

**Health Regions** 2005

# Boundaries and correspondence with census geography





Statistique Canada



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## **Health regions 2005**

## **Background**

In recent years there has been an increasing demand for relevant health information at a 'community' level. As a result, health regions have become an important geographic unit by which health and health-related data are produced.

Health regions are legislated administrative areas defined by provincial ministries of health. These administrative areas represent geographic areas of responsibility for hospital boards or regional health authorities. Health regions, being provincial administrative areas, are subject to change.

The first national health region geographic product was created by Statistics Canada in collaboration with provincial health ministries. *Health regions 2000 - Boundaries, geographic information and population estimates* (Cat. no. 82F0082XCB) was released on a CD-ROM by the Health Statistics Division of Statistics Canada in October 2000. The reference date for these health region boundaries was January 2000. In May 2003, Health Statistics Division produced the second version of this product. *Health Regions 2003 - Boundaries, geographic information and population estimates (Cat. No. 82F0082XCB)* was released in the bi-annual electronic publication of <u>Health Indicators</u>. *Health Regions 2003* reflects the boundaries and names in effect as of June 2003 and provides the geographic linkage to 1996 and 2001 Censuses.

Since the 'Health Regions 2003' product was created, a number of provinces have undergone regional restructuring of health administration with substantial boundary changes, especially in Newfoundland and Labrador and Ontario. Other provinces have also adjusted their boundaries and health region names. In 2005, work began to bring the health regions recognised by Statistics Canada up to date. Health Regions 2005 reflects the boundaries and names in effect as of June 2005 and, like the 2003 product, provides the geographic linkage to 1996 and 2001 Censuses.

## **Description**

The generic term "health region" applies to a variety of administrative areas across Canada that are defined by provincial ministries of health. For complete Canadian coverage, each northern territory represents a health region.

The following table describes the health regions, by province, with reference to the provincial legislation under which these areas have been defined:

Table 1: Health regions in Canada, 2005

Province /territory	Health Regions 2005	Units	Relevant Legislation
N.L.	Regional Integrated Health Authorities <sup>1</sup>	4	Regional Integrated Health Authorities Order under s.4 and s.21 of the Hospitals Act (O.C.) 2005-052)
P.E.I.	Health Regions	4	Bill No. 54, Chapter 42, <i>Health Services Act</i> . Ministerial Order dated June 7 <sup>th</sup> , 2005; Bill No. 56, Chapter 39, <i>Health and Community Services Reorganization Act</i> . Ministerial Order dated June 7 <sup>th</sup> , 2005
N.S.	Zones <sup>2</sup>	6	Health Authorities Act (Statutes of Nova Scotia 2000, c. 6) sec.84
N.B.	Health Regions	7	Regional Health Authorities Act (Chapter R-5.05) - Schedule A
Que.	Régions sociosanitaires <sup>3</sup> (RSS)	18	Article 339 de la Loi sur les services de santé et les services sociaux (L.R.Q.,chapitre S-4.2); la Loi sur les services de santé et les services sociaux (L.R.Q., chapitre S-5); les décrets 1213-78,1813-91,1815-91,1816-91, 1817-91, 1818-91, 1819-91, 1820-91, 1821-91, 1822-91, 1823-91, 1824-91, 1825-91, 1826-91, 1827-91, 1828-91, 655-94.
Ont.	Public Health Units <sup>4</sup> Local Health Integration Networks <sup>5</sup>	14	Regulation 553 (Revised Regulations of Ontario), pursuant to Health Protection and Promotion Act R.S.O. 1990, Amended to O. Reg. 64/05  legislation unavailable at this time
Man.	Regional Health Authorities	11	Regional Health Authorities Establishment Regulation (regulation 207/97) pursuant to The Regional Health Authorities Act (C.C.S.M. c. R34); amended Regulations 99/2002 and 169/2002.
Sask.	Regional Health Authorities	13	The Regional Health Services Act, Chapter R-8.2; The Regional Health Services Administration Regulations, Chapter R-8.2 Reg 1
Alta.	Regional Health Authorities <sup>6</sup>	9	Regional Health Authorities Act Chapter R-10

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<sup>&</sup>lt;sup>1</sup> In Newfoundland and Labrador, six community health regions were reduced to four regional integrated health authorities (RIHAs). Boundaries are unchanged for two RIHAs and the other four have been collapsed into two. Name and code changes in effect as of March 1<sup>st</sup>, 2005

<sup>&</sup>lt;sup>2</sup> Nova Scotia health zones aggregate to the nine district health authorities.

<sup>&</sup>lt;sup>3</sup> Régions sociosanitaires in Quebec coincide with the 17 administrative regions in the province.

<sup>&</sup>lt;sup>4</sup> Ontario Public Health Units (PHU) are official health agencies that administer health promotion and disease prevention programs. As of April 1<sup>st</sup>, 2005 Muskoka-Parry Sound Health Unit dissolved. The Muskoka part of this region was combined with Simcoe Country District and Parry Sound joined North Bay.

<sup>&</sup>lt;sup>5</sup> Ontario Local Integrated Networks (LHINs) are boundaries that were developed based on travel patterns of residents to acute hospital care and replace the previous district health councils.

<sup>&</sup>lt;sup>6</sup> Slight boundary change in which the Calgary Health Region gained a population of 1.2% from David Thompson Regional Health Authority.

Table 1: Health regions in Canada, 2005

Province	Health Regions	Units	Relevant Legislation	
/territory	2005			
B.C.	Health Service	16	Health Authorities Amendment Act, Statutes of B.C. 2002 (see	
	Delivery Areas		B.C. Regulation 225/2003 also); Health Authorities Act Chapter	
	$(HSDA)^7$		180 (and associated Regulations)	
Y.T.	-	1*	An Act To Amend the Public Health Act, Statutes of the Yukon,	
			1997	
N.W.T.	-	1*	Consolidation of Northwest Territories Health District	
			Establishment Order, R-080-2000 (pursuant to Public Health Act)	
Nvt.	-	1*	Public Health Act (Statutes of Northwest Territories 1998 chapter	
			5)	

<sup>\*</sup> Entire territory represents a health region

## Health region code structure

A four digit numeric code is used to uniquely identify health regions. The first two digits represent the province, and the second two digits represent the health region. These codes reflect the same codes used by the provincial ministries of health. For those provinces where a numeric code is not applicable, a two-digit code was assigned. Ontario uses a 4-digit code for public health units. This code was truncated to the last two digits for consistency in the national health region code structure. Since Ontario has two sets of health regions, which do not entirely relate hierarchically, their codes are unique within the province.

