

Informing ASPIRE and a Future Student Run Clinic: Needs Assessment of the City of
London (Ontario)

ASPIRE Research Committee: Yara Abou-Hamde, Ruth Fisher, Adam Hopfgartner,
and Michael Iacocca
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Introduction

The Alliance of Students Providing Interprofessional Resources and Education (ASPIRE) is a group aiming to maintain at least one student-led clinic in the city of London, Ontario. This clinic will be committed to the improvement of healthcare provision for the underserved and marginalized; to improve awareness of the need for access to healthcare; to actively involve students in contributing to the healthcare needs of society; to provide students with the opportunity of hands-on medical experience and increase mutual understanding of underserved client groups; to contribute to the welfare of all members, including undergraduate students, medical students, graduate students, and healthcare personnel; to work to ensure that our healthcare provision reflects the need of society including but not limited to differences in age, race/ethnicity, culture, gender, disability, and sexual orientation.

In order to ensure that we are addressing the healthcare needs of the population of London, Ontario, we have embarked on researching and compiling a needs assessment of this community. In the following pages, we provide information regarding population characteristics, social determinants of health, medical conditions, and access to primary care within the London community. In doing so, we attempt to understand the factors at play in determining the health of our population as well as the services that are needed to improve it. To conclude our needs assessment, we provide recommendations on the nature of services that ASPIRE could potentially provide.

I. Demographics and Population Characteristics

As of 2016, the City of London and Middlesex County together form an area of the South West Local Health Integration Network (LHIN) that is home to 455,373 people. On its own, the City of London is home to 383,822 inhabitants, making it the largest urban settlement in Southwestern Ontario.

Between 2011 and 2016, the City of London's population increased by 4.8%, comparable to a 5.0% increase across Canada. Approximately 84% of the population is 15 years and older (**Figure 1**). In 2011, 15.6% of the London population self-reported as a visible minority with 2.4% of the population reporting Spanish as a mother tongue and 2.1% of the population reporting Arabic as the mother tongue. At the time, 2.7% were recent immigrants, having arrived in Canada between 2006 and 2011. Approximately 1.3% of the population does not speak English or French.

London is home to an Indigenous population that makes up 1.3% of its inhabitants. When considering the entire sub-LHIN area, the Indigenous population is concentrated in the Oneida Nation of the Thames, Chippewas of the Thames First Nation, and Munsee-Delaware Nation – band governments based in reserves located within 30 minutes of the City of London.

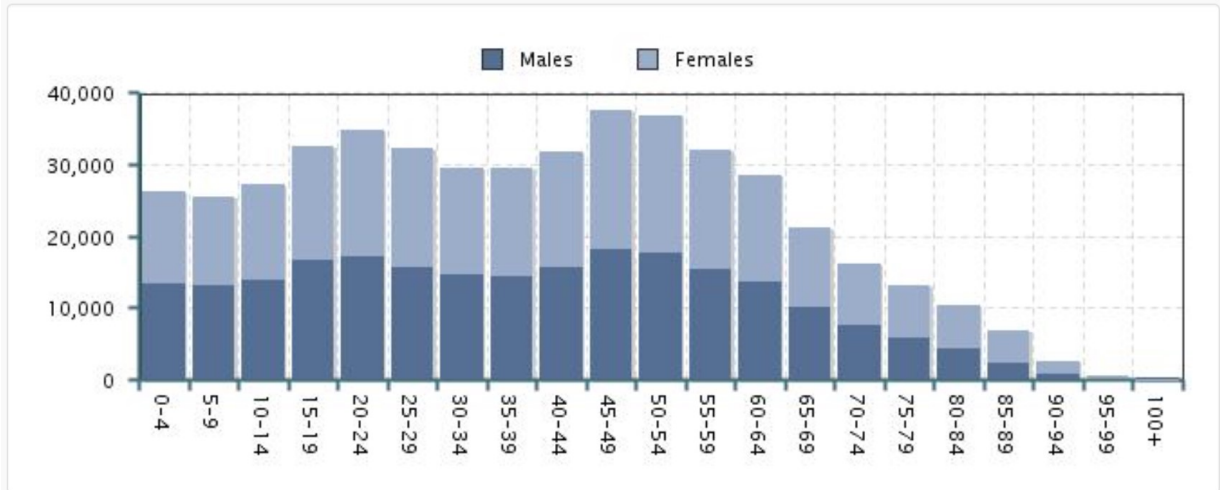


Figure 1. London population by five-year age groups and sex (Census 2011). *Source: Statistics Canada.*

In 2011, 70.2% of families were married couples, 12.7% were common-law couples and 17.2% were single-parent families (**Figure 2**). In those aged 15 years and older, 56.4% were either married or living with a common-law partner and 43.6% were either single, separated, divorced, or widowed.

