STRENGTHENING A POPULATION HEALTH APPROACH FOR HEALTH SYSTEM PLANNING

A Public Health Ontario 2017-18 Special Edition Locally Driven Collaborative Project (LDCP)

Phase 2 Survey Technical Summary

Demographics

Respondents were asked if they work in Ontario, their employer, their current position/title, and the number of years they have worked in the health sector.

- A total of 310 respondents completed the survey and 97% (n=302) work in Ontario.

- Overall, the majority of respondents (74%) work at Public Health Units (PHUs), while 14% work at Local Health Integration Networks (LHINs). The variation in response rates from PHU and LHIN employees is *likely* representative of the numbers of employees working in each area. About 8% of respondents work in other sectors and 4% work at either the Ministry of Health and Long-term Care (MOHLTC) or Public Health Ontario (PHO).

- Just over a fifth of respondents were managers (22%). The remaining respondents covered a wide range of positions and levels (e.g., 17% data experts).

- Close to half (45%) the survey respondents had worked in the health sector for more than 15 years and a fifth (21%) had worked less than 5 years.

Extent of Collaboration

Respondents were asked to what extent they have, in their current organization, collaborated with each of the following sectors or organizations: LHIN, PHU, MOHLTC, PHO, primary care, hospital, non-health sector, academic research partners working on population health, other sectors.

- LHIN respondents were more likely to state that they collaborated to a “great/moderate” extent with the MOHLTC (90%), Hospitals (88%) and Primary Care (80%).

- PHU respondents were more likely to state that they collaborated to a “great/moderate” extent with PHO (72%), the non-health care sector (70%) and the MOHLTC (62%).

Actions to Foster Better Collaboration

Respondents were asked to select the top five actions that they believe would best foster collaboration between LHINs and PHUs to improve health system planning (Table 1).

Table 1. Top five actions, reported by all respondents, to foster better collaboration between LHINs and PHUs (N=251)

Overall Top 5 Actions (out of 18 Categories)	Count	Percentage
Working in partnerships on specific projects (small or large) with clear goals & shared indicators	168	66.9%
Collaborating on data sharing and analysis	151	60.2%
Deliberately working to build understanding of each other's roles, priorities, and decision-making processes	120	47.8%
Developing a strong and clear process for leaders of the LHINs and PHUs to connect	98	39.0%
Creating a common understanding of each sector's approach to population health	96	38.2%

Table 2. Top five actions, by sector, to foster better collaboration between LHINs and PHUs (LHIN: N=40, PHU: N=190)

Responses by Employer	LHIN Count (% of LHINs)	LHIN Rank	PHU Count (% of PHUs)	PHU Rank
Working in partnerships on specific projects (small or large) with clear goals & shared indicators	**33 (82.5%)**	**1**	**122 (64.2%)**	**1**
Collaborating on data sharing and analysis	**24 (60.0%)**	**2**	**111 (58.4%)**	**2**
Determining shared vision, values and guiding principles for collaboration	20 (50.0%)	3	60 (31.6%)	
Addressing geographic boundaries between LHINs and PHUs	16 (40.0%)	4	43 (22.6%)	
Creating a common understanding of each sector's approach to population health	**14 (35.0%)**	**5**	**79 (41.6%)**	**4**
Developing a strong and clear process for leaders of the LHINs and PHUs to connect	9 (22.5%)		78 (41.1%)	5
Deliberately working to build understanding of each other's roles, priorities, and decision-making processes	3 (7.5%)		98 (51.6%)	3

***Bolded rows represent agreement between LHINs and PHUs on the top five actions**

Both LHINs and PHUs agreed on the following actions among the top five (Table 2):

- Working in partnerships on specific projects (small or large) with clear goals & shared indicators
- Collaborating on data sharing and analysis
- Creating a common understanding of each sector's approach to population health

Processes and Structures to Promote Role Clarity

Respondents were asked to select the top three processes or structures they think are important to promote role clarity among LHIN and PHU partners (Table 3).