The names of the health regions also represent the official names used by the provinces. See Appendix 1 – Health regions 2005: Names and codes by province and territory.

## Geographic coding tools

Production of health region level data requires geographic coding tools. Since census geography does not recognize provincial health region boundaries, a health region-to-census geography correspondence file provides the linkage between health regions and their component census geographic units. These correspondence files use the smallest relevant census geographic unit.

To accommodate various data sources producing health region level data, linkage has been created for both 1996 and 2001 Census geographies. The layout of these correspondence files includes the seven-digit Standard Geographic Classification (SGC) code. The SGC code uniquely represents census subdivisions (CSD).

Most health regions comprise entire CSDs (see Table 2). However, there are some cases where health regions do not conform with municipalities. The 1996 Census linkage was done at the enumeration area (EA) level, while the 2001 Census linkage was created at the dissemination area (DA) level (and block level for Alberta, Saskatchewan and Manitoba). Even these smaller geographic areas (EA/DA/blocks) sometime straddle health region

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<sup>&</sup>lt;sup>7</sup> Health Service Delivery Areas (HSDAs) in British Columbia aggregate into five Health Authorities (HAs).

boundaries. In those cases, the entire EA or DA (or block) was assigned, in conjunction with the affected province, to just one health region and therefore represents a "best fit" with census geography.

Other data sources use postal codes to geographically reference data records. These data are first converted to census geographic units using the Statistics Canada postal code conversion file, then linked to health regions based on the correspondence file.

Correspondence files were provided by Alberta (Alberta Treasury supplied files with 1996 EA and 2001 link to Census blocks) and British Columbia (BC Stats provided EA and 2001 link to DAs).

**Table 2: Census geography definitions** 

Geographic Term	Definition
Census Subdivision (CSD)	A municipality or an area that is deemed to be equivalent to a
	municipality for statistical reporting purposes (e.g., as an
	Indian reserve or an unorganized territory). Municipal status is
	defined by laws in effect in each province and territory in
	Canada.
1996 Census enumeration area	The geographic area canvassed by one census representative. It
(EA)	is the smallest standard geographic area for which census
	(1996 and previous) data are reported. All the territory of
	Canada is covered by EAs.
2001 Census dissemination area	Small area composed of one or more neighbouring blocks, with
(DA)	a population of 400 to 700 persons. All of Canada is divided
	into dissemination areas.
2001 Census block	An area equivalent to a city block bounded by intersecting
	streets. These areas cover all of Canada.

The dissemination/enumeration area-to-health region (DA/EA-to-HR) correspondence files provided in the *Health Regions - 2005* product are available in comma-separated value (.CSV) format for each province and for the northern territories. The record layout of the files is shown in the following tables.

Table 3: 2001 Census health region correspondence file layout

Variable name	Comments
DAUID / BLKUID**	(dissemination area unique ID / block unique ID)
	PR-CD-DA (province, census division, dissemination
	area, census block**)
CSDUID	(Standard Geographical Classification [SGC] code)
	PR-CD-CSD (province, census division, census
	subdivision)
PR-HRUID	(health region code)
	PR-HR (province, health region) unique ID
HRNAME	(health region name)
POP2001	(unadjusted 2001 Census population count)

<sup>\*\*10-</sup>digit census block ID (BLKUID) applies to the provinces of Manitoba, Saskatchewan, and Alberta only. The first 8 digits comprise the DA code (DAUID) for these provinces.

Table 4: 1996 Census health region correspondence file layout, (national, Ont. LHIN & N.S. DHA)

Variable name	Comments
EAUID	(enumeration area unique ID)
	PR-FED-EA (province, federal electoral district,
	enumeration area)
CSDUID	(Standard Geographical Classification [SGC] code)
	PR-CD-CSD (province, census division, census
	subdivision)
HRUID	(health region code)
	PR-HR (province, health region) unique ID
HRNAME	(health region name)
POP1996	(unadjusted 1996 Census population count)

## Health regions and standard geography

For the most part, health regions can be described as groupings of counties (census divisions) or municipalities (census subdivisions). This description holds especially true in the Atlantic provinces, Quebec, and Ontario (with minor exceptions in northern Ontario). In the western provinces, health regions are less likely to follow census division or census subdivision boundaries.

The following table provides a count, by province, of census subdivisions that fall in more than one health region.

Table 5: Census subdivisions linked to more than one health region

Provinces with splits	1996 CSDs	2001 CSDs
Newfoundland and Labrador	1	1
Ontario PHU	5	4
Manitoba	4	8
Saskatchewan	21	48
Alberta	19	7
British Columbia	15	12

## **Boundary files**

The health region boundaries provided in this product are based on 2001 Census geographic units. The smallest geographic unit available has been used as the building block to define health regions. In all provinces except Alberta, Saskatchewan and Manitoba, the dissemination area was used to define health regions. In the western provinces, the DA is not ideal and would create additional distortion as a building block. Therefore, the census block (a smaller geographic unit introduced for 2001 Census) has been used to improve the accuracy of these boundaries. Even with this improved resolution, the boundary files do not

always reflect the true, legal limits recognized by the provinces. For the most part, they are based on a best-fit linkage to census geography. To maximize comparability, the provincial ministries of health shared their census linkage files where applicable.

## Method used to create health region 2005 boundary files

The latest boundaries for health regions were produced under several different circumstances:

## 1. Provinces reporting no geographic changes since 2003

The majority of the provinces and all of the territories did not report any geographic changes since the 2003 update. Contacts in the health ministries in Prince Edward Island, Nova Scotia (Zones) New Brunswick, Quebec, Manitoba, Saskatchewan, British Columbia, Yukon, Northwest Territories and Nunavut reported no health region boundary changes.