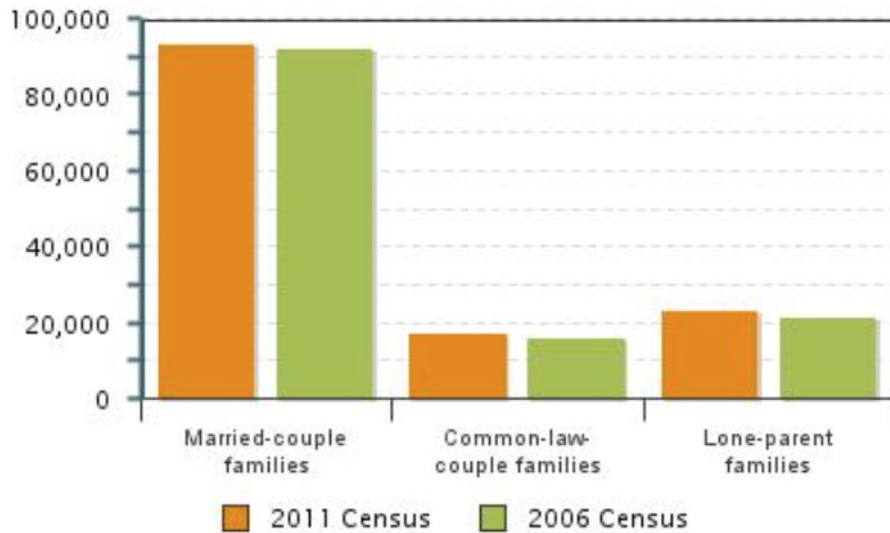


Figure 2. Types of families in London. *Source: 2011 Census, Statistics Canada.*

II. Social Determinants of Health

A. Socioeconomic Status

On average, higher socioeconomic status (SES) (including education, income and occupation) is associated with better health (Adler & Ostrove, 1999). In London, the highest socioeconomic distress is localized in the southeastern section of the city (**Figure 3**). Within the London Census Metropolitan Area (CMA), individuals with the lowest SES had higher rates of hospitalization, various health concerns and detrimental health-related behaviours versus those with the highest SES status ("Social Determinants," n.d.). Specifically, hospitalization related to anxiety disorders, chronic obstructive pulmonary disease (COPD) and substance-related disorders are four times as common among individuals with lower SES (**Figure 4**).

