Describing Patient Populations for the *My Health Team Initiative* – Report Supplement

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Section 1. Introduction

This online Report Supplement complements the print report available from the Manitoba Centre for Health Policy (MCHP) and online. The print report provides some key indicators of health, health service use, and social determinants of health for the existing and projected My Health Team (MyHT) areas throughout Manitoba. In this online Report Supplement, detailed results for each of the MyHTs for *all* of the indicators are presented in tables or figures in Microsoft Excel files. Small numbers have been suppressed (denoted by 's').These files can be used to create figures or tables for visualization of the data. In the case that this data is used in a presentation, proper attribution of credit for the research should be included by making reference to this report. For each indicator, a list of the worksheets in the Excel file is provided.

This supplement also includes more detailed information on the creation of the cohorts, the indicator definitions, and the methods used to analyse the data.

Section 2. My Health Team Geographies

Key to the implementation of MyHTs in Manitoba was defining geographic areas in which the teams would operate. Each of the Health Regions in the province were divided into several geographic areas that approximate the future areas for Manitoba-wide MyHTs. The MyHT boundaries used in this report may not be the final areas. However, in consultation with regional representatives, they represent the best presumed boundaries for the regional implementation of the MyHT initiative. Maps below show the geographic boundaries. File 1 shows the districts or municipalities that make up the MyHTs.

