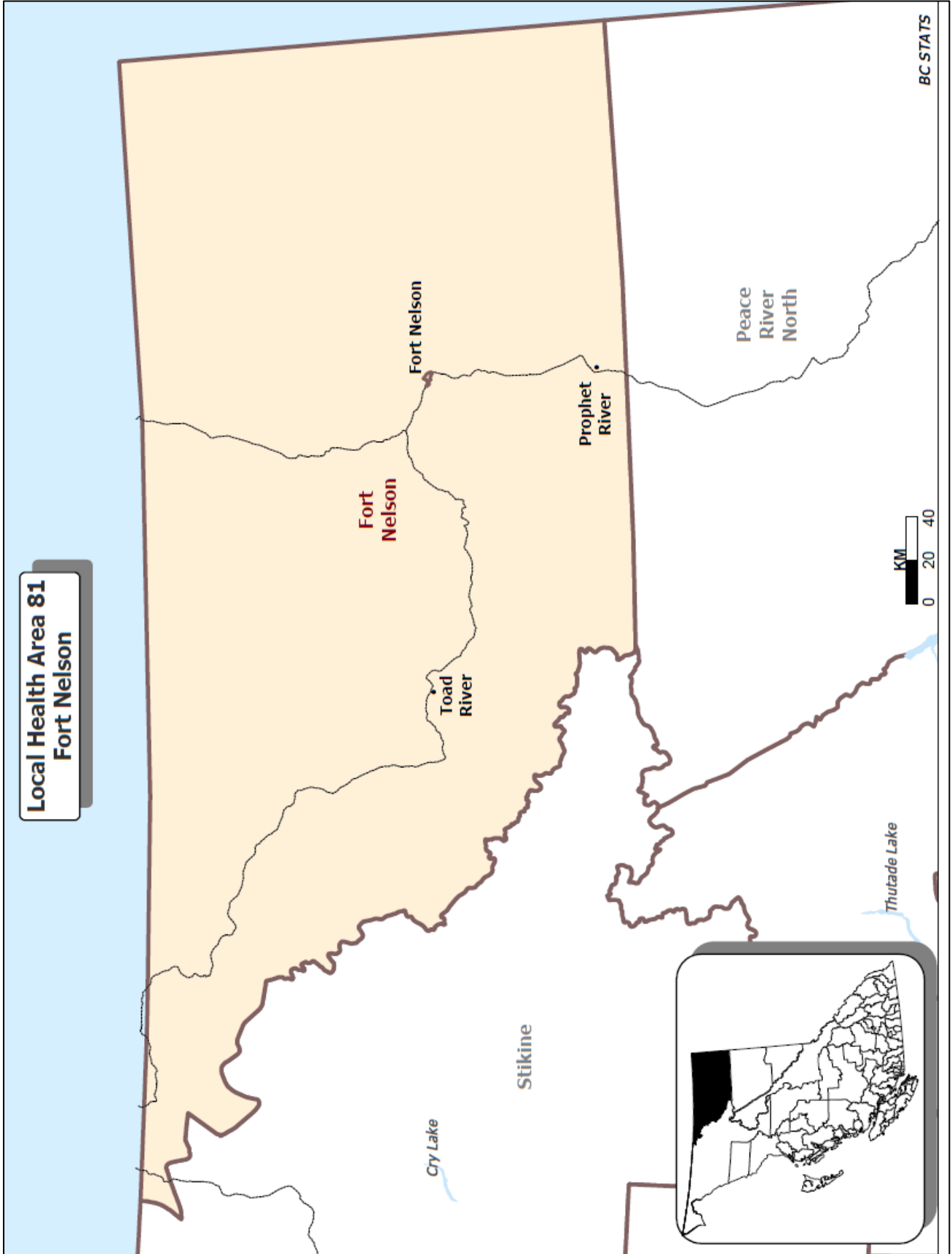
Location: where inpatient hospital services were received.²⁷

Fort Nelson residents during the five year period: 2005/06 - 2009/10.							
Number of Cases and Days	Location of Care						
	Fort Nelson	Fort St. John	Dawson Creek	Other NH	Other BC	OOP	Total
Cases	2,874	454	271	194	246	450	4,489
Days	11,254	1,294	1,613	1,677	2,295	3,249	21,382

- Cases These are inpatient cases - client was admitted to the facility.
- Days These are inpatient days - does not include days attributable to ALC.
- Other NH Care was received at a Northern Health facility other than those shown.
- Other BC Care was received at a non Northern Health facility in BC.
- OOP Care was received Out of Province – in most cases this means Alberta.
- ALC Alternate Level of Care. Clients who no longer need acute services and who are waiting to be discharged to a setting more appropriate to their needs.²⁸