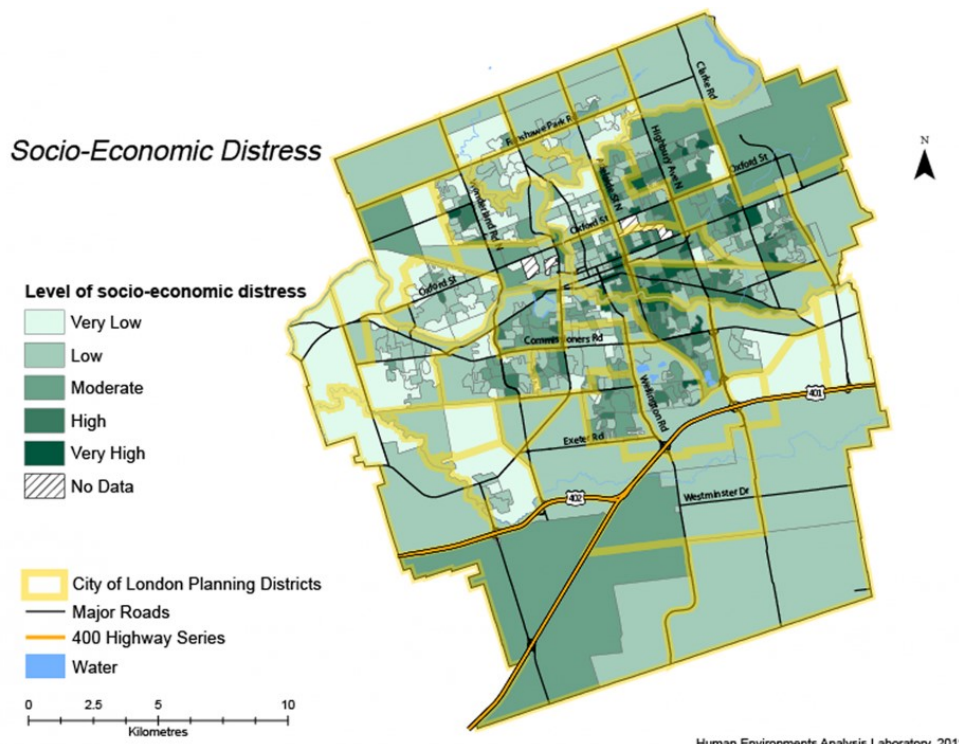


Figure 3. Level of socio-economic distress within the City of London (2006). *Source: 2006 Census, Statistics Canada; DMTI Spatial, 2009; The City of London, 2009; maps prepared by the Human Environments Analysis Laboratory, 2011.*

	Injures in Children	Low Birth Weight	Unintentional Falls	Land Transport Incidents	Injuries	Asthma in Children	Anxiety Disorders	Affective Disorders	ACSC	Mental Health	Diabetes	COPD	Substance Related Disorders
Pan-Canadian	1.2	1.2	1.3	1.3	1.4	1.6	1.6	1.9	2.3	2.3	2.4	2.7	3.4
Victoria	1.2	1.1	1.5	1.3	1.5	2.0	1.7	1.8	2.6	2.0	2.0	2.6	2.5
Vancouver	1.1	1.2	1.3	1.4	1.4	1.7	2.2	2.3	2.3	2.8	2.3	2.8	3.0
Calgary	1.2	1.2	1.4	1.4	1.5	1.8	2.1	2.1	3.0	2.7	2.6	3.3	3.9
Edmonton	1.5	1.3	1.4	1.7	1.7	1.5	1.3	2.0	3.0	2.6	3.1	3.1	4.2
Saskatoon	2.0	1.6	1.8	2.8	2.4	1.3	2.2	2.8	3.4	3.3	3.4	3.4	6.4
Regina	1.7	1.1	2.0	1.9	2.2	1.9	2.4	3.5	3.8	4.5	4.2	4.7	8.5
Winnipeg	2.5	1.3	1.8	1.9	2.2	3.0	3.9	2.1	3.4	3.0	3.7	2.7	5.0
London	1.1	1.2	1.7	1.5	1.7	1.6	4.5	2.8	3.5	2.8	3.5	4.7	4.2
Hamilton	1.4	1.4	1.5	1.4	1.6	1.8	1.1	1.8	2.5	2.2	2.7	3.1	2.7
Toronto	1.1	1.2	1.1	1.1	1.2	1.2	1.5	1.6	1.7	2.0	1.9	2.2	2.3
Ottawa-Gatineau	1.0	1.4	1.0	1.0	1.1	1.5	1.4	1.8	1.9	2.0	1.6	1.8	3.0
Montreal	1.0	1.2	1.1	1.2	1.2	1.5	1.2	1.5	2.3	1.8	2.4	2.5	3.3
Quebec	1.1	1.3	1.1	1.2	1.2	1.5	1.4	1.9	2.0	2.7	2.3	1.8	5.4
Halifax	1.6	1.3	1.3	1.5	1.5	2.5	4.0	3.6	2.9	3.4	2.2	2.9	3.1
St. John's	1.0	1.4	1.2	1.0	1.3	1.5	8.0	2.4	2.2	2.3	1.5	2.3	3.2