Table 3. Top three processes or structures, reported by all respondents, to promote role clarity among LHIN and PHU partners (N=248)

Overall Top 3 Processes or Structures (out of 8 Categories)	Count	Percentage
Shared indicators for a health outcome of common interest in both LHIN and PHU accountability agreements	142	57%
Identification of leads in PHUs and LHINs to work with the leadership teams of each organization	125	50%
Formal Memorandum of Understanding (MOU) for collaboration	107	43%

Table 4. Top three processes or structures, by sector, to promote clarity among LHIN and PHU partners (LHIN: N=40, PHU: N=190)

Responses by Employer	LHIN Count (% of LHINs)	LHIN Rank	PHU Count (% of PHUs)	PHU Rank
Shared indicators for a health outcome of common interest in both LHIN and PHU accountability agreements	**22 (55.0%)**	**1**	**100 (52.6%)**	**1**
Identification of leads in PHUs and LHINs to work with the leadership teams of each organization	**18 (45.0%)**	**2**	**93 (48.9%)**	**2**
Face-to-face meetings involving all levels of staff in LHINs and PHUs in their jurisdiction	17 (42.5%)	3	69 (36.3%)	
Formal Memorandum of Understanding (MOU) for collaboration	16 (40.0%)		80 (42.1%)	3

Bolded rows represent agreement between LHINs and PHUs on the top three processes or structures

More than half of respondents (PHU and LHIN) agreed that: 1) shared indicators for a health outcome of interest in both PHU and LHIN accountability agreements and 2) identification of leads with both organisations to work with the leadership teams of each organization were important processes/structures to promote role clarity among LHIN and PHU partners (Table 4). However, LHIN respondents preferred face-to-face meetings as their third preference in comparison to PHUs who preferred having a formal Memorandum of Understanding (MOU) for collaboration as their third preference.

Geographic Challenges

Solutions to help overcome geographic boundary challenges in relation to using data to inform health system planning using a population health approach

When asked about solutions to help overcome geographic challenges in relation to using data to inform health system planning using a population health approach, the top two "somewhat or very likely" solutions selected by both LHINs and PHUs were:

- Ensure that health data are geocoded (89%).
- Ensure that geocoded information is available to all agencies or embedded into health data (82%).

The other proposed solutions were less frequently considered "somewhat or very likely" to help overcome geography boundary challenges:

- Ensure that LHIN sub-regions match PHU boundaries (77%)
- Eliminate or reduce overlap between LHIN and PHU boundaries (57%)

Solutions to help overcome geographic challenges in relation to collaboration between LHINs and PHUs for an improved health system in Ontario

When asked about solutions to help overcome geographic challenges in relation to collaboration between LHINs and PHUs, the top three "somewhat or very likely" solutions selected by both LHINs and PHUs were:

- Develop a joint strategic local needs assessment (77%).
- Identify one PHU lead to connect with each LHIN sub-region leadership team (57%).
- Identify one LHIN executive lead to work with each PHU leadership team (57%).

Tools to Support LHIN and PHU Collaboration

Respondents were asked to select the top five categories of tools (that currently exist or could be created) that would have the most positive impact when jointly used to support LHIN and PHU collaboration for an improved health system in Ontario informed by a population health approach (Table 5). Both LHINs and PHUs agreed on the following tools among the top five (Table 6):

- Program planning, management, and evaluation
- Health equity impact assessments
- Knowledge exchange and translation

Table 5. The top five categories of tools that could have the most positive impact when jointly used to support LHIN and PHU collaboration for an improved health system (N=236)

Overall Top 5 Categories of Tools (out of 14 Categories)	Count	Percentage
Program planning, management, and evaluation	151	64%
Knowledge exchange and translation	123	52%
Health equity impact assessments	121	51%
Joint communication strategies and messages - shared platforms and/or tools for common messaging across all sectors	104	44%
Collaboration/ partnership evaluation	97	41%