#### 2. Boundary changes – correspondence files created by Statistics Canada

In Newfoundland and Labrador, the 2005 health regions were reduced from six community health regions to four regional integrated health authorities. Boundaries were unchanged for two of the regions and the remaining four were collapsed into two. The new boundaries were created based on aggregations of the 2001 census subdivision (municipality) components. In Nova Scotia, current geographical boundaries using zones remained unchanged. However, a correspondence file to reflect the nine administrative regions of the province was created. Contacts in the province provided documentation that directed the assignment of 2001 census subdivisions to the appropriate district health authority. Public health units (PHU) in Ontario, based on 2001 census subdivision components, underwent minor changes. The number of PHUs decreased from thirty-seven to thirty-six when one PHU was dissolved and the CSDs within its boundaries were reassigned to two other PHUs.

## 3. Boundary changes – correspondence files provided by the province

In 2003, Alberta (Alberta Treasury) provided correspondence files with linkage to 2001 census units from which the boundaries were created. Alberta provided the linkage between the latest regional health authority boundaries using the best-fit to 2001 census blocks. These DA and census block based files were used to update the new health region boundary file. In 2005, there was a minor boundary change between two regional health authorities, affecting a population of approximately 13,000 residents. For more information about the quality of the geographic linkages contact <u>Alberta Treasury</u>.

The files for the new local health integrated networks (LHIN) in Ontario were provided by the Ontario Ministry of Health. These new boundaries are based on 2001 census subdivision components.

## **Boundary file formats**

All digital health region boundaries in the *Health Regions - 2005* product are available in two formats: ARC/INFO® EXPORT and MapInfo®, Version 5.0 for Windows. The coordinates are in latitude/longitude.

The extension of the ARC/INFO® EXPORT files is E00. In MapInfo® for Windows, a self-extracting executable (EXE) is provided. This file expands to provide the four files, with different extensions, for each province. The four extensions are: TAB, DAT, ID, and MAP.

Boundary files are provided as one national boundary file and as individual provincial boundary files.

## **Projection information**

The map projection parameters used to create the health region boundaries are as follows;

Lambert Conformal Conic
Datum = NAD83
Units = meters
Spheroid = GRS North American 83

#### Parameters:

1st standard parallel: 49° 00' 00" 2nd standard parallel: 77° 00' 00" Central Meridian: -91° 52' 00"

Latitude of Projection Origin: 63° 23' 26.43"

False Easting: 6200000 False Northing: 3000000

## Minimum system requirements

- Pentium PC
- Windows 98 / NT 4.0
- Minimum 32 MB RAM
- Minimum 30 MB free space on Hard disk
- Microsoft Mouse or compatible

#### To use MapInfo boundary files:

MapInfo Version 5.0 for Windows or newer

## To use ARC/INFO EXPORT boundary files:

ARC/INFO Version 7.0 or newer ArcView Version 3.0 or newer

## Acknowledgements

Health Statistics Division worked closely with the provincial Ministries of Health and the Geography Division of Statistics Canada to produce this product. BC Stats and Alberta Treasury also contributed directly to this work by providing health region-to-census geography linkage files. Saskatchewan Health and Manitoba Health provided digital boundaries (shape files).

## Appendix 1: Health regions in Canada, 2005

#### Newfoundland and Labrador

- 1011 Eastern Regional Integrated Health Authority
- 1012 Central Regional Integrated Health Authority
- 1013 Western Regional Integrated Health Authority
- 1014 Labrador-Grenfell Regional Integrated Health Authority

#### Prince Edward Island

- 1101 West Prince
- 1102 East Prince
- 1103 Queens
- 1104 Kings

#### Nova Scotia

- 1201 Zone 1
- 1202 Zone 2
- 1203 Zone 3
- 1204 Zone 4
- 1205 Zone 5
- 1206 Zone 6
- 1211 DHA 1
- 1212 DHA 2
- 1213 DHA 3
- 1214 DHA 4
- 1215 DHA 5
- 1216 DHA 6
- 1217 DHA 7
- 1218 DHA 8
- 1219 DHA 9

#### New Brunswick

- 1301 Region 1
- 1302 Region 2
- Region 3
- 1304 Region 4
- Region 5
- Region 6
- 1307 Region 7

#### Quebec

- 2401 Région du Bas-Saint-Laurent
- 2402 Région du Saguenay Lac-Saint-Jean
- 2403 Région de la Capitale-Nationale
- 2404 Région de la Mauricie et du Centre-du-Québec
- 2405 Région de l'Estrie
- 2406 Région de Montréal
- 2407 Région de l'Outaouais
- 2408 Région de l'Abitibi-Témiscamingue
- 2409 Région de la Côte-Nord
- 2410 Région du Nord-du-Québec
- 2411 Région de la Gaspésie Îles-de-la-Madeleine
- 2412 Région de la Chaudière-Appalaches
- 2413 Région de Laval
- 2414 Région de Lanaudière
- 2415 Région des Laurentides
- 2416 Région de la Montérégie
- 2417 Région du Nunavik
- 2418 Région des Terres-Cries-de-la-Baie-James