Figure 4. Age-standardized ratio of hospitalization rates between groups of low- and high-socioeconomic status (2006). *Source: Middlesex-London Community Health Resource; CPHI analysis of 2003-2004 to 2005-2006 Discharge Abstract Database and National Trauma Registry Data, Canadian Institute for Health Information.*

i. Income and Unemployment

The median household income in the City of London is \$63,123 with 35.9% of the population living under the low-income cut-off (LICO). Statistics Canada defines LICOs as “income thresholds below which a family will likely devote a larger share of its income on the necessities of food, shelter and clothing than the average family.” Moreover, 8.8% of the population between 25 and 64 years old lacks a high school diploma, which is a significant determinant of socioeconomic status. Unemployment in the London CMA was 8.6% in 2010 (ninth highest of the 34 CMAs across Canada) and London’s labour market participation rate of 65.7% was within the lowest third in this CMA and below the provincial rate of 67.1% (“2006 Census,” 2012).

ii. Food Insecurity

The price of food in London is steadily increasing. Between 2010 and 2011, the weekly cost of nutritious food necessary to feed a family of four increased by \$10 (versus the average Ontario increase of \$8). This rate of inflation contributes to the 7.7% of households considered food insecure (without reliable access to adequate nutrition) in the London-Middlesex area in 2009-10 (“Social Determinants,” n.d.). Furthermore, between 2001 and 2010 there was a 28.5% increase in the number of families (3,044 in 2010) visiting the London Food Bank every month. However, the total number of households increased by less than 10% (“2006 Census,” 2012).

B. Housing

Core housing need is an indicator of potential homelessness referring to households that are unable to afford housing that meets adequacy, suitability and affordability norms. As of 2006, 19,240 (13.8%) London households lived in core housing need, which is an improvement from the 1996 rate of 18.5% (“Quality of Life,” 2015). This compared to the Canadian and Ontario averages of 12.7% and 16.2%, respectively (“Quality of Life,” 2015).

Between 2011 and 2015, 9552 individuals accessed emergency shelters in London. There has been a steady decline with 760 fewer unique individuals visiting homeless shelters in 2015 (2670 individuals) versus 2011 (3400 individuals). However, the rate of dependent children and youth accessing emergency shelters has remained constant (“Emergency Shelters,” 2016).

D. Transportation

According to the 2011 National Household Survey released by Statistics Canada, of the 167,570 Londoners aged 15 years and over with either a regular place of work or no fixed workplace address, 76% drove to work, 8.7% used public transit, 6.9% carpooled, 5.8% walked and 1.7% cycled (“National Household,” 2013). This resulted in an average commuting time of 15.9 minutes (“National Household,” 2013).

E. Crime

In general, crime varies by year with no general trends (**Figure 5**; “Other Crime,” 2017). Violent crimes have increased since 2014 (2,381 versus 2,676 in 2016) after a consistent decline from 2010 (3,042). There were fewer property crimes in 2016 (13,601) than the earliest reported numbers in 2010 (14,288). However, this rate was higher than the previous year (12,449 in 2015).

