

Healthy Northern Communities 2013

Houston

Revised
September 24, 2013



northern health
the northern way of caring

What Determines Health?

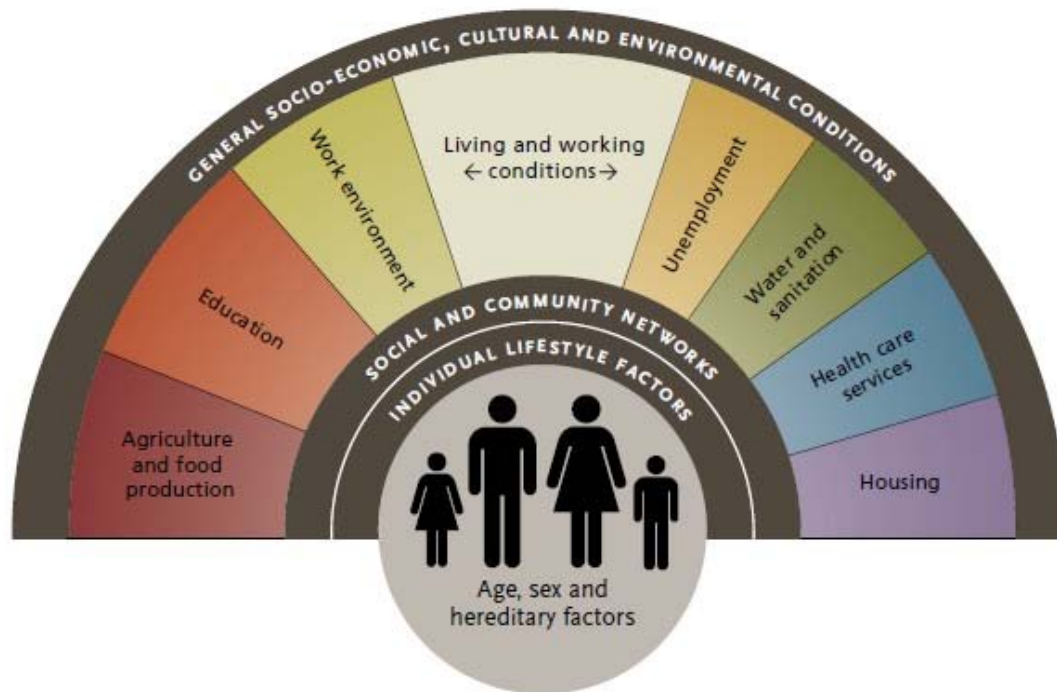


Figure: Health Council of Canada, 2010.

Broadly speaking: a good strong start in life; early and enriching experiences; educational opportunities; a sufficient and equitable distribution of employment, income, housing and food; water and sanitation; our interactions with the environment; our choices towards certain lifestyles and risks; our age and sex; genetics; as well as access to appropriate high quality health care are some of the many factors that are known to influence our health.

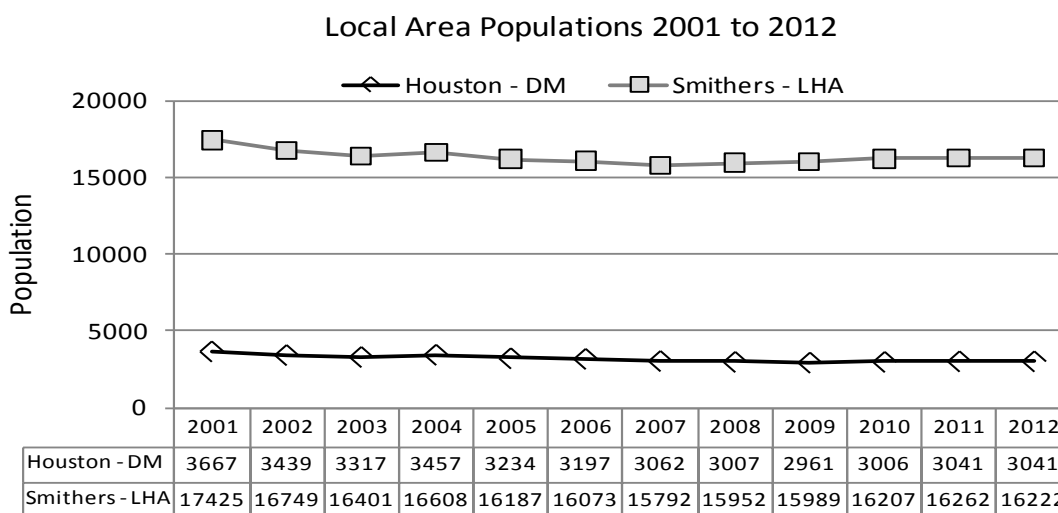
Additional Information (text below is hyperlinked)