## Appendix 1: Health regions in Canada, 2005

Ontario	
	ealth Integrated Networks (LHINs)
3501	Erie St. Clair
3502	South West
3503	Waterloo Wellington
3504	Hamilton Niagara Haldimand Brant
3505	Central West
3506	Mississauga Halton
3507	Toronto Central
3508	Central
3509	Central East
3510	South East
3511	Champlain
3512	North Simcoe Muskoka
3513	North East
3514	North West
Public H	<u>lealth Units</u>
3526	The District of Algoma Health Unit
3527	Brant County Health Unit
3530	Durham Regional Health Unit
3531	Elgin-St Thomas Health Unit
3533	Grey Bruce Health Unit
3534	Haldimand-Norfolk Health Unit
3535	Haliburton, Kawartha, Pine Ridge District Health Unit
3536	Halton Regional Health Unit
3537	City of Hamilton Health Unit
3538	Hastings and Prince Edward Counties Health Unit
3539	Huron County Health Unit
3540	Chatham-Kent Health Unit
3541	Kingston, Frontenac and Lennox and Addington Health Unit
3542	Lambton Health Unit
3543	Leeds, Grenville and Lanark District Health Unit
3544	Middlesex-London Health Unit
3546	Niagara Regional Area Health Unit
3547	North Bay Parry Sound District Health Unit
3549	Northwestern Health Unit
3551	City of Ottawa Health Unit
3552	Oxford County Health Unit
3553	Peel Regional Health Unit
3554	Perth District Health Unit
3555	Peterborough County-City Health Unit
3556	Porcupine Health Unit
3557	Renfrew County and District Health Unit
3558	The Eastern Ontario Health Unit
3560	Simcoe Muskoka District Health Unit
3561	Sudbury and District Health Unit
3562	Thunder Bay District Health Unit
3563	Timiskaming Health Unit
3565	Waterloo Health Unit
3566	Wellington-Dufferin-Guelph Health Unit
3568	Windsor-Essex County Health Unit
3570	York Regional Health Unit
3595	City of Toronto Health Unit
Manitol	ha
4610	Winnipeg Regional Health Authority
4615	Brandon Regional Health Authority

4610	Winnipeg Regional Health Authority
4615	Brandon Regional Health Authority
4620	North Eastman Regional Health Authority
4625	South Fastman Regional Health Authority

## Appendix 1: Health regions in Canada, 2005

#### Manitoba

Interlake Regional Health Authority
Central Regional Health Authority
Assiniboine Regional Health Authority
Parkland Regional Health Authority
Norman Regional Health Authority
Burntwood Regional Health Authority
Churchill Regional Health Authority

#### Saskatchewan

- Sun Country Regional Health Authority
   Five Hills Regional Health Authority
   Cypress Regional Health Authority
   Regina Qu'Appelle Regional Health Authority
- 4705 Sunrise Regional Health Authority
  4706 Saskatoon Regional Health Authority
- 4707 Heartland Regional Health Authority4708 Kelsey Trail Regional Health Authority
- 4709 Prince Albert Parkland Regional Health Authority
- 4710 Prairie North Regional Health Authority
- 4711 Mamawetan Churchill River Regional Health Authority
- 4712 Keewatin Yatthé Regional Health Authority
- 4713 Athabasca Health Authority

#### Alberta

- 4820 Chinook Regional Health Authority
- 4821 Palliser Health Region4822 Calgary Health Region
- 4822 Calgary Health Region4823 David Thompson Regional Health Authority
- 4824 East Central Health
- 4825 Capital Health
- 4826 Aspen Regional Health Authority
- 4827 Peace Country Health
- 4828 Northern Lights Health Region

## British Columbia

- 5911 East Kootenay
- 5912 Kootenay-Boundary
- 5913 Okanagan
- 5914 Thompson/Cariboo
- 5921 Fraser East
- 5922 Fraser North
- 5923 Fraser South
- 5931 Richmond
- 5932 Vancouver
- 5933 North Shore/Coast Garibaldi
- 5941 South Vancouver Island
- 5942 Central Vancouver Island
- 5943 North Vancouver Island
- 5951 Northwest
- 5952 Northern Interior
- 5953 Northeast

#### Yukon Territory

6001 Yukon Territory

#### Northwest Territories

6101 Northwest Territories

## Nunavut

6201 Nunavut

Appendix 2: Summary of changes to health regions, 2003 and 2005

Prov	Health regions 2003	Units	Health Regions 2005	Units	Comments
N.L.	Community Health Regions	6	Regional Integrated Health Authorities (RIHAs)	4	<ul> <li>RHIAs came into effect March 1<sup>st</sup>, 2005</li> <li>boundaries unchanged for two regions and the other four regions have been collapsed into two. Name and code changes introduced.</li> </ul>
P.E.I.	Health Regions	4	Health Regions	4	- current restructuring by province will collapse four administrative areas into one. Data will still be presented by the four health regions for consistency.
N.S.	Zones	6	Zones	6	- no change
			District Health Authorities	9	- administrative areas that can be aggregated to zones for statistical purposes except for a small discrepancy
N.B.	Health Regions	7	Health Regions	7	- no change
Que.	Régions sociosanitaires	18	Régions sociosanitaires	18	<ul> <li>name changes only</li> <li>2403 Québec becomes Capitale-Nationale</li> <li>2406 Montéal-Centre becomes Montréal</li> </ul>
Ont.	Public health units (PHUs)	37	PHUs	36	- public health unit of Muskoka-Parry Sound (3545) no longer exists – territory divided in part to North Bay Parry Sound District Health Unit (3547) and part to Simcoe Muskoka District Health Unit (3560)
	District health councils	16	LHINs	14	- LHINs came into effect on April 1, 2005 – boundaries were developed based on travel patterns of residents to acute hospital care.
Man.	Regional Health Authorities	11	Regional Health Authorities	11	- no change
Sask.	Regional Health Authorities	13	Regional Health Authorities	13	- no change
Alta.	Regional Health Authorities	9	Regional Health Authorities	9	- change affecting boundary between Calgary Health Region and David Thompson Health Region
B.C.	Health Service Delivery Areas (HSDA)	16	Health Service Delivery Areas (HSDA)	16	- no change
Y.T.	Territory	1	Territory	1	- no change
N.W.T.	Territory	1	Territory	1	- no change
Nvt.	Territory	1	Territory	1	- no change

Appendix 3: Detailed list of census subdivisions split by two or more health regions, 2001