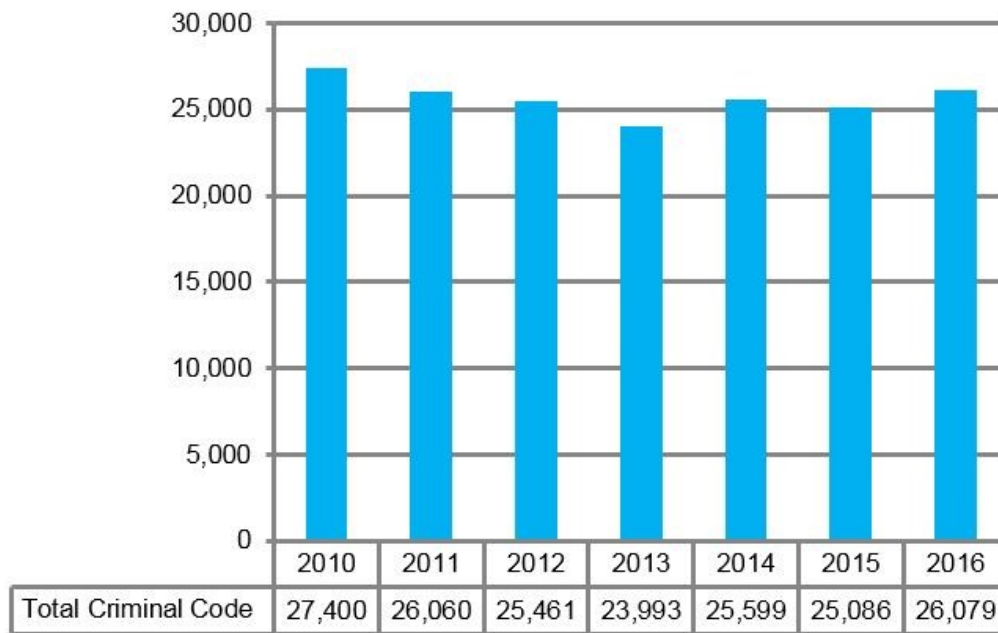


Figure 5. Total number of crimes in the City of London from 2010 to 2016. *Source: Reports and Statistics, London Police.*

F. Discrimination/Cultural Barriers

Discrimination and cultural barriers experienced by vulnerable populations can exacerbate the effects of low SES. According to the Golden Report released in response to the rising incidence of homelessness in the city of Toronto in 1999, families with children, youth, abused women, Indigenous people, and immigrants and refugees are the groups at highest risk of homelessness (“The Toronto Report,” 2001). Poverty and stereotyping based on culture or SES can compound the already detrimental forces felt by these vulnerable populations resulting in inequality and homelessness. In this case, health suffers due to the inability to maintain medication and/or social/medical support leading to the spread of disease, abuse, stress, malnutrition, dehydration, sleep deprivation, and exposure to the elements (“The Toronto Report,” 2001).

A recent study compared social determinants of health between the general Ontario population (n=39,980) and transgender Ontarians (n=433). Compared to the general population, a transgender individual in Ontario is significantly more likely to be underpaid and underemployed, unable to complete postsecondary education, and to have experienced food insecurity, social exclusion and unmet health care needs (Giblon, 2016). Furthermore, the Trans PULSE project describes social determinants of health among trans people in Ontario. Statistics describing discrimination and violence experienced by trans persons in this report include, but are not limited to (Bauer & Scheim, 2015):

- 20% of the population had been the victim of physical or sexual assault due to their gender expression
- 13% have been fired for being transgender
- 10% of trans participants reported having emergency health care stopped or denied
- 28% of trans Ontarians could not receive employment references and 58% could not receive transcripts with the correct name or sex designation
- 21% of participants reported avoiding the emergency department when they needed it, due to being trans gender
- 43% had attempted suicide

Overall, the LGBTQ community experiences higher levels of depression and suicide, greater risk of sexually transmitted infections, and higher rates of alcohol and drug use (“What are Social”, 2006).

G. Education

In 2006, 21% of the Middlesex-London population over the age of 15 had not achieved a high school certificate or equivalent (“Social Determinants,” n.d.). In this area, males are twice as likely to receive an apprenticeship or trades certificate/diploma whereas a somewhat higher proportion of females completed college (**Figure 6**). Residents of Middlesex-London attain a college certificate at a higher rate than Ontarians overall. However, they are less likely to have a university degree (**Figure 6**).

Highest Educational Attainment	Middlesex-London		Ontario	
	Females	Males	Females	Males
	Percent			
No certificate; diploma or degree	20.5	22.1	22.2	22.3
High school certificate or equivalent	28.6	27.3	27.7	25.7
Apprenticeship or trades certificate or diploma	5.2	10.7	5.3	10.9
College; CEGEP or other non-university certificate or diploma	23.3	18.5	20.1	16.5
University certificate or diploma below the bachelor level	3.3	2.8	4.4	3.8
University certificate; diploma or degree	19.2	18.5	20.2	20.8

Figure 6. Highest educational attainment in Middlesex-London and Ontario as of 2006 (>15 years of age). Source: Middlesex-London Community Health Resource; 2006 Census, Statistics Canada.

III. Health Status of the Population and Prominent Medical Issues

When it comes to the health of the population, cardiovascular and respiratory diseases (e.g. IHD, stroke, and COPD) are the leading causes of hospitalization and mortality in the London Middlesex sub-LHIN area. However, the prevalence of these conditions has declined over time and remains lower than the rest of Ontario. Asthma stands out as an exception, with rates in the London Middlesex sub-LHIN area surpassing those in the remainder of the South West LHIN. It is important to note, however, that London Middlesex also has the highest proportion of children aged 5-17 years in its population compared to the rest of the LHIN.