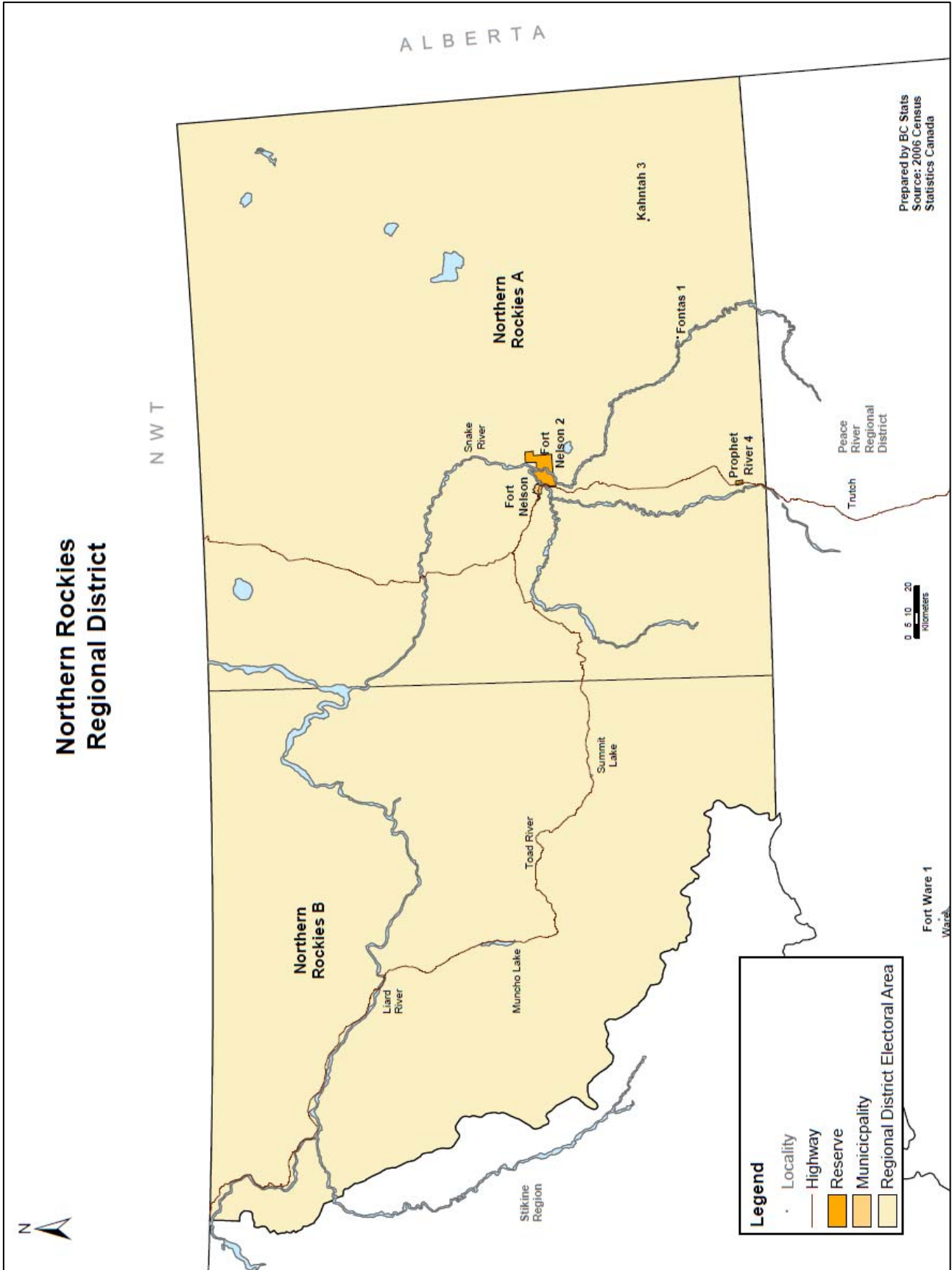
Selected measures of facility and patient activity: by fiscal year.²⁹

No. 714 - Fort Nelson General Hospital					
Selected Measures	2006/07	2007/08	2008/09	2009/10	2010/11
Acute discharges/deaths total	672	729	638	642	667
Acute in-patient admissions total	668	710	629	643	665
Acute in-patient days (excl. ALC)	2,588	2,661	2,140	2,594	2,478
ALC days total	2,016	1,987	1,634	1,262	1,463
Ambulatory visits (excl. E/R).	2,822	3,017	2,468	2,429	3,469
Emergency visits (excl. Ambul)	4,655	4,768	4,540	4,508	4,827
In-patient surgical cases total	20	20	21	19	19
Surgical day care cases total	28	19	17	20	14
Psychiatry/addiction admissions	n/a	n/a	n/a	n/a	n/a
Psychiatry/addiction I/P days	n/a	n/a	n/a	n/a	n/a
Medical Imaging Tests	4,641	4,313	4,155	4,797	4,562
Lab Tests (excludes respiratory)	118,320	116,040	161,033	153,233	163,421