Newfoundland	CSD	HR	HR Name	Population	% population split in CSDs
1009021       1013       Western Regional Integrated Health Authority       499       19         1009021       1014       Labrador-Grenfell Regional Integrated Health Authority       2783       88         1009021       Sub total       3282       100         Ontario PHU         3554094       3556       Porcupine Health Unit       90       3185         3554094       3563       Timiskaming Health Unit       3185       9         3554094       Sub total       3275       100         3557095       3526       The District of Algoma Health Unit       6079       98         3557095       3556       Porcupine Health Unit       20       6         3558090       3549       Northwestern Health Unit       69       9         3558090       3549       Northwestern Health Unit       6102       96         3558090       3549       Northwestern Health Unit       7626       100         3560090       3556       Porcupine Health Unit       0       6         3560090       3556       Porcupine Health Unit       0       6         3560090       3560       Porcupine Health Unit       0       6         3560090       Subtotal				•	
1009021					
1009021         Sub total         3282         100           Ontario PHU         3554094         3556         Porcupine Health Unit         90         3554094           3554094         3563         Timiskaming Health Unit         3185         9           3557095         3526         The District of Algoma Health Unit         6079         96           3557095         3560         Porcupine Health Unit         20         66           3558090         3549         Northwestern Health Unit         69         100           3558090         3562         Thunder Bay District Health Unit         6102         96           3558090         3549         Northwestern Health Unit         6102         96           3558090         3549         Northwestern Health Unit         7626         100           3560090         3549         Northwestern Health Unit         0         0           3560090         3556         Porcupine Health Unit         0         0           3560090         3562         Thunder Bay District Health Unit         0         0           3560090         3562         Thunder Bay District Health Unit         0         0           4601094         4625         South Eastman			·		15.2%
Ontario PHU           3554094         3556         Porcupine Health Unit         90         3554094         3563         Timiskaming Health Unit         3185         9           3554094         Sub total         3275         100           3557095         3526         The District of Algoma Health Unit         6079         95           3557095         3556         Porcupine Health Unit         20         60           3558090         3549         Northwestern Health Unit         69         100           3558090         3562         Thunder Bay District Health Unit         6102         96           3558090         3549         Northwestern Health Unit         7626         100           3560090         3559         Northwestern Health Unit         0         6           3560090         3556         Porcupine Health Unit         0         6           3560090         3552         Thunder Bay District Health Unit         0         6           3560090         Subtotal         7626         100           4601094         4620         North Eastman         391         56           4601094         4625         South Eastman         279         4           4		1014			84.8%
3554094       3556       Porcupine Health Unit       90       3554094         3554094       Sub total       3275       100         3557095       3526       The District of Algoma Health Unit       6079       98         3557095       3556       Porcupine Health Unit       20       60         3558090       3549       Northwestern Health Unit       69       100         3558090       3562       Thunder Bay District Health Unit       6102       96         3558090       Sub total       6171       100         3560090       3549       Northwestern Health Unit       7626       100         3560090       3556       Porcupine Health Unit       0       0         3560090       3562       Thunder Bay District Health Unit       0       0         3560090       3562       Thunder Bay District Health Unit       0       0         3560090       Subtotal       7626       100         4601094       4620       North Eastman       391       56         4601094       Sub total       670       100         4602075       4625       South Eastman       4958       100         4602075       4640       Central	1009021		Sub total	3282	100.0%
3554094       3563       Timiskaming Health Unit       3185       9         3554094       Sub total       3275       10         3557095       3526       The District of Algoma Health Unit       6079       9         3557095       3556       Porcupine Health Unit       20       6         3558090       3549       Northwestern Health Unit       69         3558090       3562       Thunder Bay District Health Unit       6102       96         3558090       Sub total       6171       10         3560090       3549       Northwestern Health Unit       7626       10         3560090       3556       Porcupine Health Unit       0       0         3560090       3562       Thunder Bay District Health Unit       0       0         3560090       Subtotal       7626       10         4601094       4620       North Eastman       391       5         4601094       4625       South Eastman       279       4         4601094       Sub total       670       10         4602075       4640       Central       0       0	Ontario PHU				
3554094         Sub total         3275         100           3557095         3526         The District of Algoma Health Unit         6079         98           3557095         3556         Porcupine Health Unit         20         6099         100           3557095         Sub total         6099         100           3558090         3549         Northwestern Health Unit         69           3558090         Sub total         6171         100           3560090         3549         Northwestern Health Unit         7626         100           3560090         3556         Porcupine Health Unit         0         0           3560090         3556         Porcupine Health Unit         0         0           3560090         3562         Thunder Bay District Health Unit         0         0           3560090         Subtotal         7626         100           Manitoba         4601094         4620         North Eastman         391         56           4601094         4625         South Eastman         279         4           4601094         Sub total         670         100           4602075         4625         South Eastman         4958	3554094	3556	Porcupine Health Unit	90	2.7%
3557095       3526       The District of Algoma Health Unit       6079       99         3557095       3556       Porcupine Health Unit       20       6         3557095       Sub total       6099       10         3558090       3549       Northwestern Health Unit       69         3558090       Sub total       6171       10         3558090       Sub total       7626       10         3560090       3549       Northwestern Health Unit       0       6         3560090       3556       Porcupine Health Unit       0       6         3560090       3562       Thunder Bay District Health Unit       0       6         3560090       Subtotal       7626       10         Manitoba       4601094       4620       North Eastman       391       5         4601094       4625       South Eastman       279       4         4601094       Sub total       670       10         4602075       4625       South Eastman       4958       10         4602075       4640       Central       0       0	3554094	3563	Timiskaming Health Unit	3185	97.3%