- [World Health Organization: Social Determinants of Health](#)
- [Public Health Agency of Canada: Best Practices Portal](#)
- [Canadian Institute for Health Information: Factors Affecting Health](#)
- [Canadian Institute for Health Information: Health System Performance](#)
- [Health Council of Canada: Stepping it Up to a Healthier Canada.](#)
- [National Collaborating Centre for Aboriginal Health: Social Determinants of Health](#)
- [Northern Health: Community Health Information Portal](#)

The District Municipality of Houston was incorporated in 1957. Houston is located approximately 81 km west of Burns Lake and 364 km southeast of Smithers.¹

Houston is situated within the Bulkley Nechako Regional District, within the Smithers Local Health Area (LHA 054) and within the Northwest Health Service Delivery Area of Northern Health. The Houston area is served by Bulkley Valley School District No.54.

The broad area surrounding the District of Municipality Houston is the traditional territories of the Wet'suwet'en and Dakelh (Carrier) peoples.^{2, 3}



The estimated 3,041 people within the District of Houston account for approximately 18.7 % of the Smithers LHA population (3,041 / 16,222 persons) and for 7.7 % of the Bulkley-Nechako Regional District population (3,041 / 39,319 persons).^{4, 5, 6}

During the 2011 calendar year, there were 186 live births, 124 deaths and 73 marriages that could be attributed to Smithers LHA residents. Of these, 34 live births, 24 deaths and 15 marriages could be attributed to residents of Houston. The average life expectancy for both populations was 80.2 years: more than the British Columbia (BC) average of 82 years.⁷

Additional Community Information

District Municipality of Houston <http://www.houston.ca/>

Houston Chamber of Commerce: <http://www.houstonchamber.ca/>

Lake Babine Nation: <http://www.lakebabine.com/>

Wet'suwet'en Nations <http://www.wetsuweten.com/>

Bulkley Nechako Regional District: <http://www.rdbn.bc.ca/>

Supernatural Northern British Columbia:
<http://www.hellobc.com/northern-british-columbia.aspx>

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

Selected Community Indicators

Demographics	Houston	LHA	BC
Percent of population who are 0 – 19 yrs old	28	27	21
Percent of population who are ages 65+	12	11	15
Percent of population who are Visible Minorities	6.0	3.6	24.5
Percent of population who are Aboriginal Identity	12.0	11.5	4.8
Income			
Percent of families earning < \$20,000 per year	5.4	6.2	8.0
Percent of families earning from \$20,000 - \$80,000 per year	52.5	53.5	53.8
Percent of families earning > \$80,000 per year	42.2	40.3	38.1
* Percent of population receiving Income Assistance > 1 yr.	nca	1.3	1.0
Early Development and Educational Achievement			
Percent of kindergarten children vulnerable: 1 or more EDI scales ⁸	34.0	28.8	28.6
† Percent of Grade 4 & 7 students below standard on FSA - Reading	nca	21.7	20.7
† Percent of Grade 4 & 7 students below standard on FSA - Writing	nca	13.3	17.9
† Percent of Grade 4 & 7 students below standard on FSA - Math	nca	22.9	23.4
† Percent of 18 yr olds who did not graduate	nca	14.5	29.0
Percent of persons ages 25 to 54: without high school completion	nca	13.9	11.1
Percent of persons ages 25 to 64: with university degree or above	7.7	14.3	24.1
Housing			
Percent of households that are renting	21.3	21.7	30.4
Percent of tenants paying 30 % or more of income towards housing	23	29.4	43.4
Percent of owners paying 30 % or more of income towards housing	8.0	9.9	22.7
Children and Youth at Risk			
* Children (ages <15) receiving Income Assistance > 1 year	nca	2.2	1.7
* Youth (ages 15 - 24) receiving Income Assistance > 1 yr	nca	1.4	0.9
Children in care rate per 1,000 population, ages 0 – 18	nca	10.2	9.2
Teen pregnancies per 1,000 women ages 15 – 19 (2007-2009)	nca	32.1	26.3
Other Indicators			
Alcohol sales per capita in 2010 (Dollars Spent)	nca	991	790
Alcohol sales per capita in 2010 (Litres Consumed)	nca	153	107
nca = means this level of data detail or data aggregation is "not currently available."			
* Income Assistance figures may be understated as they do not include Aboriginal people who are living on reserve.			