Figure 1. Map of Proposed My Health Team Areas by Health Region in Manitoba

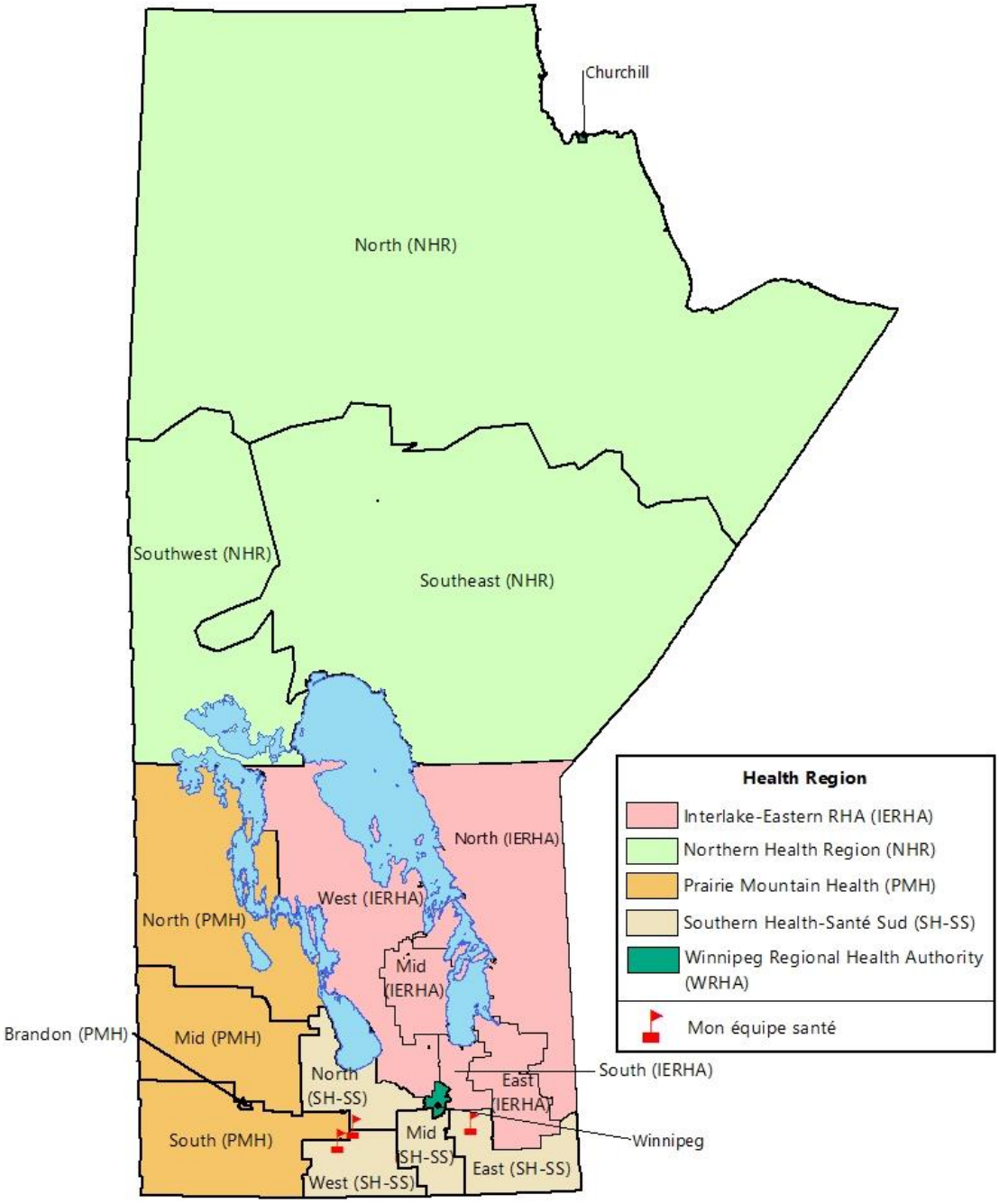


Figure 2. Map of Proposed My Health Team Areas in Northern Health Region

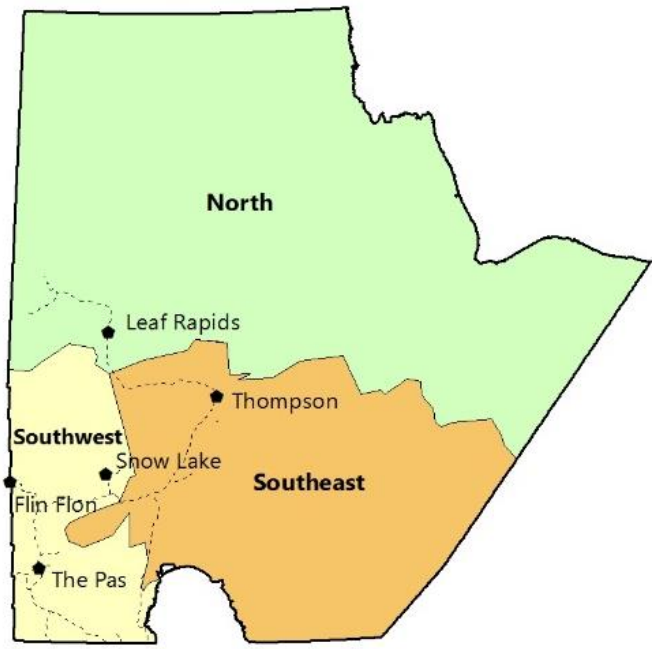


Figure 3. Map of Proposed My Health Team Areas in Interlake-Eastern Regional Health Authority

Figure 4. Map of Proposed My Health Team Areas in Prairie Mountain Health

Figure 5. Map of Proposed My Health Team Areas in Southern Health-Santé Sud

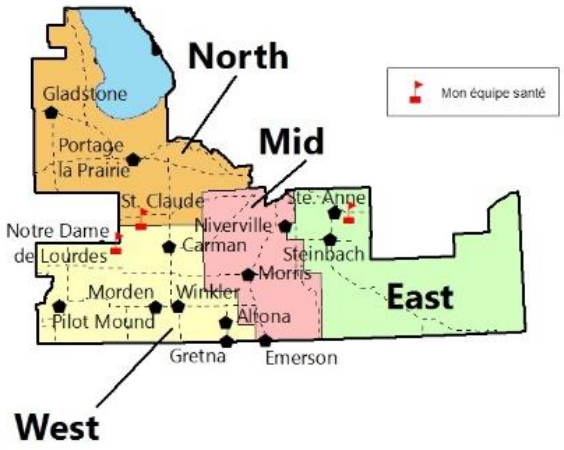
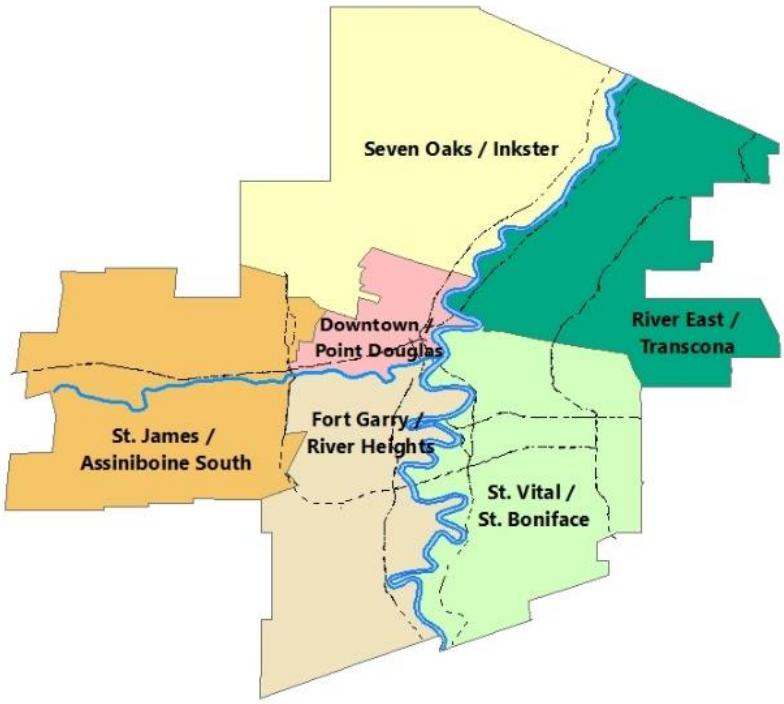