3557095       3556       Porcupine Health Unit       20       6099       106         3557095       Sub total       6099       106         3558090       3549       Northwestern Health Unit       69         3558090       3562       Thunder Bay District Health Unit       6102       98         3558090       Sub total       6171       106         3560090       3549       Northwestern Health Unit       7626       106         3560090       3556       Porcupine Health Unit       0       0         3560090       3562       Thunder Bay District Health Unit       0       0         3560090       Subtotal       7626       106         Manitoba         4601094       4620       North Eastman       391       56         4601094       4625       South Eastman       279       4         4601094       Sub total       670       106         4602075       4625       South Eastman       4958       106         4602075       4640       Central       0       0	3554094		Sub total	3275	100.0%
3557095         Sub total         6099         100           3558090         3549         Northwestern Health Unit         69           3558090         3562         Thunder Bay District Health Unit         6102         98           3558090         Sub total         6171         10           3560090         3549         Northwestern Health Unit         7626         100           3560090         3556         Porcupine Health Unit         0         0           3560090         3562         Thunder Bay District Health Unit         0         0           3560090         Subtotal         7626         10           Manitoba         4601094         4620         North Eastman         391         56           4601094         4625         South Eastman         279         4           4601094         Sub total         670         10           4602075         4625         South Eastman         4958         10           4602075         4640         Central         0         0	3557095	3526	The District of Algoma Health Unit	6079	99.7%
3558090       3549       Northwestern Health Unit       69         3558090       3562       Thunder Bay District Health Unit       6102       98         3558090       Sub total       6171       100         3560090       3549       Northwestern Health Unit       7626       100         3560090       3556       Porcupine Health Unit       0       0         3560090       3562       Thunder Bay District Health Unit       0       0         3560090       Subtotal       7626       100         Manitoba         4601094       4620       North Eastman       391       56         4601094       4625       South Eastman       279       4         4601094       Sub total       670       100         4602075       4625       South Eastman       4958       100         4602075       4640       Central       0       0	3557095	3556	Porcupine Health Unit	20	0.3%
3558090       3562       Thunder Bay District Health Unit       6102       93         3558090       Sub total       6171       100         3560090       3549       Northwestern Health Unit       7626       100         3560090       3556       Porcupine Health Unit       0       0         3560090       3562       Thunder Bay District Health Unit       0       0         3560090       Subtotal       7626       100         Manitoba         4601094       4620       North Eastman       391       56         4601094       4625       South Eastman       279       4         4601094       Sub total       670       100         4602075       4625       South Eastman       4958       100         4602075       4640       Central       0       0	3557095		Sub total	6099	100.0%
3558090         Sub total         6171         100           3560090         3549         Northwestern Health Unit         7626         100           3560090         3556         Porcupine Health Unit         0         0           3560090         3562         Thunder Bay District Health Unit         0         0           3560090         Subtotal         7626         100           Manitoba           4601094         4620         North Eastman         391         56           4601094         4625         South Eastman         279         4           4601094         Sub total         670         100           4602075         4625         South Eastman         4958         100           4602075         4640         Central         0         0	3558090	3549	Northwestern Health Unit	69	1.1%
3560090       3549       Northwestern Health Unit       7626       100         3560090       3556       Porcupine Health Unit       0       0         3560090       3562       Thunder Bay District Health Unit       0       0         3560090       Subtotal       7626       100         Manitoba         4601094       4620       North Eastman       391       56         4601094       4625       South Eastman       279       46         4601094       Sub total       670       100         4602075       4625       South Eastman       4958       100         4602075       4640       Central       0       0	3558090	3562	Thunder Bay District Health Unit	6102	98.9%
3560090       3556       Porcupine Health Unit       0       0         3560090       3562       Thunder Bay District Health Unit       0       0         3560090       Subtotal       7626       10         Manitoba         4601094       4620       North Eastman       391       50         4601094       4625       South Eastman       279       4         4601094       Sub total       670       100         4602075       4625       South Eastman       4958       100         4602075       4640       Central       0       0	3558090		Sub total	6171	100.0%
3560090       3562       Thunder Bay District Health Unit       0       0         3560090       Subtotal       7626       100         Manitoba         4601094       4620       North Eastman       391       56         4601094       4625       South Eastman       279       4         4601094       Sub total       670       100         4602075       4625       South Eastman       4958       100         4602075       4640       Central       0       0	3560090	3549	Northwestern Health Unit	7626	100.0%
3560090       Subtotal       7626       106         Manitoba       4601094       4620       North Eastman       391       56         4601094       4625       South Eastman       279       4         4601094       Sub total       670       100         4602075       4625       South Eastman       4958       100         4602075       4640       Central       0       0	3560090	3556	Porcupine Health Unit	0	0.0%
Manitoba         4601094       4620       North Eastman       391       56         4601094       4625       South Eastman       279       4         4601094       Sub total       670       100         4602075       4625       South Eastman       4958       100         4602075       4640       Central       0       0	3560090	3562	Thunder Bay District Health Unit	0	0.0%
4601094       4620       North Eastman       391       56         4601094       4625       South Eastman       279       4         4601094       Sub total       670       100         4602075       4625       South Eastman       4958       100         4602075       4640       Central       0       0	3560090		Subtotal	7626	100.0%
4601094       4625       South Eastman       279       4         4601094       Sub total       670       100         4602075       4625       South Eastman       4958       100         4602075       4640       Central       0       0	Manitoba				
4601094       Sub total       670       100         4602075       4625       South Eastman       4958       100         4602075       4640       Central       0       0	4601094	4620	North Eastman	391	58.4%
4602075 4625 South Eastman 4958 100 4602075 4640 Central 0	4601094	4625	South Eastman	279	41.6%
4602075       4625       South Eastman       4958       100         4602075       4640       Central       0       0	4601004		Sub total	670	100.0%
4602075 4640 Central 0		1625			100.0%
					0.0%
4002075 Sub total 4936 10		4040		_	100.0%
4607065 4615 Brandon 0		1615			0.0%
				-	100.0%
		4045			100.0%
		4640			0.0%
					100.0%
		7070			100.0%
		4610			0.0%
, <del>g</del>			, •		100.0%
		7070			100.0%
		4640			27.5%
					72.5%
		<del>-</del> 000			100.0%
		4620			0.0%
					100.0%
		<del>-1000</del>			100.0%