Sources of the above information:

BC Stats Socio-economic Profiles

<http://www.bcstats.gov.bc.ca/StatisticsBySubject/SocialStatistics/SocioEconomicProfilesIndices.aspx>

Census 2011: Statistics Canada

<http://www12.statcan.ca/census-recensement/2011/dp-pd/prof/index.cfm?Lang=E>

BC Ministry of Education K -12 Reporting

<http://www.bced.gov.bc.ca/reporting/province.php>

Human Early Learning Partnership: Early Development Instrument

<http://earlylearning.ubc.ca/edi/>

Population Forecasts (with a focus on seniors)

Although the percentage of seniors in northern BC is the smallest of all the health regions, this group is expected to grow quickly over the next 15 years. From 2015 to 2030, the 65+, 75+ and 85+ populations in northern BC are expected to grow by 78 %, 111 % and 106 % respectively: the highest overall seniors' growth rates in BC's health authorities.⁹

Below is a forecast of what we might expect at the local health service delivery levels.

Smithers Local Health Area: Population Projection						Population Change 2015 - 2030	
Broad Age Groups	2010	2015	2020	2025	2030	number	%
<20	4,431	4,114	3,996	4,019	4,023	-91	-2.2
20-44	5,091	5,029	5,046	4,958	5,077	48	1.0
45-64	4,912	5,006	4,836	4,461	4,058	-948	-18.9
65+	1,768	2,359	3,066	3,826	4,408	2,049	86.9
Total Population	16,202	16,508	16,944	17,264	17,566	1,058	6.4
Focus on Seniors						number	%
65+	1,768	2,359	3,066	3,826	4,408	2,049	86.9
75+	668	876	1,156	1,514	1,978	1,102	125.8
85+	174	288	352	426	567	279	96.9
90+	60	101	168	187	223	122	120.8

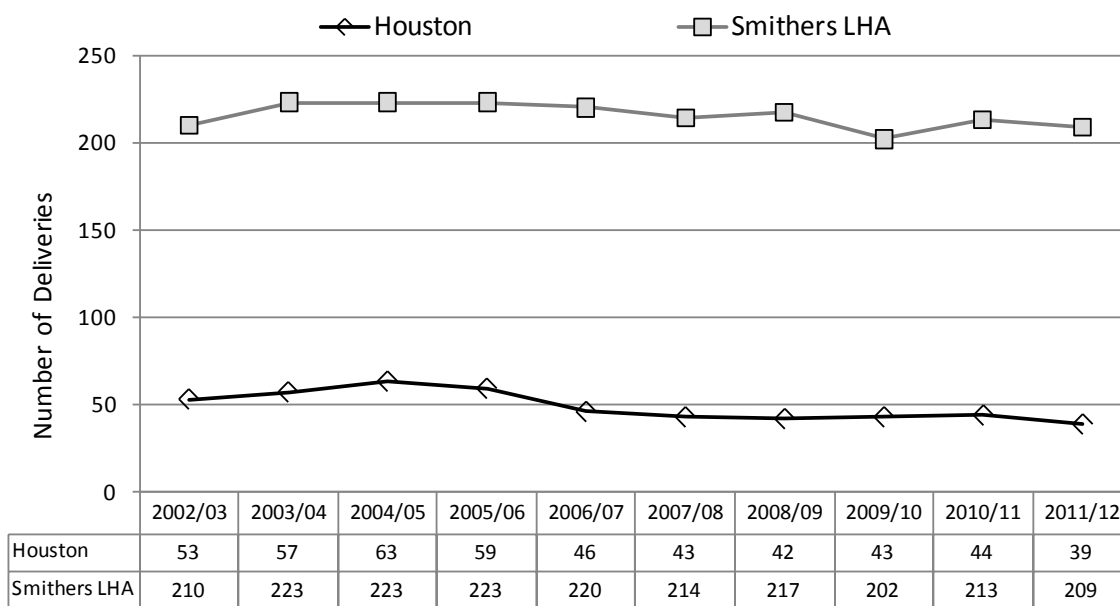
Northwest Health Service Delivery Area: Population Projection						Population Change 2015 - 2030	
Broad Age Groups	2010	2015	2020	2025	2030	number	%
<20	20,042	18,491	17,763	17,227	16,745	-1,746	-9.4
20-44	23,639	23,426	23,271	23,475	23,786	360	1.5
45-64	23,018	23,064	22,078	20,082	18,432	-4,632	-20.1
65+	8,798	11,205	14,285	17,477	19,898	8,693	77.6
Total Population	75,497	76,186	77,397	78,261	78,861	2,675	3.5
Focus on Seniors						number	%
65+	8,798	11,205	14,285	17,477	19,898	8,693	77.6
75+	3,405	4,110	5,397	7,068	8,940	4,830	117.5
85+	837	1,207	1,548	1,821	2,384	1,177	97.5
90+	307	435	706	820	939	504	115.9