The expected primary care need score (SAMI) for residents of the City of London is 0.96, sitting higher than the South West LHIN average of 0.92. The Standardized ACG Morbidity Index, or SAMI score, is a tool used to predict an individual's expected number of primary care visits. The index is standardized at 1, so a SAMI score below 1 indicates a less complex patient or population and a SAMI score above 1 indicates a more complex patient or population. Despite London's lower than average SAMI score, the score of patients rostered to the London InterCommunity Health Centre is 1.64, the second highest SAMI score of the community health centres in Ontario funded by the South West LHIN.¹

A. Ischemic Heart Disease (IHD)

Between 2003 and 2013, there was a statistically significant decrease in the rates of IHD, and the rate of hospitalization due to IHD was lower in London Middlesex than in the rest of the province. The mortality rate was also lower in London Middlesex (94.9 per 100,000) than in the South West LHIN (127.7 per 100,000). Despite these trends, cardiovascular disease including IHD remains the leading cause of mortality in London Middlesex ("Middlesex-London," n.d.).

B. Hypertension

Hospitalization rates for hypertension did not change from 2003 to 2013, and the rates in London Middlesex were similar to those in the South West LHIN and in all of Ontario. There was also no difference in rates between males and females, although rates did rise with increasing age.

¹ The other community health centres funded by the South West LHIN are the Central Community Health Centre (St. Thomas), South East Grey Community Health Centre (Markdale), Southwest Ontario Aboriginal Health Access Centre (London and Chippewa), West Elgin Community Health Centre (West Lorne), and Woodstock and Area Community Health Centre (Woodstock).

C. Stroke

From 2003 to 2013, hospitalization rates for stroke decreased and then increased with no statistically significant overall changes over the ten-year period. The rates were lower in London Middlesex than in all of Ontario prior to 2009, but were not statistically different from 2009 to 2013. In general, males tended to have higher rates of stroke than females, and the rate increased with age. The mortality rate for strokes was lower in London Middlesex (29.0 per 100,000) than in the entire South West LHIN (35.7 per 100,000).

D. Chronic Obstructive Pulmonary Disorder (COPD)

From 2003 to 2013, the hospitalization rates for COPD were lower in London Middlesex than in the province as a whole, and there was no significant decrease in the rates over that period. Rates increased significantly with age and also tended to be higher in males than in females. The mortality rate for COPD was lower in London Middlesex (27.9 per 100,000) than in the South West LHIN (34.8 per 100,000).

E. Asthma

The rates of hospitalization for asthma dropped substantially between 2005 and 2007, both in London Middlesex and in other parts of Ontario. The rates decreased primarily for those under the age of 20, and remained more stable in other age groups, though those aged 0-19 years continued to have the highest rate of hospitalization of any age group.

F. Diabetes

The rates of hospitalization for diabetes were similar between London Middlesex and all of Ontario, and actually higher in London Middlesex in 2012. Between 2003 and 2013, the rates in London Middlesex increased significantly, while they remained relatively stable elsewhere in the province. Rates increased with age and males tended to have higher rates than females, though not in all years. The mortality rate for diabetes was lower in the London Middlesex sub-LHIN (19.3 per 100,000) than in the whole South West LHIN (24.6 per 100,000).

G. Cancer

When considered together, all types of cancer accounted for the highest mortality rate of any chronic condition in London Middlesex (218.0 per 100,000) in 2011. The rate was lower than that reported for the South West LHIN (231.6 per 100,000). From 1988 to 2007, the incidence rates of age-standardized cancer increased, while the mortality rates decreased. While there was no significant difference in incidence or mortality rates between all of Ontario and London Middlesex, incidence rates of cancer in those aged 45 years or older were significantly higher in London

Middlesex. The rates of cancer rose with increasing age, with seniors having the greatest risk for developing cancer.