Figure 6. Map of Proposed My Health Team Areas in Winnipeg Regional Health Authority



Interlake-Eastern Regional Health Authority My Health Team Areas

Most MyHT areas have a geographic border around them, with all cities, towns and rural areas within that boundary being considered part of the MyHT area. For the purposes of this report, Interlake-Eastern Regional Health Authority (IERHA) differs: some towns are part of one MyHT, but the rural areas surrounding them are part of another. The IERHA altered the boundaries used for primary care planning, including MyHTs, during the course of this study. The new geographies are not partitioned along prior district and zone geographies, but instead geographies were assigned using municipal codes. Future work may be able to properly allocate individuals within a single municipal code to separate MyHT areas; however, this was not possible for this report. For now, Dunnottar and Winnipeg Beach are in Interlake-Eastern RHA Mid, but the surrounding area is Interlake-Eastern RHA South. Teulon is in Interlake-Eastern RHA Mid, but its surrounding area is Interlake-Eastern RHA West.

Section 3. Patient Populations within the My Health Team Boundaries

In order to describe the patient population relevant for the MyHTs, individuals had to have been residents in the province for a period long enough to have reliable data to characterize them. For this reason, the small proportion of individuals that were not in the province for the entire three-year study period (April 1, 2011 – March 31, 2014) were excluded from the study. Therefore, the study excluded any individuals that died, moved away, moved in, or were born during the study period. However, since these factors can affect future planning for MyHTs, MyHT demographics are presented. Personal care home (nursing home) residents were also excluded, as their care provision is organized and delivered separately from community-based care that the MyHT encompass. Finally, residents of Churchill (formally part of the WRHA) are excluded for much the same reason as personal care home residents: planning for and providing care to the Churchill residents is carried out separately from the MyHT initiative.

Two Different Ways to Look at the My Health Team Patient Population

In this report, we provide data on two cohorts of Manitoba residents: the *residence-based cohort*, which assigns patients to MyHT areas based on the postal code of residence in the MHSAL registry, and the *provider-based cohort*, which first allocates individuals to primary care providers, and then assigns them to the MyHT area where the provider works.

1) Residence-Based Cohort
   All Manitobans who live within the geographical boundaries of a specific MyHT.

2) Provider-Based Cohort
   All Manitobans who receive the majority of their care from a primary care provider in a certain MyHT geography. The *provider-based cohort* deals with the fact that many Manitobans may travel some distance to access primary care, and in doing so, have left the proposed boundaries for the MyHT in which they live. Because the primary care provider (family physician or nurse practitioner) acts as the principal access point to the MyHT, it may be more relevant to describe the population receiving care in a MyHT than the population that lives in a MyHT.

Patient Allocation to Providers

The following algorithm was used to allocate patients to a provider:

1. Patients must have three or more visits to primary care providers in the three-year study period.
2. If the patient has seen one provider for all visits, the patient is allocated to that provider.
3. If the patient has seen multiple providers, with more than one visit per provider, the patient is allocated to the provider with the majority of visits.
    i. If the number of visits is tied, the patient is allocated to the provider with the highest billing fees.
    ii. If the fees are tied, the patient is allocated randomly.
4. If the patient went to multiple providers one time each, the patient is allocated to the provider that performed a complete physical.
    i. If the patient did not have any complete physicals done or had more than one complete physical done by more than one provider, they could not be allocated.

The table below presents the number and percentage of patients that were allocated based on the criteria above. Almost 15% of the cohort had visits with only one primary care provider, while another 59% visited one provider more than any others. The last three categories represent patients that could not be allocated, either due to having one visit to each of a number of different providers ('visits tied; one visit each'; approximately 2%), not enough visits to be analysed ('low user'; approximately 13%), or, in fact, no visits at all during the three-year study period ('no visits'; approximately 10%). It should be noted that data from northern regions of Manitoba may be incomplete due to care not captured in the Medical Claims data, which may include some visits to salaried physicians and visits with nurses at nursing stations.

Figure 7: Count of Patients Meeting the Criteria of Provider Allocation Algorithm

Algorithm Steps	Frequency	Percent
Allocated		
Unique Provider	170,949	14.74%
Majority of Visits	680,464	58.68%
Visits Tied; Highest Fees	7,033	0.61%
Visits Tied; Random Allocation	1,243	0.11%
Visits Tied; One Complete Physical	9,740	0.84%
Not Allocated		
Visits Tied; One Visit Each	22,527	1.94%
Low User (1-2 Visits)	149,357	12.88%
No Visits	118,232	10.20%

The algorithm only examined visits to primary care providers, excluding visits to specialists, as the intent was to identify each person's primary care provider. It is possible that had specialists been included, some individuals would have been allocated to a specialist if they had seen them more than they had seen their primary care provider. With the intent to find primary care providers for each individual, we also examined how the primary care providers practice to prevent allocation to those that practiced as *de facto* specialists. Primary care providers who had the majority of their claims from one year within one ICD-9 diagnostic chapter appear to be providing specialized care. Termed 'family physicians with a special interest', these providers and their associated visits were excluded prior to the application of the allocation algorithm. They and their visits were included in the indicators that relate to specialist care (e.g., multiple specialists, specialist visits for non-psychiatric care, or in the case of those providing psychiatric care, specialist visits for psychiatric care).