Table 6. The top five categories of tools, by sector, that could have the most impact when used jointly to support collaboration (LHIN: N=40, PHU: N=175)

Crosstabs by employer	LHIN Count (% of LHINs)	LHIN Rank	PHU Count (% of PHUs)	PHU Rank
Program planning, management, and evaluation	**29 (72.5%)**	**1**	**104 (59.4%)**	**1**
Business intelligence (for decision support)	24 (60.0%)	2	35 (20.0%)	
Health equity impact assessments	**20 (50.0%)**	**3**	**87 (49.7%)**	**3**
Quality improvement	19 (47.5%)	4	49 (28%)	
Knowledge exchange and translation	**15 (37.5%)**	**5**	**95 (54.3%)**	**2**
Joint communication strategies and messages	12 (30.0%)		80 (45.7%)	4
Collaboration/ partnership evaluation	13 (32.5%)		76 (43.4%)	5

Bolded rows represent agreement between LHINs and PHUs on the top five categories

Criteria for a Common Set of Health Indicators to Inform Health System Planning

When asked to rate the importance of various criteria when selecting a common set of population health indicators to inform system planning, most respondents rated the criteria below as "**important/very important**":

1. Potential to identify inequity (92%)
2. Covers a range of indicator categories (e.g., risk factors in addition to health system utilization) (92%)
3. Meaningful at different geographical levels (e.g., can roll up and down from local/neighbourhood to regional to provincial levels) (87%)
4. Both LHINs and PHUs have a role in improvement of the measured population health outcome (83%)

Both LHINs and PHUs had a similar distribution of these criteria, however, the LHINs had much smaller proportions of respondents reporting the level of importance as "important/very important" and much higher proportions of respondents being neutral about these criteria. For example, 92% of PHU respondents reported that the potential to identify inequity is an "important/very important" criteria as compared to 33% of LHIN respondents (62% were neutral).

Types of Data that Help Us Understand Population Health

Respondents were asked in an open-ended question; "**Please list the top five types of data that you use to understand the health of your population.**" Responses were analyzed qualitatively and grouped under six major categories (Table 7). The number of responses under each category are displayed by type of respondent (i.e., LHIN and PHU).

Of the total 352 LHIN and PHU responses related to *Data Used to Understand the Health of the Population*, the data categories most often used were:

- Health Status/Health Outcome (30.7%)
- Demographics and Determinants of Health (23.9%)
- Health Services Utilization (23.3%)
- Health Behaviour (e.g., substance use, obesity, breastfeeding, physical activity) (9.7%)
- Community/Neighbourhood Characteristics - community assessment data (i.e., walkability) (8.2%)

Table 7. Number and percentage of items by type of data used to understand population health by LHIN and PHU respondents

Types of Data	LHIN Count (% of LHINs)	PHU Count (% of PHUs)	Total Count (% of Total)
1. Health Status/Health Outcomes (e.g., morbidity/ mortality, life expectancy, injuries, reportable infectious disease)	28 (28.6%)	80 (31.5%)	108 (30.7%)
2. Demographics and Determinants of Health (e.g., employment, income, culture)	21 (21.4%)	63 (24.8%)	84 (23.9%)
3. Health Services Utilization (e.g., hospital, ER, and program use)	28 (28.6%)	54 (21.3%)	82 (23.3%)
4. Health Behaviours (e.g., substance use, obesity, breastfeeding, physical activity)	6 (6.1%)	28 (11.0%)	34 (9.7%)
5. Community Characteristics (e.g., walkability, environmental assessments)	5 (5.1%)	24 (9.4%)	29 (8.2%)
6. Health Services Quality/Performance (e.g., access to services)	10 (10.2%)	5 (2.0%)	15 (4.3%)
Total	**98 (100%)**	**254 (100%)**	**352 (100%)**

For additional information, refer to level 1 aggregation on worksheet titled "Q12 Data Types (LHINs & PH)" in accompanying MS Excel spreadsheet.