Appendix 3: Detailed list of census subdivisions split by two or more health regions, 2001

				% population
CSD	HR	HR Name	Population	split in CSDs
Manitoba				
4619045	4620	North Eastman	697	21.7%
4619045	4630	Interlake	426	13.2%
4619045	4660	Parkland	2094	65.1%
4619045		Sub total	3217	100.0%
Saskatchewan				
4701091	4701	Sun Country RHA	305	80.1%
4701091	4704	Regina Qu'Appelle RHA	76	19.9%
4701091		Sub total	381	100.0%
4701094	4701	Sun Country RHA	316	83.4%
4701094	4704	Regina Qu'Appelle RHA	63	16.6%
4701094		Sub total	379	100.0%
4702800	4701	Sun Country RHA	0	
4702800	4702	Five Hills RHA	0	
4702800	4704	Regina Qu'Appelle RHA	0	
4702800		Sub total	0	100.0%
4703001	4701	Sun Country RHA	311	100.0%
4703001	4702	Five Hills RHA	0	0.0%
4703001		Sub total	311	100.0%
4703006	4701	Sun Country RHA	95	40.4%
4703006	4702	Five Hills RHA	140	59.6%
4703006		Sub total	235	100.0%
4703064	4702	Five Hills RHA	160	52.5%
4703064	4703	Cypress RHA	145	47.5%
4703064		Sub total	305	100.0%
4705011	4701	Sun Country RHA	200	39.1%
4705011	4704	Regina Qu'Appelle RHA	311	60.9%
4705011		Sub total	511	100.0%
4705014	4701	Sun Country RHA	461	93.9%
4705014	4704	Regina Qu'Appelle RHA	30	6.1%
4705014		Sub total	491	100.0%
4705018	4701	Sun Country RHA	343	74.1%
4705018	4704	Regina Qu'Appelle RHA	120	25.9%
4705018		Sub total	463	100.0%
4705042	4704	Regina Qu'Appelle RHA	15	13.6%
4705042	4705	Sunrise RHA	95	86.4%
4705042		Sub total	110	100.0%
4705051	4704	Regina Qu'Appelle RHA	0	0.0%
4705051	4705	Sunrise RHA	872	100.0%
4705051		Sub total	872	100.0%
4705063	4704	Regina Qu'Appelle RHA	271	45.3%
4705063	4705	Sunrise RHA	327	54.7%
4705063		Sub total	598	100.0%
4705804	4704	Regina Qu'Appelle RHA	385	100.0%
4705804	4705	Sunrise RHA	0	0.0%

Appendix 3: Detailed list of census subdivisions split by two or more health regions, 2001

220	Ш	UD Maria	Dlatte	% population
CSD	HR	HR Name	Population	split in CSDs
Saskatchewan		Onl total	205	400.00/
4705804	4700	Sub total	385	100.0%
4706021	4702	Five Hills RHA	273	55.3%
4706021	4704	Regina Qu'Appelle RHA	221	44.7%
4706021	4700	Sub total	494	100.0%
4706059	4702	Five Hills RHA	103	18.3%
4706059	4704	Regina Qu'Appelle RHA	460	81.7%
4706059	4700	Sub total	563	100.0%
4706063	4702	Five Hills RHA	55	19.4%
4706063	4704	Regina Qu'Appelle RHA	229	80.6%
4706063	4704	Sub total	284	100.0%
4706071	4704	Regina Qu'Appelle RHA	98	19.0%
4706071	4706	Saskatoon RHA	419	81.0%
<b>4706071</b>	4704	Sub total	517	100.0%
4706099 4706099	4704	Regina Qu'Appelle RHA Sunrise RHA	233	86.9% 13.1%
<b>4706099</b>	4705	Sub total	35 <b>268</b>	
4709060 4709060	4705	Sunrise RHA	466	<b>100.0%</b> 65.6%
4709060	4703	Kelsey Trail RHA	244	34.4%
<b>4709060</b>	4700	Sub total	710	100.0%
4710003	4704	Regina Qu'Appelle RHA	0	0.0%
4710003	4705	Sunrise RHA	532	100.0%
<b>4710003</b>	4703	Sub total	532 532	100.0%
4710003 4710026	4704	Regina Qu'Appelle RHA	226	81.0%
4710026	4706	Saskatoon RHA	53	19.0%
4710026	4700	Sub total	279	100.0%
4710027	4704	Regina Qu'Appelle RHA	625	100.0%
4710027	4706	Saskatoon RHA	0	0.0%
4710027		Sub total	625	100.0%
4710031	4704	Regina Qu'Appelle RHA	238	43.4%
4710031	4706	Saskatoon RHA	310	56.6%
4710031		Sub total	548	100.0%
4710036	4705	Sunrise RHA	678	97.1%
4710036	4706	Saskatoon RHA	20	2.9%
4710036		Sub total	698	100.0%
4710041	4705	Sunrise RHA	0	0.0%
4710041	4706	Saskatoon RHA	570	100.0%
4710041		Sub total	570	100.0%
4710042	4705	Sunrise RHA	0	0.0%
4710042	4706	Saskatoon RHA	30	100.0%
4710042		Sub total	30	100.0%
4710071	4706	Saskatoon RHA	808	80.5%
4710071	4708	Kelsey Trail RHA	196	19.5%
4710071		Sub total	1004	100.0%
4710826	4705	Sunrise RHA	36	10.9%
4710826	4706	Saskatoon RHA	294	89.1%

Appendix 3: Detailed list of census subdivisions split by two or more health regions, 2001

CSD	HR	HR Name	Population	% population split in CSDs
Saskatchewan				
4710826		Sub total	330	100.0%
4711018	4702	Five Hills RHA	40	10.4%
4711018	4707	Heartland RHA	344	89.6%
4711018		Sub total	384	100.0%
4711039	4704	Regina Qu'Appelle RHA	125	38.5%
4711039	4706	Saskatoon RHA	185	56.9%
4711039	4707	Heartland RHA	15	4.6%
4711039		Sub total	325	100.0%
4711042	4704	Regina Qu'Appelle RHA	35	16.7%
4711042	4706	Saskatoon RHA	175	83.3%
4711042		Sub total	210	100.0%
4712029	4706	Saskatoon RHA	86	36.0%
4712029	4707	Heartland RHA	153	64.0%
4712029		Sub total	239	100.0%
4712050	4706	Saskatoon RHA	172	40.0%
4712050	4707	Heartland RHA	258	60.0%
4712050		Sub total	430	100.0%
4712069	4707	Heartland RHA	302	85.3%
4712069	4710	Prairie North RHA	52	14.7%
4712069		Sub total	354	100.0%
4713068	4707	Heartland RHA	472	76.4%
4713068	4710	Prairie North RHA	146	23.6%
4713068		Sub total	618	100.0%
4713072	4707	Heartland RHA	421	100.0%
4713072	4710	Prairie North RHA	0	0.0%
4713072		Sub total	421	100.0%
4714035	4706	Saskatoon RHA	0	0.0%
4714035	4708	Kelsey Trail RHA	673	100.0%
4714035		Sub total	673	100.0%
4715048	4706	Saskatoon RHA	205	40.9%
4715048	4708	Kelsey Trail RHA	296	59.1%
4715048		Sub total	501	100.0%
4715054	4706	Saskatoon RHA	90	13.6%
4715054	4708	Kelsey Trail RHA	87	13.1%
4715054	4709	Prince Albert Parkland RHA	487	73.3%
4715054		Sub total	664	100.0%
4715057	4706	Saskatoon RHA	537	46.5%
4715057	4709	Prince Albert Parkland RHA	617	53.5%
4715057		Sub total	1154	100.0%
4715061	4706	Saskatoon RHA	401	42.4%
4715061	4709	Prince Albert Parkland RHA	544	57.6%
4715061		Sub total	945	100.0%
4715071	4708	Kelsey Trail RHA	325	39.8%
4715071	4709	Prince Albert Parkland RHA	492	60.2%
4715071		Sub total	817	100.0%