Identifying Providers' Practice Locations

The following algorithm was used to identify the practice location of healthcare providers:

- When the provider's clinic code (electronic user (EUSL) code) and the location of the highest percent of the physician's patients match, use the EUSL code.
- When the provider's clinic location does not match the location of the highest percent of the provider's patients, used this algorithm:
    - If the highest percent of patients coming from a MyHT is greater than 50%, assign the provider to that MyHT.
    - If the highest percent of patients coming from a MyHT is <50% and the provider is in Winnipeg, use the MyHT associated with the EUSL code.
    - Exclude the remaining providers (and their allocated patients) from the *provider-based cohort* (22 providers, 6,832 patients).

Four analyses are included in this supplement that focus on the *provider-based cohort*. Links to these files are included below. The first two focus on the allocation of individuals to the MyHTs based on the location of their primary care provider, and how this is related to where the person actually lives. One describes the MyHTs that Manitobans were allocated to, according to where they live. The second looks at everybody allocated to the providers in a MyHT, and describes where patients came from.

- File 2. Where Manitobans went for Primary Care
- File 3. Where Manitobans came from for Primary Care

The second pair of analyses focus on the visits rather than the individuals. Even when a person has been allocated to a particular MyHT based on their main provider, they may still have visits with providers outside their MyHT. We have calculated what proportion of all visits for patients allocated to a MyHT happen outside the allocated MyHT. Conversely, the providers in a MyHT can have visits with people that are actually allocated to other MyHTs. This second number can be split into visits made by patients who reside in another MyHT, and the number of visits provided to patients who actually live in the same MyHT, although they were allocated elsewhere.

- File 4. Proportion of Visits to Providers Outside the Allocated MyHT
- File 5. Proportion of Visits to MyHT made by Patients Allocated to Another MyHT

Demographic Characteristics of My Health Team Populations

For all of the MyHTs, a number of demographic variables were produced that describe the populations, or provide information on population stability. Personal Care Home resident rates are also presented to inform on the size of this population within the MyHT. Also presented is information on the flow of individuals into and out of the different MyHT areas, which could be either migration into or out of Manitoba, or between the MyHTs within Manitoba. Links to these files are found below.

- File 6. Age Distributions of MyHTs
- File 7. Sex Distributions of MyHTs
- File 8. Income Distribution of MyHTs
- File 9. Birth and Death Rates of MyHTs
- File 10. Move In and Move Out Rates of MyHTs
- File 11. Personal Care Home Resident Rates of MyHTs

Indicators used to Characterize the My Health Team Patient Populations

In this report, we describe the *residence-based* and *provider-based* MyHTs by examining the counts and rates of several indicators. Some of these use administrative health data, while others use data from other departments of the Government of Manitoba.

The following databases from the Manitoba Population Research Data Repository were used in this research:

- Manitoba Health Insurance Registry
- Hospital Abstracts
- Medical Claims
- Drug Program Information Network
- Provider Registry
- Child and Family Services: Applications and Intake
- Prosecution Information and Scheduling Management
- Employment/Income Assistance
- Enrollment, Marks and Assessments
- Tenant Management System
- Canada Census
- Long Term Care Utilization
- Manitoba Cancer Registry

Detailed descriptions of these databases can be found on MCHP's Repository Data List webpage.

The indicators used in this report to describe MyHT patient populations fall into three main groups:

1) High Users of Health Services (Section 4)
    - Patients considered high users of health services such as primary care visits or hospitalizations
2) Medical Complexity (Section 5)
    - Patients who are medically complex, likely with multiple conditions, chronic or otherwise, that would influence the provision of care, or the need for coordinated care. While many high users may also be medically complex, and vice versa, it is also possible

that a person could be distinctly a high user, with only a single medical condition or two; or that a person could be medically complex, with multiple conditions, and yet manage their health concerns well and not be a high user of services.

3) Social Complexity (Section 6)
    - Individuals with social complexities that influence both health and the use of health care services. Because of the increased likelihood of developing acute disease and chronic conditions, these individuals may benefit from services that prevent them from becoming medically complex or high users, or to prevent their health from deteriorating.

Definitions for each of the indicators used in Sections 4 to 6 are presented below. Depending on the indicator, either the rate of events or the proportion of individuals meeting the indicator definition was calculated using Poisson regression. Typically, Poisson regression predicts the raw number of events as the outcome without regard to the size of the population from which they were drawn. In order to account for the differences in population size among the MyHTs, the natural logarithm of the MyHT cohort population was used as an offset. This corrects the estimates from the model so that the outcome is the rate or proportion, rather than the number of events.