Public Health respondents (n=204) contributed 254 responses which were most often grouped into: 'Health Status/Health Outcomes' data (31.5%), 'Demographics and Determinants of Health' (24.8%) and 'Health Services Utilization' data (21.3%).

LHIN respondents (n=40) contributed 98 responses and indicated that they used 'Health Services Utilization' (28.6%) and 'Health Status/Health Outcomes' data (28.6%) most often, followed by the 'Demographics and Determinants of Health' data (21.4%). LHIN respondents also reported using more 'Health Services Quality/Performance indicator' data compared to those in Public Health (10.2% versus 2.0%). PHUs reported using more 'Health Behaviour' data compared to the LHIN (9.4% versus 6.1%)

It should be noted that many respondents (48 responses from LHINs, 313 responses from PHUs) interpreted the question as the *sources* of data rather that *types* of data. For example, many respondents named organizations, such as Statistics Canada or national and provincial surveys; for example, Canadian Community Health Survey (CCHS) and General Social Survey (GSS). Respondents also reported data systems such as those available from the Canadian Institutes for health Information (CIHI); including Continuing Care Reporting System (CCRS); Discharge Abstract Database (DAD); National Ambulatory Care Reporting System (NACRS); and Ontario Mental

Health Reporting System (OMHRS). Other data systems were named, including the Rapid Risk Factor Surveillance System (RRFSS). A few respondents named generic types surveys; for instance, parent, population health, or priority population surveys (Table 8).

Table 8. Number and percentage of data sources* used to understand population health by LHIN and PHU respondents

Data Source	LHIN Count (% of LHINs)	PHU Count (% of PHUs)	Total Count (% of Total)
Risk Factor Surveys	6 (12.5%)	66 (21.1%)	72 (19.9%)
Census	11 (22.9%)	51 (16.3%)	62 (17.2%)
Organizations Providing Data	11 (22.9%)	36 (11.5%)	47 (13.0%)
Better Outcomes Registry and Network (BORN)	0	31 (9.9%)	31 (8.6%)
Existing Profiles, Reports, Snapshots	1 (2.1%)	22 (7.0%)	23 (6.4%)

**Only the top 5 data sources are listed here*
For additional information, refer to level 1 aggregation on worksheet titled "Q12 Data Sources (LHINs & PH)" in accompanying MS Excel spreadsheet.

Indicators that will Strengthen Collaborative Health System Planning

Respondents were asked to identify **"the two most important indicators in each category that will strengthen collaborative health system planning by LHIN and Public Health."** Responses were analysed qualitatively. Results are reported using frequency counts of the items within sub-categories for each of the major categories.

Although the question asked about the top two indicators, the list below includes the top **five indicators to strengthen collaborative health system planning by LHINs and Public Health** within each of the eight major categories:

a) **Health Outcomes** (e.g., mortality, life expectancy)
   1. mortality measured in various ways (e.g., mortality by cause, preventable, premature) (n= 90);
   2. life expectancy (e.g., life expectancy by income quartile, disability free life expectancy) (n=43);
   3. morbidity reported in various ways (e.g., incidence, changes in rates of disease, multi-morbidity) (n=33);
   4. quality of life (n=15); and
   5. health service use including hospitalizations (n=14).

b) **Health Status** (e.g. excellent or very good health, cancer incidence)
   1. diseases including chronic disease, infectious diseases, multi-morbidity and correlations (n=92);
   2. general self-reported health status (n=49);
   3. mental health (n=37) described as self-rated mental health and excellent to very good self-reported mental health;
   4. physical health (e.g., physical activity level, obesity) (n=16); and
   5. quality of life measures (n=9);activities of daily living, disabilities, functional status and mobility (n=9).