About these Population Forecasts: These projections incorporate the known trends in terms of births, deaths, migration, fertility, age-group (cohort) survival etc. The extra populations that "might" result from the many anticipated projects in the north are not yet explicitly considered. At best, these projections reflect a base-case of what our future population might look like if currently known trends continue into the future. For methodological reasons, these forecasts are not produced at the community level.

A Good Strong Start in Life is more likely if infants, children and all family members are as healthy as possible. In thinking about this we consider many factors including trends in the number of mothers delivering babies and the locations where the infants are delivered.

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

Deliveries per year by Houston DM mothers and Smithers LHA mothers: ¹⁰

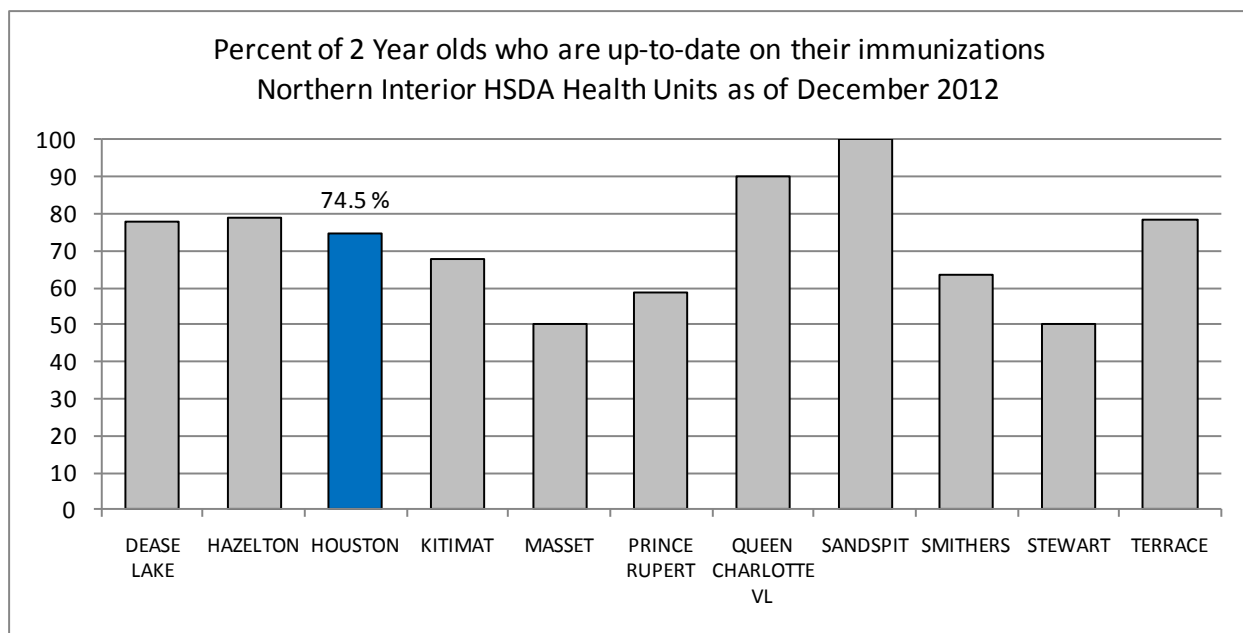


Delivery locations for Houston mothers (five year summary)