High Use of Health Services

Ambulatory Visits to Primary Care

Average annual number of visits to primary care providers (physicians and nurse practitioners) over the three-year time period. Normal pregnancy-related and well-baby visits were excluded. High users were defined as 10+ visits per year.

Years of data used: fiscal years 2011/12 – 2013/14

Specialist Visits for Non-Psychiatric Care

Average annual number of visits to specialists over the three-year time period. Includes visits to family physicians with a special interest if the visit was within the ICD chapter that they are specialized in. Normal pregnancy-related and well-baby visits were excluded. High users were defined as 5+ visits per year.

Years of data used: fiscal years 2011/12 – 2013/14

Number of Hospitalizations

The number of hospitalizations over the three-year time period. Includes non-acute facilities and alternate level of care (ALC) patients. Includes inpatient visits only. Normal pregnancy-related and well-baby visits were excluded. High users were defined as 3+ hospitalizations in three years.

Years of data used: fiscal years 2011/12 – 2013/14

Number of Hospital Days

The number of hospital days used over the three-year time period. Includes non-acute facilities and ALC patients and days. Includes inpatient visits only. Normal pregnancy-related and well-baby visits were excluded. High users were defined as 30+ hospital days in three years.

Years of data used: fiscal years 2011/12 – 2013/14

Medical Complexity

Resource Utilization Bands (RUBs)

Resource Utilization Bands (RUBs) are a part of the Johns Hopkins Adjusted Clinical Group® (ACG®) case-mix system. They are a simplified ranking system of overall morbidity level. Individuals who are expected to use the same level of resources, regardless of their type of illness, are grouped together. The RUB assigned to an individual is their maximum RUB over the three-year time period. Medically complex was defined as RUB of 4 or 5.

Years of data used: fiscal years 2011/12-2013/14

Polypharmacy

Medically complex was defined as prescription drug dispensations for 10+ unique drugs, defined at the fourth level Anatomical Therapeutic Chemical (ATC) code, over a one-year period. Prescriptions need not be concurrent, nor is the duration of the prescription taken into account.

Years of data used: fiscal years 2011/12 – 2013/14

Substance Use Disorder

Medically complex was defined as a person diagnosed as having substance use disorder by 1+ hospitalizations or 1+ physician visit with a substance use disorder diagnosis code (ICD-9-CM codes: 291, 292, 303, 304, 305; ICD-10-CA codes: F10-F19, F55).

Years of data used: fiscal years 2009/10-2013/14

Major Mental Health Diagnosis

Medically complex was defined as a person identified as ever having a disorder with symptoms of psychosis (ICD-9-CM codes: 295, 296, 297, 298, 299; ICD-10-CA codes: F2x, F31, F321, F322, F323, F328, F33, F348, F349, F38, F39, F840, F841, F843, F844, F845, F849).

Years of data used: 1997 – March 31, 2014

Multiple Specialists (Non-Psychiatric)

Number of specialists seen in one year. Includes visits to family physicians with a special interest if the visit was within the ICD chapter that they are specialized in. Medically complex was defined as 3+ different specialists in one year for people without cancer, and 5+ different specialists in one year for people with cancer. Multiple practitioners within the same specialty would count as multiple specialists for this indicator.

Years of data used: fiscal years 2011/12-2013/14

Specialist Visit for Psychiatric Care

The number of visits to specialists for psychiatric care over the three-year time period. Includes visits to family physicians with a special interest if the visit was within the ICD chapter that they are specialized in. Medically complex was defined as 1+ psychiatric specialist visit(s) in one year.

Years of data used: fiscal years 2011/12-2013/14

Social Complexity

Child in Care

A child identified as having been removed—at any point in time—from their family of origin and placed in the care of another adult due to concerns about proper provision of care in the family of origin; restricted to children aged 17 or younger.

Years of data used: fiscal years 1992/93-2013/14

Teen Mom

A female who first gave birth at age 19 or younger.

Years of data used: 1970 to March 31, 2014

Child of a Teen Mom

A person identified as being the child of a mother with a history of teen birth.

Years of data used: 1970 to March 31, 2014

High Residential Mobility

A person who moved residences three or more times in a 10-year period.

Years of data used: fiscal years 2001/02-2013/14

Lowest Income Quintile

Income quintile is a measure of neighbourhood socioeconomic status that divides the population into five income groups (from lowest income to highest income) so that approximately 20% of the population is in each group; this indicator represents the lowest 20% (Q1).

Years of data used: fiscal years 2011/12-2013/14

Social Housing Resident

A person having ever lived in social housing that is owned and directly managed by Manitoba Housing.

Years of data used: 1995 to March 31, 2013

Income Assistance

A person who has ever received income assistance, or in the case of children, whose family has ever received income assistance.

Years of data used: 1995 to March 31, 2014

Newcomer

A probability of being an immigrant to Canada that is assigned to a person based on the Canadian Census dissemination area in which they reside.