c) **Population/Demographic** (e.g., birth rate; age/sex distribution)
   1. age, sex, and gender data (n=95);
   2. birth and death rates (n=40);
   3. ethnic, racial, cultural, and minority groups/priority populations (e.g., indigenous, immigrant and refugees, LGBTQ, and ethnicity) (n=28);
   4. income indicators (e.g., income inequality, family income, poverty rates, deprivation) (n=23); and
   5. population size and make up (n=14).

d) **Health Risk Factors** (e.g., tobacco use; fruit and vegetable intake; exceeding low risk alcohol drinking guidelines):

   1. substance use including tobacco (n=80), alcohol (n=42), drugs (n=32), and substance use in general (n=7) (total n=161);
   2. energy imbalance (e.g., food intake, weight, physical activity, clustered physical activity, nutrition) (n=92);
   3. mental health (n=11);
   4. social determinants of health (n=8); and
   5. healthy lifestyle (n=6); injuries (n=6); communicable diseases (n=6).

e) **Social Determinants of Health/Health Inequities** (e.g., population in low income (LIM); housing affordability; differences in health outcomes comparing indigenous and non-indigenous populations)

   1. income (e.g., low-income measure (LIM), poverty, deprivation index, living wage) (n=104);
   2. housing (e.g., affordability, safety, security, access, and transient housing) (n=41);
   3. priority populations (e.g., indigenous population, cultural communities, visible minorities) (n=33);
   4. health outcomes by population (e.g., indigenous populations, immigrant populations, social determinants of health, socioeconomic status, income) (n=23); and
   5. education (n=16).

f) **Health Service Capacity/Health System Characteristics** (e.g., number of general practitioners and nurse practitioners per capita; number of home care visits per capita)

1. numbers and ratios of health and community care providers per capita, including primary care, health care and community care, health services, and public health providers (n=64);
2. access to health and community services and providers (e.g., wait times, bed care spaces, access to providers and quality of access) (n=61);
3. number per capita and quality of home care visits (n=15);
4. number of unattached patients (n=13); and
5. service utilization rates for hospitalization, ER, primary care, dental and long-term care (n=11).

g) **Health System Performance** (e.g., visits for conditions best managed elsewhere; two-year old well baby visits)

1. appropriate and inappropriate use of service (e.g., visits and ambulatory care sensitive conditions best managed elsewhere, inappropriate emergency room use) (n=34);
2. hospital and ER admissions, readmissions and discharges including use of Alternate Level of Care (ALC) beds (n=26);
3. prenatal, well baby including breastfeeding support, and HBHC visits (n=25);
4. access to services/specialists/procedures (e.g., wait times, access to primary care, access to appropriate care 24/7) (n=25); and
5. Immunization rates (n=8).

h) **Health System Utilization** (e.g. emergency room visits, hospitalization rates)

1. emergency department utilization (e.g., rates by cause and return visits) (n=74);
2. hospitalization rates (e.g., admissions and readmissions, use of ALC beds, length of stay, and reasons for admissions) (n=48);
3. appropriate versus inappropriate utilization of services (e.g., inappropriate use of acute care beds, non-urgent use of ER and visits for conditions best managed elsewhere) (n=16);
4. primary care utilization and access measures (e.g., walk-in use) (n=11); and
5. home care use (n=8).

Data Gaps – Indicators, Topics, and Population Data Needed to Facilitate Collaborative Health System Planning

Respondents were asked to identify, to the best of their knowledge, **"five indicators, topics, or populations for which data are not currently available"** but would facilitate collaboration between LHINs and PHUs for an improved health system in Ontario, informed by a population health approach.

Respondents provided up to five answers for the above question. A total of 384 answers reported data needs which were all coded qualitatively (Table 9; Table 10). These answers were grouped into three major categories as follows: '**Topics of Interest**' (n= 23 answers; 58.1%); '**Populations of Interest**' (n=83 answers; 21.6%); and '**Demographics and Access to Data**' (n =78 answers, 20.3%).