Mom's Home Community	Delivery Location: 2007/08 – 2011/12 [^]						Total Deliveries
	Bulkley Valley	UHNBC	Mills Memorial	Home Births	Wrinch Memorial	Other BC Location	
Bulkley-Nechako A	255	4	2	7	1	7	276
Bulkley-Nechako G	5	1	2	0	0	1	9
Houston (DM)	198	6	3	0	0	4	211
Smithers (T)	389	10	11	2	4	8	424
Telkwa (VL)	127	2	3	0	0	3	135
Total Deliveries	974	23	21	9	5	23	1,055

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. ^{11, 12}

Because immunizations 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 Houston area, who are up-to-date with their immunizations, is 74.5%. ¹³



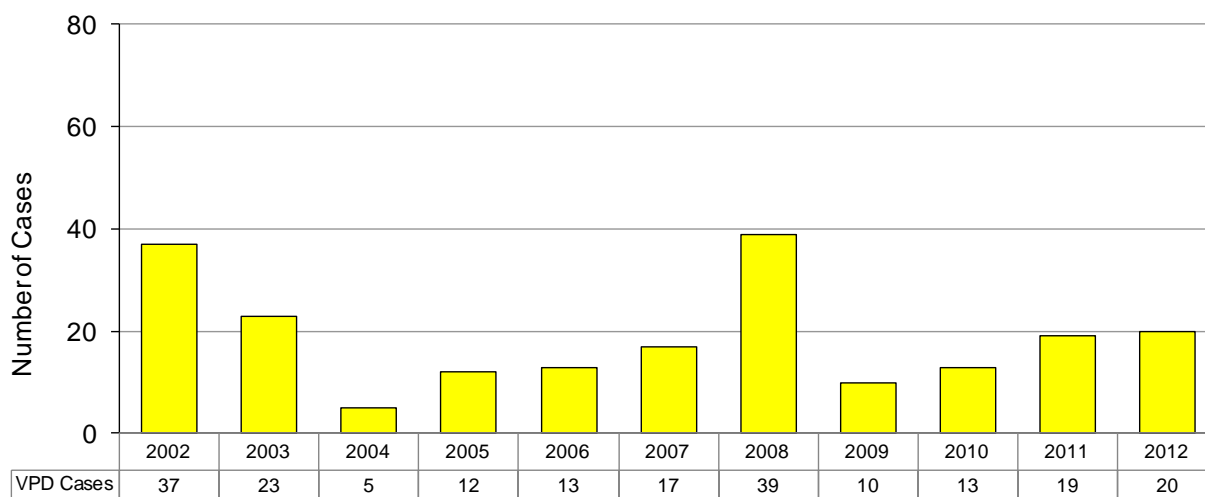
The above graph represents children who were born during the year 2010 and who were two years of age as of Dec 31st, 2012. To be considered as up-to-date for their age, two year old children must have completed the following immunizations by their second birthday:

- 4 doses of DTP vaccine
 - 3 doses of Polio vaccine
 - 3 doses of Hepatitis B vaccine
 - 1 dose each of Measles, Mumps and Rubella vaccines
 - at least 2 doses of Pneumococcal conjugate vaccine
 - at least 1 dose of Meningococcal conjugate vaccine
 - at least 1 dose of Haemophilus Influenza B vaccine after month 15
 - 1 dose of Varicella (chicken-pox) vaccine or past disease (i.e. immune) by the 2nd birthday.
- Note: DTP = Diphtheria, Tetanus and Pertussis (whooping cough).

Vaccine Preventable Diseases (VPD) are illnesses that may have been avoided if individuals and communities were sufficiently immunized.

This page presents a summary of the most frequently reported Vaccine Preventable Diseases for the Northwest Health Service Delivery Area.