Note that to be included in the study cohort, people needed to have Manitoba Health coverage for all three years of the study period. Therefore, we are not including the more recent newcomers who immigrated during the study period.

Years of data used: fiscal years 2006/07-2013/14

Child of a Newcomer

A person identified as a child of a newcomer.

Years of data used: fiscal years 2006/07-2013/14

Involvement with the Justice System

A person who has had contact with the justice system and is identified using the PRISM database (Prosecutions Information and Scheduling Management) as a witness, victim, or accused.

Years of data used: incidents occurring from 2005 to 2012

Special Education Funding

A person who has received funding from the Department of Education due to having special needs and requiring extensive supports in the classroom.

Years of data used: academic years 1995/1996-2013/2014

Section 4. High Use of Health Services

Indicators

File 12. Ambulatory Visits to Primary Care

- Concentration Curve
- Graph of Rates of High Users (10+ visits)
- Table of Rates of High Users
- Age Distribution of High Users
- Sex Distribution of High Users
- Income Quintile Distribution of High Users

File 13. Specialist Visits for Non-Psychiatric Care

- Concentration Curve
- Graph of Rates of High Users (5+ visits)
- Table of Rates of High Users
- Age Distribution of High Users
- Sex Distribution of High Users
- Income Quintile Distribution of High Users

File 14. Number of Hospitalizations

- Concentration Curve
- Graph of Rates of High Users (3+ hospitalizations)
- Table of Rates of High Users
- Age Distribution of High Users
- Sex Distribution of High Users
- Income Quintile Distribution of High Users

File 15. Number of Hospital Days

- Concentration Curve
- Graph of Rates of High Users (30+ hospital days)
- Table of Rates of High Users
- Age Distribution of High Users
- Sex Distribution of High Users
- Income Quintile Distribution of High Users

Overlap among the High Use of Health Services Indicators

Each of the indicators for high use of services was examined separately, but another interesting piece of information would be to know how these indicators overlap. Are most of the high users of primary care the same people as the high users of hospitalizations and specialist visits? How many people in each of the MyHTs can be identified as a high user using any of the indicators? The files linked below contain information on the overlap between three indicators: ambulatory visits to primary care, hospitalizations, and specialist visits. The number and percent of individuals found in each of the individual indicators, in each pairwise combination, in all three indicators, or in none of the three indicators is presented. Across the MyHTs, in the provider-based cohort there was a low of 14.8% identified in at least one of the indicators, to a high of 31.6%.

File 16. Overlap among the High Users of Services Indicators

- Overlap among High Users of Services Indicators (residence-based cohort)
- Overlap among High Users of Services Indicators (provider-based cohort)

Creating a Composite Index of High Use of Health Services

Using factor analysis, a single composite index of high use that incorporates primary care visits, specialist visits, and hospitalizations was created. The top 5% of all Manitobans on this score were defined as high users. On average, a high user had just over 12 primary care provider visits, almost 6 specialist visits, and on average 1 hospitalization in the three-year study period.

For the factor analysis on the High Use of Service indicators, we excluded hospital days due to a strong correlation with hospitalizations. One factor resulted from the high use indicators. The factor loadings are presented below.

Figure 8: Factor Loadings for High Use of Services Composite Index

Health Services	Factor Loading
Ambulatory Visits for Primary Care	0.57
Number of Hospitalizations	0.80
Specialist Visits for Non-Psychiatric Care	0.56

File 17. High Users of Services Composite Index

- Graph of Rates of High Users
- Table of Rates of High Users
- Age Distribution of High Users
- Sex Distribution of High Users
- Income Quintile Distribution of High Users

Proportion of Visits outside Allocated My Health Team

For individuals identified as high users of services using the composite index, we calculated the proportion of their visits that were made to providers outside their allocated MyHT, indicating people with a need for care or seeking care outside their regular provider or any provider that is part of that MyHT. These range from a high of 58.5% to a low of 5.5%.

File 18. Proportion of Visits outside Allocated My Health Team for High Users of Services (Composite Index)

Section 5. Medical Complexity

Indicators

File 19. Polypharmacy

- Concentration Curve
- Graph of Rates of Medically Complex (10+ drugs)
- Table of Rates of Medically Complex
- Age Distribution of Medically Complex
- Sex Distribution of Medically Complex
- Income Quintile Distribution of Medically Complex

File 20. Major Mental Health Diagnosis

- Graph of Rates of Medically Complex Patients (ever diagnosed with a disorder with symptoms of psychosis)
- Table of Rates of Medically Complex Patients
- Age Distribution of Medically Complex Patients
- Sex Distribution of Medically Complex Patients
- Income Quintile Distribution of Medically Complex Patients

File 21. Substance Use Disorder

- Graph of Rates of Medically Complex Patients (1+ hospitalization or 1+ physician visit with substance use disorder diagnosis)
- Table of Rates of Medically Complex Patients
- Age Distribution of Medically Complex Patients
- Sex Distribution of Medically Complex Patients
- Income Quintile Distribution of Medically Complex Patients