Table 9. Number and percentage of topics by overall category for which data are not currently available but are needed for LHIN-PHU collaboration

Topics	Total Count	% of Total
1. Topics of Interest	223	58.1%
2. Populations of Interest	83	21.6%
3. Demographics and Data Access	78	20.3%
Total	**384**	**100%**

For additional information, refer to level 1 aggregation on worksheet titled "Q14 Data Not Available" in accompanying MS Excel spreadsheet.

Table 10. Number and percentage of Q14 collated responses for which data are not currently available but are needed for LHIN-PHU collaboration (N = 384)

Data Gaps	Total Count	% of Total for Each Category
Topics of interest	**223**	**-**
Health Issues (*Largest category – see table 10 below*)	151	67.7%
Health System Issues	52	23.3%
Socio-environmental Issues	20	9%
Populations of Interest	**83**	**-**
Indigenous/First Nations	24	28.9%
Children and Youth	23	27.7%
Ethno-cultural groups	10	12%
Seniors	10	12%
Priority populations (e.g., poor, marginalized)	6	7.2%
Homeless population	4	4.8%
Newcomers/Refugees	4	4.8%
LGBTQ	2	2.4%
Demographics and data access	**78**	**-**
Data available but not accessible to all	64	82.1%
Demographics	14	17.9%

For additional information, refer to level 1 aggregation on worksheet titled "Q14 Data Not Available" in accompanying MS Excel spreadsheet

Within the **'Topics of Interest'** category (n=223) (Table 10) were:

1. 'Health Issues' (n=151; 67.7%). These comprised of health behaviours, mental health, chronic diseases, healthy weights and obesity, immunizations vaccinations, and injuries and violence (Table 11). The most frequent responses (n=57; 37.7%) were grouped into the sub-category 'Health Behaviours' (i.e., substance use, physical activity, nutrition, and sleep). The next most frequently identified health issue was 'Mental Health' (i.e., general mental health, child and youth mental health, suicide) (n=35; 23.2%). The third most frequently reported health issue was 'Chronic Diseases' (n=8; 5.2%);

2. 'Health System Issues' (n=52; 23.3%). These comprised of access to health services, utilization of health services, and system performance (Table 12); and

3. 'Socio-environmental Issues' (n=20; 8.9%). These comprised of the built environment, employment indicators, housing, and community neighbourhood characteristics (Table 13).

Table 11. Number and percentage of health issues for which data are not currently available but are needed for LHIN-PHU collaboration (N=151)

Health Issues	Total Count	% of Total
Behaviours	57	37.7%
Mental health	35	23.2%
Chronic diseases	8	5.3%
Healthy weights and obesity	6	3.9%
Immunizations vaccinations	6	3.9%
Injuries and violence	6	3.9%
Social engagement - isolation for seniors	5	3.3%
Infectious diseases	4	2.6%
Dental care	4	2.6%
Attitudes beliefs	3	1.9%
Food security	3	1.9%
Health literacy	3	1.9%
Caregiver strain	2	1.3%
General health status information	2	1.3%
Sexual health	2	1.3%
Learning disabilities autism ADHD	1	0.7%
Prescription drugs	1	0.7%
Preconception & pregnancy health	1	0.7%
Disabilities	1	0.7%
Hospice care	1	0.7%

For additional information, refer to level 3 aggregation on worksheet titled "Q14 Data Not Available" in accompanying MS Excel spreadsheet

Table 12. Number and percentage of <u>health system issues</u> for which data are not currently available but are needed for LHIN-PHU collaboration (N=52)

Health Systems Issues	Total Count	% of Total
Access to Health and Community Care (Including Wait Times)	19	36.5%
Utilization of Health Services	14	26.9%
Health System Performance	11	21.2%
Human Resources	5	9.6%
Health Equity	3	5.7%