**Local Health Area 81
Fort Nelson**

BC STATS



References

- 1 BC Stats, Community Fact Sheets: <http://www.bcstats.gov.bc.ca/data/dd/facsheet/facsheet.asp>
- 2 BC Treaty Commission Statement of Intent Maps: GEO BC. <http://ilmbwww.gov.bc.ca/cis/initiatives/treaty/>
- 3 BC Ministry of Aboriginal Relations & Reconciliation: First Nations by Region. <http://www.gov.bc.ca/arr/treaty/regional.html>
- 4 BC Stats: Population Estimates for Local Health Areas: PEOPLE 35. <http://www.bcstats.gov.bc.ca/data/pop/popstart.asp>
- 5 Population Estimates for Municipalities: BC Stats; 1996-2006, 2006-2009. <http://www.bcstats.gov.bc.ca/data/pop/pop/estpop.asp#totpop>
- 6 BC Stats: Population Estimates for Regional Districts: PEOPLE 35. <http://www.bcstats.gov.bc.ca/data/pop/popstart.asp>
- 7 BC Vital Statistics Annual Report: 2009. <http://www.vs.gov.bc.ca/stats/annual/index.html>
This is calendar year data (Jan - Dec). There will be a small mismatch with fiscal year data of Perinatal-Services-BC.
- 8 What Determines Health: Public Health Agency of Canada <http://www.phac-aspc.gc.ca/ph-sp/determinants/index-eng.php>
- 9 Healthy and Productive Canada: Determinants of Health Approach. Senate Committee on Health. <http://www.parl.gc.ca/40/2/parlbus/commbus/senate/Com-e/popu-e/rep-e/rephealthjun09-e.pdf>
- 10 BC Socio-economic profiles; BC Stats: June 2011. <http://www.bcstats.gov.bc.ca/data/sep/index.asp>
- 11 BC figures from BC Stats: [BC Socio-economic profiles](#), [Census 2006 Profiles](#) and / or [PEOPLE 35](#).
- 12 Human Early Learning Partnership; the Early Development Index: Wave 3. <http://www.earlylearning.ubc.ca/research/initiatives/early-development-instrument/>
- 13 Northern Health Resident Mothers that Delivered a Baby in British Columbia, by Resident Municipality. Prepared for Northern Health by Perinatal Services BC. Request 211011: June 16, 2011.
- 14 Northern Health Resident Mothers that Delivered a Baby in British Columbia, by Resident Municipality. Prepared for Northern Health by Perinatal Services BC. Request 211011: June 16, 2011.
- 15 Alberta Perinatal Health Program: June 2011. Figures are for 2004/05 – 2008/09.
- 16 Immunization: A Report on the Health and Wellbeing of British Columbian. BC Provincial Health Officer, 1998. <http://www.health.gov.bc.ca/pho/pdf/phoannual1998.pdf>
- 17 Technical Assumptions for Population Forecasting in BC: Page 7. BC Stats, July 2009. <http://www.bcstats.gov.bc.ca/data/pop/pop/popproi.asp>
- 18 2008 Cohort (2 year olds) Date of Birth Jan 01, 2008 to Dec 30, 2008. Up-to-date for all vaccines: (new definitions). Data extracted Jan 17, 2011: MMP for JMH: Northern Health-Public and Preventive Health: June 2011.
- 19 Vaccine Preventable Disease: Northern Health-Public Health / Preventive Public Health: May 2010.
- 20 Population Patterns of Chronic Health Conditions in Canada: Health Council of Canada. <http://healthcouncilcanada.ca>
- 21 The Cost of Chronic Disease in Canada: GPI Atlantic. 2004. <http://gpiatlantic.org/pdf/health/chroniccanada.pdf>
- 22 Prevention: British Columbia Cancer Agency. 2009. <http://www.bccancer.bc.ca/PPI/Prevention/default.htm>
- 23 Hospitalizations: Counts and Rates Attributable to Alcohol, Tobacco, and Illicit Drugs for BC Health Authorities. BC Centre for Addictions Research: AOD project. March 2010. <http://carbc.ca/AODMonitoring/tabid/541/Default.aspx>
- 24 BC Ministry of Health Services: Chronic Conditions according to LHA. Project 2011_005_PHC
- 25 InterRAI Client Assessment Summary: Northern Health. Summary as of March 31, 2011. Data extracted May 28, 2011. Northern Health Home and Community Care Services.
- 26 Seniors and the Health Care System: What is the Impact of Multiple Chronic Conditions? CIHI, January 2011. http://secure.cihi.ca/cihiweb/products/air-chronic_disease_aib_en.pdf
- 27 Hospitalizations by patient's home community 2003/ 04 to 2009/ 10: Special Analysis by the BC Ministry of Health for Northern Health. Project No. 2010_0289. Revised and Updated: July, 2011.
- 28 Alternate Level of Care in Canada: CIHI. <https://secure.cihi.ca/estore/productSeries.htm?pc=PCC456>
- 29 Northern Facility Activity Summaries from Northern Health Finance: Executive Summary Reports (ESR). Figures are P13 for previous year. Lab and Medical Imaging prepared separately: July 2011.