Vaccine Preventable Disease Cases in Northwest BC: 2002 - 2012



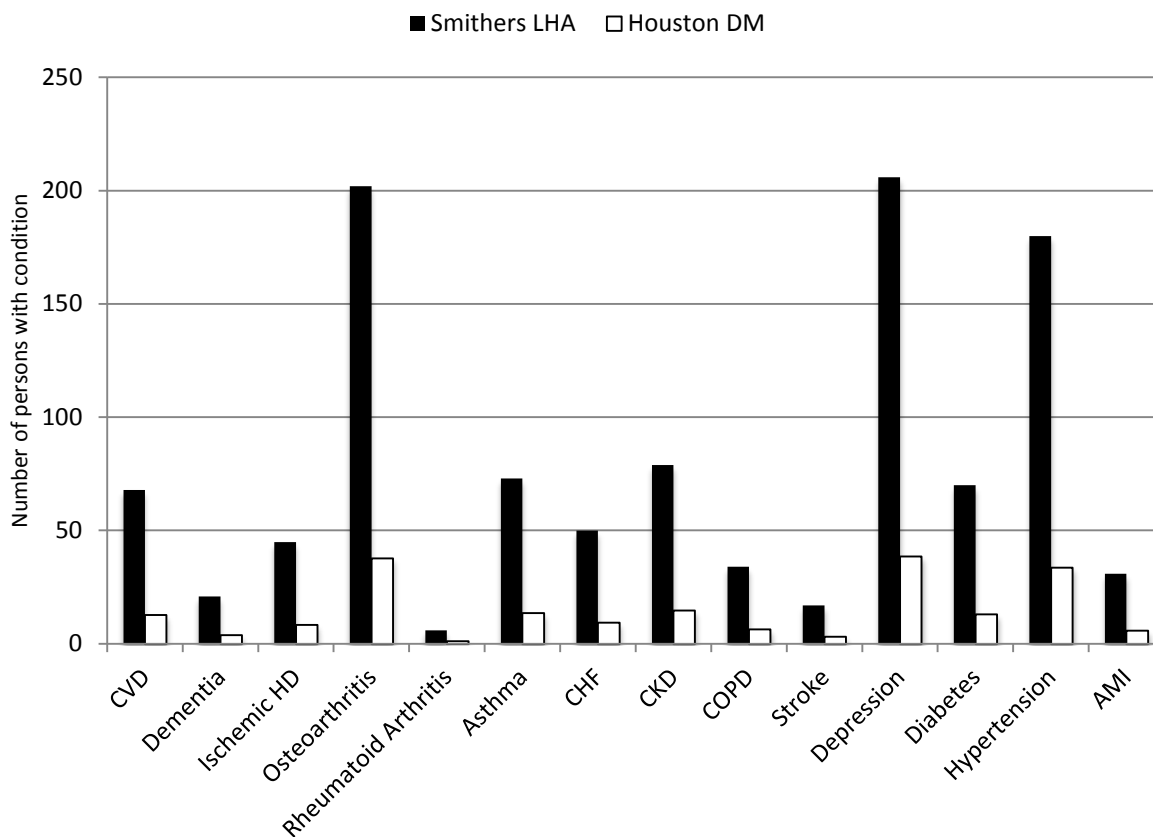
VPD in Northwest BC: Cases by Community 2002 - 2012 ¹⁴												
Community	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total
Dease Lake	0	1	0	0	0	1	0	0	0	0	0	2
Hazelton	1	8	0	0	1	3	2	1	2	0	0	18
Houston	14	1	2	0	0	0	2	0	0	0	0	19
Kitimat	1	2	1	0	0	0	0	2	0	2	1	9
Masset	1	1	0	0	0	1	1	0	0	2	3	9
Prince Rupert	8	4	0	7	5	4	2	2	8	9	5	54
QC Village	0	0	1	0	0	2	2	0	0	0	0	5
Smithers	9	1	1	2	4	4	25	2	1	3	4	56
Stewart	0	0	0	0	0	0	1	0	0	0	0	1
Terrace	3	5	0	3	3	2	4	3	2	3	7	35
Total	37	23	5	12	13	17	39	10	13	19	20	208

From 2002 to 2012, the most frequently reported VPDs in the Northwest HSDA were:

- Hepatitis B - 75 cases
- Pertussis (whooping cough) - 68 cases.
- Invasive Pneumococcal Disease - 47 cases
- Invasive Meningococcal disease – 8 cases
- Haemophilus Influenza B – 7 cases.