For additional information, refer to level 3 aggregation on worksheet titled "Q14 Data Not Available" in accompanying MS Excel spreadsheet

Table 13. Number and percentage of <u>socio-environmental issues</u> for which data are not currently available but are needed for LHIN-PHU collaboration by LHIN and PHU respondents (N=20)

Socio-environmental Issues	Total Count	% of Total
Built Environment (Including Water Quality)	7	35.0%
Community/Neighbourhood Characteristics	3	15.0%
Employment Indicators	3	15.0%
Housing	3	15.0%
Social and Environmental Determinants of Health	3	15.0%
Mobility	1	5.0%

For additional information, refer to level 3 aggregation on worksheet titled "Q14 Data Not Available" in accompanying MS Excel spreadsheet

Within the '**Populations of Interest Category**' (n=83) (Table 10) were:

1. 'Indigenous Population and First Nation Issues' (n=24; 28.9%). This comprised of requests related to Indigenous population/First Nations data both on and off reserve;
2. 'Children and Youth' (n=23; 27.7 %). This category comprised of gaps in the general child health data and in particular child health data under the age of 12 years;
3. 'Ethno Cultural Groups' (n=10; 12%). The comprised of gaps in Mennonite and Francophone specific data;
4. 'Seniors' (n=10; 12%). General data requests for senior health data;

5. ‘Priority Populations’ (n=6; 7.2%) This comprised of requests for data related to marginalised groups generally, specifically data in relation to sex trade workers and institutionalized groups;
6. ‘Homeless Population’ (n=4; 4.8%). This comprised of gaps in homeless, inadequately housed and transitional youth data;
7. ‘Newcomers and Refugee Data’ (n=4; 4.8%); and
8. ‘LGBTQ’ (n=2; 2.4%).

Within the ‘**Demographics, Data Quality and Access**’ (n=78) (Table 14) were:

1. ‘Data Available but not Accessible to All’ (n=64; 82%)
    a. ‘Small area - sub-region data availability’ (n=32; 41%). The need for more granular neighbourhood level/DA level data on specific health indicators was identified.
    b. ‘Data available but not easily accessible’ (n=17; 21.8%). Responses in this category identified that, although data is available to some organizations, it may not be available to all (e.g., Coroners’ data, OHIP billing data, EMS data, Primary Care and other EMR data).
    c. ‘Linked data and data sharing’ (n=11; 14.1 %). Responses in this category identified the need for better/more data linkages across disparate data systems.
    d. ‘Other types of information’ (n=4; 5.1%) included Emergency Medical Services (EMS) data, Patient Reported Outcome Measures (PROMs), and primary care screening data.
2. ‘Demographics’ (n=14; 17.9%). Respondents identified a need for more/better socio–economic and demographic data (e.g., education, income, ethnicity, immigration status).

Table 14. Number and percentage of <u>demographics, data quality and access issues</u> for which data are not currently available but are needed for LHIN-PHU collaboration (N=78)

Data Accessibility	**Total Count** (% of Total)
Small Area/Neighbourhood/Sub-region Data Availability	32 (41.0%)
Data Available But Not Easily Accessible (e.g. Coroner’s Data, OHIP, Primary Care Data)	17 (21.8%)
Demographics (e.g., Income, Ethnicity, Education, Socio-economic Status)	14 (17.9%)
Linked Data and Data Sharing (e.g., Unique Patient Identifiers, Linking Health Admin Datasets with Other Data)	11 (14.1%)
Other Types of Data (e.g., EMS Data, PROMs, Primary Care Screening Data, EMR Data)	4 (5.1%)

For additional information, refer to level 3 aggregation on worksheet titled “Q14 Data Not Available” in accompanying MS Excel spreadsheet

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Appendix 1

Please refer to the accompanying MS Excel Workbook “Patients First LDCP Study Survey Responses to Qualitative Questions May 282018 FINAL.xls” for more detailed information.