File 22. Resource Utilization Bands (RUBs)

- Graph of Rates of Medically Complex Patients (RUB 4 or 5)
- Table of Rates of Medically Complex Patients
- Age Distribution of Medically Complex Patients
- Sex Distribution of Medically Complex Patients
- Income Quintile Distribution of Medically Complex Patients

File 23. Multiple Specialists (Non-Psychiatric)

- Graph of Rates of Medically Complex Patients (3+ specialists in 1 year for those without cancer, 5+ specialists in 1 year for those with cancer)
- Table of Rates of Medically Complex Patients
- Age Distribution of Medically Complex Patients
- Sex Distribution of Medically Complex Patients
- Income Quintile Distribution of Medically Complex Patients

File 24. Specialist Visit for Psychiatric Care

- Graph of Rates of Medically Complex Patients (1+ visit)
- Table of Rates of Medically Complex Patients
- Age Distribution of Medically Complex Patients
- Sex Distribution of Medically Complex Patients
- Income Quintile Distribution of Medically Complex Patients

Overlap among Medical Complexity Indicators

The files linked below contain information on the overlap between three indicators of medical complexity: two from the physical health medical complexity group (number of specialists and polypharmacy) and one from the mental health medical complexity group (substance use disorder). The number and percent of individuals found in each of the individual indicators, in each pairwise combination, in all three indicators, or in none of the three indicators is presented. Across the MyHTs, in the provider-based cohort there was a low of 11.8% identified in at least one of the indicators, to a high of 28.2%.

File 25. Overlap among Medical Complexity Indicators

- Overlap among Medical Complexity Indicators (residence-based cohort)
- Overlap among Medical Complexity Indicators (provider-based cohort)

Creating Composite Indices of Medical Complexity

For medical complexity, rather than a single composite index, two were created from the factor analysis method: one that incorporated the physical health indicators (RUBs, multiple specialists, polypharmacy), and one that incorporated the mental health indicators (psychiatric specialist visit, substance use disorder, major mental health condition). Individuals could be defined as neither of these, one, or both. The top 5% of all Manitobans on each of the composite scores were defined as physical health medically complex, or mental health medically complex. The factor loadings are presented below. There is a clear separation between the two factors, with three measures loading high on a physical health composite, and three indicators loading high on a mental health composite. This separation is also apparent in the very low loadings that the indicators have on the alternate composite index; a high loading on the physical health measure is accompanied by a low loading on the mental health measure, and vice versa.

Figure 9: Factor Loadings for Medical Complexities Composite Indices

Medical Complexities	Physical Health	Mental Health
Resource Utilization Bands (RUB) 4 or 5	**0.77**	0.13
Polypharmacy	**0.73**	0.10
Multiple Specialists (Non-Psychiatric)	**0.61**	0.01
Major Mental Health Diagnosis	0.09	**0.77**
Substance Abuse	0.06	**0.47**
Specialist Visit for Psychiatric Care	0.06	**0.77**

File 26. Physical Health Medical Complexity Composite Index

- Graph of Rates of Physical Health Medically Complex Patients
- Table of Rates of Physical Health Medically Complex Patients
- Age Distribution of Physical Health Medically Complex Patients
- Sex Distribution of Physical Health Medically Complex Patients
- Income Quintile Distribution of Physical Health Medically Complex Patients

File 27. Mental Health Medical Complexity Composite Index

- Graph of Rates of Mental Health Medically Complex Patients
- Table of Rates of Mental Health Medically Complex Patients
- Age Distribution of Mental Health Medically Complex Patients
- Sex Distribution of Mental Health Medically Complex Patients
- Income Quintile Distribution of Mental Health Medically Complex Patients

Proportion of Visits outside Allocated My Health Team

For individuals identified as medically complex using the composite scores, we calculated the proportion of visits that were made to providers outside their allocated MyHT, indicating people with a need for care or seeking care outside their regular provider or any provider that is part of that MyHT.

File 28. Proportion of Visits outside Allocated My Health Team for Medically Complex Patients (Composite Index)

- Visits to Providers outside Allocated MyHT (physical health medical complexity)
- Visits to Providers outside Allocated MyHT (mental health medical complexity)

Section 6. Social Complexity

Indicators

File 29. Child in Care
- Graph of Rates of Socially Complex Patients (ever received care from Child and Family Services)
- Table of Rates of Socially Complex Patients

File 30. Teen Mom
- Graph of Rates of Socially Complex Patients (ever a teen mom)
- Table of Rates of Socially Complex Patients

File 31. Child of a Teen Mom
- Graph of Rates of Socially Complex Patients (child of teen mom)
- Table of Rates of Socially Complex Patients

File 32. High Residential Mobility
- Graph of Rates of Socially Complex Patients (3+ moves in 10 years)
- Table of Rates of Socially Complex Patients