Chronic Diseases tend to accumulate with age and limit our independence. Our personal choices 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 how we age and whether we remain free from certain types of cancers and chronic illnesses. ^{15, 16, 17, 18}

Estimated numbers of new cases of selected chronic conditions Smithers LHA and Houston DM residents: 2010-2011



Chronic Disease Estimates for Smithers LHA and Houston DM: 2010 - 11					
Chronic Conditions	Existing or treated cases		New cases / yr		Cost per patient / year
	Houston DM	LHA	Houston DM	LHA	
Cardiovascular Disease (CVD)	137	733	13	68	\$8,091
Dementia	28	151	4	21	\$6,525
Ischemic Heart Diseases (IHD)	98	522	8	45	\$7,856
Osteoarthritis	327	1,750	38	202	\$4,084
Rheumatoid Arthritis	25	132	1	6	\$4,895
Asthma	227	1,213	14	73	\$1,413
Congestive Heart Failure (CHF)	69	369	9	50	\$10,079
Chronic Kidney Disease (CKD)	67	360	15	79	\$9,556
COPD	50	266	6	34	\$10,913
Stroke	26	139	3	17	\$9,518
Depression	838	4,480	39	206	\$2,619

Healthy and independent seniors are what we want to see when we look around the communities in northern BC. The population however, is aging and with that often comes an accumulation of chronic health conditions that inhibit our independence.

Home support and other services provided by Northern Health intend to keep people healthy and independent. As of March 2013, there were 449 northwest BC residents receiving long-term home-support services. Here is an abbreviated profile of these residents.¹⁹

Male	36 %	Married	23 %	Aged 75+	67 %
Female	64 %	Widowed	46 %	Aboriginal	23 %
Frequently Noted Health Conditions					
Hypertension	61 %	Diabetes	26 %	Any Psychiatric Diagnosis	24%
Arthritis	51 %	Chronic Arterial	24 %	Osteoporosis / Cataract	22%
Clients with Multiple Health Conditions					
≤ 3 Conditions	25 %	3 - 5 Conditions	35 %	≥5 Conditions	40 %
Clients with Cognitive Impairment (Cognitive Performance Score)					
No impairment	48 %	Borderline /mild	42 %	Moderate	6 %
Clients with independence difficulty in 1- 3 daily activities (IADL Difficulty Scale)					
No difficulty	33 %	Some difficulty	50 %	Great difficulty	17 %

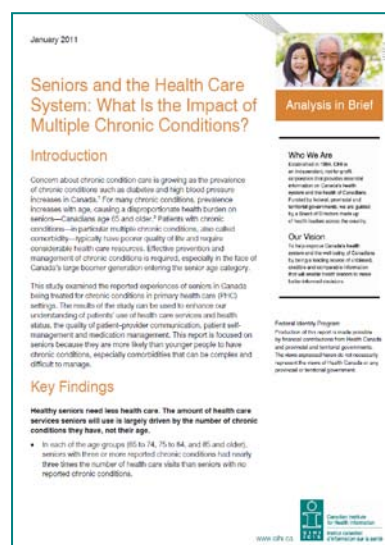
How do we compare to the rest of Canada?

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.²⁰

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?*



This publication is available from the Canadian Institute for Health Information: https://secure.cihi.ca/free_products/air-chronic_disease_aib_en.pdf

Acute care (hospital) services are an important part of the health care services continuum. This page provides a 5 year snap-shot of where residents received acute care services and a glimpse into the activities occurring at local facilities.

Location where inpatient hospital services were received:²¹

For Houston residents during the five year period: 2008/09 – 2012/13.							
Number of Cases and Days	Location of Hospital Care						Total
	Smithers	Terrace	Prince Rupert	Other NH	Other BC	OOP	
Cases	1,218	113	56	321	251	15	1,974
Days	4,238	517	126	1,971	1,992	53	8,897

- 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.²²
- 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.