Appendix 3: Detailed list of census subdivisions split by two or more health regions, 2001

				% population
CSD	HR	HR Name	Population	split in CSDs
Saskatchewan				
4716005	4706	Saskatoon RHA	79	18.0%
4716005	4710	Prairie North RHA	361	82.0%
4716005		Sub total	440	100.0%
4716028	4709	Prince Albert Parkland RHA	0	0.0%
4716028	4710	Prairie North RHA	1078	100.0%
4716028		Sub total	1078	100.0%
4717001	4709	Prince Albert Parkland RHA	0	0.0%
4717001	4710	Prairie North RHA	885	100.0%
4717001		Sub total	885	100.0%
4717054	4710	Prairie North RHA	2761	100.0%
4717054	4712	Keewatin Yatthé RHA	0	0.0%
4717054		Sub total	2761	100.0%
4717812	4709	Prince Albert Parkland RHA	0	0.0%
4717812	4710	Prairie North RHA	514	100.0%
4717812		Sub total	514	100.0%
4718090	4708	Kelsey Trail RHA	75	4.9%
4718090	4709	Prince Albert Parkland RHA	38	2.5%
4718090	4710	Prince Albert Parkland RHA	0	0.0%
4718090	4711	Mamawetan Churchill River RHA	888	57.4%
4718090	4712	Keewatin Yatthé RHA	358	23.2%
4718090	4713	Athabasca Health Authority	187	12.1%
4718090		Sub total	1546	100.0%
Alberta				
4803018	4801	Chinook Regional Health Authority	2324	42.9%
4803018	4803	Calgary Health Region	3088	57.1%
4803018		Sub total	5412	100.0%
4803021	4801	Chinook Regional Health Authority	301	76.8%
4803021	4803	Calgary Health Region	91	23.2%
4803021		Sub total	392	100.0%
4804004	4802	Palliser Health Region	903	38.7%
4804004	4804	David Thompson Regional Health Authority	1428	61.3%
4804004		Sub total	2331	100.0%
4805012	4803	Calgary Health Region	7889	100.0%
4805012	4804	David Thompson Regional Health Authority	0	0.0%
4805012		Sub total	7889	100.0%
4814003	4806	Capital Health	765	7.7%
4814003	4807	Aspen Regional Health Authority	9116	92.3%
4814003		Sub total	9881	100.0%
4817027	4807	Aspen Regional Health Authority	5	0.1%
4817027	4808	Peace Country Health	5840	99.9%
4817027		Sub total	5845	100.0%
4817076	4808	Peace Country Health	3636	86.2%
4817076	4809	Northern Lights Health Region	581	13.8%
		Sub total	4217	

Appendix 3: Detailed list of census subdivisions split by two or more health regions, 2001

CSD	HR	HR Name	Population	% population split in CSDs
British Columbia	1111	The Hamo	1 opulation	Spiit iii CODS
5903010	5911	East Kootenay	1241	58.4%
5903010	5912	Kootenay/Boundary	884	41.6%
5903010	00.2	Sub total	2125	100.0%
5909014	5914	Thompson/Cariboo	0	0.0%
5909014	5921	Fraser East	596	100.0%
5909014		Sub total	596	100.0%
5909060	5921	Fraser East	1227	99.2%
5909060	5922	Fraser North	10	0.8%
5909060		Sub total	1237	100.0%
5915015	5931	Richmond	164345	100.0%
5915015	5932	Vancouver	0	0.0%
5915015		Sub total	164345	100.0%
5915020	5922	Fraser North	15	0.2%
5915020	5923	Fraser South	109	1.4%
5915020	5931	Richmond	0	0.0%
5915020	5932	Vancouver	7816	97.3%
5915020	5933	North Shore/Coast Garibaldi	94	1.2%
5915020		Sub total	8034	100.0%
5931017	5914	Thompson/Cariboo	5	0.3%
5931017	5933	North Shore/Coast Garibaldi	1499	99.7%
5931017		Sub total	1504	100.0%
5939023	5912	Kootenay/Boundary	63	10.1%
5939023	5914	Thompson/Cariboo	562	89.9%
5939023		Sub total	625	100.0%
5941039	5914	Thompson/Cariboo	435	49.4%
5941039	5933	North Shore/Coast Garibaldi	445	50.6%
5941039		Sub total	880	100.0%
5949020	5933	North Shore/Coast Garibaldi	0	0.0%
5949020	5951	Northwest	10	100.0%
5941039		Sub total	10	100.0%
5951053	5951	Northwest	994	90.4%
5951053	5952	Northern Interior	105	9.6%
5951053		Sub total	1099	100.0%
5955040	5952	Northern Interior	171	3.4%
5955040	5953	Northeast	4826	96.6%
5955040		Sub total	4997	100.0%
5957022	5951	Northwest	931	100.0%
5957022	5953	Northeast	0	0.0%
5957022		Sub total	931	100.0%

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