File 33. Lowest Income Quintile
- Graph of Rates of Socially Complex Patients (live in lowest income quintile neighbourhood)
- Table of Rates of Socially Complex Patients

File 34. Social Housing Resident
- Graph of Rates of Socially Complex Patients (lived in social housing)
- Table of Rates of Socially Complex Patients

File 35. Income Assistance
- Graph of Rates of Socially Complex Patients (ever received Income Assistance)
- Table of Rates of Socially Complex Patients

File 36. Newcomer
- Graph of Rates of Socially Complex Patients (newcomer)
- Table of Rates of Socially Complex Patients

File 37. Child of a Newcomer
- Graph of Rates of Socially Complex Patients (child of a newcomer)
- Table of Rates of Socially Complex Patients

File 38. Involvement with the Justice System
- Graph of Rates of Socially Complex Patients (involved with Justice system as witness, victim, or accused)
- Table of Rates of Socially Complex Patients

File 39. Special Education Funding

- Graph of Rates of Socially Complex Patients (received special education funding)
- Table of Rates of Socially Complex Patients

File 40. Three or more Complexities (individuals identified as social complex on three or more indicators)

- Graph of rates
- Table of rates

Overlap among Social Complexity Indicators

The files linked below contain information on the overlap between three indicators of social complexity (involvement with the justice system, high mobility, and income assistance). The number and percent of individuals found in each of the individual indicators, in each pairwise combination, in all three indicators, or in none of the three indicators is presented. Across the MyHTs, in the provider-based cohort there was a low of 16.1% identified in at least one of the indicators, to a high of 65.0%.

File 41. Overlap among Social Complexity Indicators

- Overlap among Social Complexity Indicators (residence-based cohort)
- Overlap among Social Complexity Indicators (provider-based cohort)

Creating Composite Indices of Social Complexity

Each of the social complexities may indicate a different type of service provision that would benefit patients in the MyHT and should be considered separately. However, we also present a summary indicator to address particularly vulnerable patients that have many different social complexities. Three factors emerged from the factor analysis on the social complexity indicators: one based primarily on low socioeconomic status, one based on indicators related to vulnerable children, and the last based on newcomer indicators. The first factor was used for analyses in this report.

Figure 10: Factor Loadings for Social Complexities Composite Indices

Social Complexities	Socioeconomic Vulnerability	Childhood Vulnerability	Newcomer Status
Income Assistance	**0.78**	0.10	-0.02
Social Housing Resident	**0.68**	0.07	-0.01
High Residental Mobility	**0.57**	0.02	-0.02
Child of a Teen Mom	**0.51**	0.17	-0.08
Involvement with the Justice System	**0.46**	-0.29	-0.09
Lowest Income Quintile	**0.42**	0.11	0.18
Teen Mom	**0.39**	-0.52	-0.04
Child in Care	0.27	**0.66**	-0.01
Special Education Funding	0.16	**0.56**	-0.03
Newcomer	-0.03	-0.02	**0.82**
Child of a Newcomer	0.00	0.00	**0.81**

File 42. Social Complexity Composite Index

- Graph of Rates of Socially Complex Patients
- Table of Rates of Socially Complex Patients
- Age Distribution of Socially Complex Patients
- Sex Distribution of Socially Complex Patients
- Income Quintile Distribution of Socially Complex Patients

Proportion of Visits outside Allocated My Health Team

For individuals identified as socially complex using the composite score, we calculated the proportion of visits that were made to providers outside their MyHT, indicating people with a need for care or seeking care outside their regular provider or any provider that is part of that MyHT.

File 43. Proportion of Visits outside Allocated My Health Team for Socially Complex Patients (Composite Index)

Section 7. The Overlap of High Use of Services, Medical Complexity, and Social Complexity

In addition to identifying rates for each of the three main patient types (high use, medical complexity, and social complexity), we looked at how these three groups overlap. We did this twice: once using the physical health medical complexity measure, and once using the mental health medical complexity measure. These numbers tell us how many unique individuals meet the criteria for at least one of the groups, the combinations among the groups, and none of the groups. By taking a look at multiple components of medical complexity, a different picture emerges of the patient populations in each of the MyHTs. This provides important and different information to consider when the team of providers is assembled, and what kinds of extra services might be most beneficial to the population at hand.

The files linked below contain information on the overlap between three types of patients. The number and percent of individuals found in each of the individual types, in each pairwise combination, in all three types, or in none of the three types is presented.

File 44. Overlap of High Use of Services, Medical Complexity, and Social Complexity

- Overlap Across the Three Types of Patients based on Physical Health Medical Complexity Composite Index (residence-based cohort)
- Overlap Across the Three Types of Patients based on Physical Health Medical Complexity Composite Index (residence-based cohort)
- Overlap Across the Three Types of Patients based on Mental Health Medical Complexity Composite Index (residence-based cohort)
- Overlap Across the Three Types of Patients based on Mental Health Medical Complexity Composite Index (residence-based cohort)