Facility Activities (selected measures).²³

No. 909 - Houston Health Centre					
Selected Measures	2008/09	2009/10	2010/11	2011/12	2012/13
Ambulatory visits (excl. E/R).	n/a	n/a	n/a	n/a	n/a
Emergency visits (excl. Ambul)	4,255	4,238	4,229	3,974	4,243
Lab Tests (excludes respiratory)	20,339	20,051	21,537	19,152	19,516
Medical Imaging Tests	1,849	1,684	1,584	1,604	1,299



Bulkley-Nechako Regional District



Legend

- Designated Placename
- Locality
- Highway
- Reserve
- Municipality
- Regional District Electoral Area

Prepared by BC Stats
Source: 2006 Census
Statistics Canada

References

- ¹ BC Stats, Community Fact Sheets: <http://www.bcstats.gov.bc.ca/StatisticsBySubject/SocialStatistics/CommunityFacts.aspx>
- ² BC Treaty Commission Statement of Intent Maps: GEO BC. <http://archive.ilmb.gov.bc.ca/cis/initiatives/treaty/index.html>
- 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 2013. <http://www.bcstats.gov.bc.ca/StatisticsBySubject/Demography/PopulationEstimates.aspx>
- ⁵ Population Estimates for Municipalities: BC Stats; 1996-2006, 2006-2012. <http://www.bcstats.gov.bc.ca/StatisticsBySubject/Demography/PopulationEstimates.aspx>
- ⁶ BC Stats: Population Estimates for Regional Districts: PEOPLE 2013. <http://www.bcstats.gov.bc.ca/StatisticsBySubject/Demography/PopulationEstimates.aspx>
- ⁷ BC Vital Statistics Annual Report: 2011. <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 Human Early Learning Partnership; the Early Development Index: Wave 3. <http://earlylearning.ubc.ca/edi/>
- ⁹ BC Stats: Population Projections: PEOPLE 2013: Published August 2013.
- ¹⁰ Northern Health Resident Mothers that Delivered a Baby in British Columbia, by Resident Municipality: Prepared for Northern Health by Perinatal Services BC. Request 211051: April 24, 2013.
- ¹¹ 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>
- ¹² Small Area Populations Projections (P.E.O.P.L.E.): Technical Paper. BC Stats, July 2009. (mortality: page 10) <http://www.bcstats.gov.bc.ca/StatisticsBySubject/Demography/TechnicalPapers.aspx>
- ¹³ 2010 Cohort (2 year olds) Date of Birth Jan 01, 2010 to Dec 30, 2010. Up-to-date for age: (2010 definition). Data extracted Jan 15, 2013: Prepared by CM for JMH / MMP: Northern Health Public Health: August 2013.
- ¹⁴ Vaccine Preventable Disease: Northern Health-Public Health Internal Files: August 2013.
- ¹⁵ Population Patterns of Chronic Health Conditions in Canada: Health Council of Canada. <http://healthcouncilcanada.ca>
- ¹⁶ The Cost of Chronic Disease in Canada: GPI Atlantic. 2004. <http://gpiatlantic.org/pdf/health/chroniccanada.pdf>
- ¹⁷ Prevention: British Columbia Cancer Agency. 2009. <http://www.bccancer.bc.ca/PPI/Prevention/default.htm>
- ¹⁸ 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>
- ¹⁹ Inter-RAI Client Assessment Summary: Northern Health. Summary as of March 31, 2013. Data extracted July, 2013. Northern Health: Home and Community Care Services.
- ²⁰ Seniors and the Health Care System: What is the Impact of Multiple Chronic Conditions? CIHI, January 2011. <https://secure.cihi.ca/estore/productFamily.htm?locale=en&pf=PFC1575>
- ²¹ Hospitalizations by patient's home community 2003/ 04 to 2012/13: Special Analysis by the BC Ministry of Health for Northern Health. Project No. 2013_00828. Revised and Updated: September 2013.
- ²² Alternate Level of Care in Canada: CIHI. <https://secure.cihi.ca/estore/productSeries.htm?pc=PCC456>
- ²³ Northern Facility Activity Summaries from Northern Health Finance: Extracted August 206, 2013..