Using data from 2005 to 2007, breast cancer was that of highest incidence in females and prostate cancer was of highest incidence in males. However, lung cancer was the leading cause of cancer death in both males and females, despite London Middlesex having lower rates of lung cancer than elsewhere in Ontario. The incidence of lung cancer in males decreased from 1988 to 2007 while increasing in females, though males still had a higher overall incidence than females. The incidence rate of prostate cancer in males and oral cancer in both males and females increased significantly from 1988 to 2007, and males in London Middlesex had significantly higher rates of melanoma, oral cancer, and prostate cancer than in the rest of Ontario.

H. Immunization

Between 2000 and 2010, there were no reported cases of diphtheria, measles, polio, or rubella infections in the City of London. Moreover, the annual average incidence of other infectious diseases like influenza, mumps and pertussis was lower in London Middlesex than it was in the rest of the province. The only exception to this was the annual average rate of invasive meningococcal disease, which was reported at 1 in 100 000 in London Middlesex versus 0.5 in 100 000 in Ontario.

I. Maternal and Child Health

In 2010, 62.1% of London Middlesex women who had given birth reported having visited a health care provider for pregnancy planning. This represents a 1.7 fold increase since 2001. Moreover, around 9 out of 10 pregnant women reported receiving prenatal care during the first trimester of their pregnancy. Birth outcomes, including multiple births, low birth weight, and large-for-gestational age (LGA) babies, were generally similar to the provincial rates. For London Middlesex infants, perinatal conditions were the leading cause of death (55%) followed by birth defects (25%). This ranking of leading causes of death was the same in Ontario.

I. Mental Health

The City of London has a very high prevalence of mental illness with 21.6% of the population known to have a mental health condition compared to 18.0% in the South West LHIN. The prevalence exceeds 22% in certain pockets of the city, including the neighbourhoods of Carling, East London, Hamilton Road, and Westmount. These neighbourhoods feature lower socioeconomic status and offer affordable housing as well as supportive housing for people with mental illness. In addition, the need for mental health services has been on the rise for students attending Western University and Fanshawe College. This has raised concerns regarding timely access to these services on both campuses.

K. HIV Crisis

Over the ten-year period between 2005 and 2015, Ontario's HIV rates went from 7.4 to 5.5 cases per 100,000. Over the same time period, London's rates experienced an increase from 5.9 cases to 9.0 cases per 100,000. The local rates for hepatitis C also climbed from 32.2 cases to 53.7 cases per 100,000 over the same period. This prompted the Middlesex London Health Unit (MLHU) to declare a state of public health emergency in June of 2016. A statement by the MLHU at that time indicated that the increasing infection rates and rates of injection drug use were tied to factors including mental health and addiction issues and sharing of needles ("Health Unit," 2016).

IV. Access to Primary Care

A. Primary Care Landscape

Of the 617 comprehensive primary care providers (PCPs) within the South West LHIN, 86% (267) reside in the city of London as of 2015. The provision of primary care in the London community includes two Family Health Teams, one Community Health Centre, 20 walk-in clinics, one Nurse Practitioner-Led Clinic, one Urgent Care Centre, and two sites operated by the Aboriginal Health Access Center (one each in London and the Chippewas of the Thames First Nation).

Family physicians (FPs) in London carry an average roster of 1,256 patients. It is worth noting that FPs who are associated with walk-in clinics do not roster patients and teaching units operated by the Schulich School of Medicine and Dentistry require FPs to divide their time between clinic, teaching and research. London has 1.7 Interdisciplinary Health Professionals or IHPs per 10,000 residents and only 33% of PCPs are affiliated with team-based care. In comparison, the South West LHIN has an average of 2.6 IHPs per 10,000 people and 53% of PCPs are affiliated with team-based care. **Figure 7** shows a breakdown of the number of IHPs by discipline practicing in London and surrounding areas.

While 90.1% of the London Middlesex sub-LHIN population report access to a FP, the proportion without a consistent PCP (17.5%) is the highest in the South West LHIN. Since December 2015, over 1600 Syrian immigrants requiring access to primary care have settled in the London Middlesex sub-LHIN area.

	London Middlesex	City of London	City of Strathroy	South West LHIN
Total Population (2011)	444,509	366,151	13,978	956,468
Nurse Practitioners (excluding NPLC)*	25.9	20.6	2.5	78.6
Registered Nurse	22.6	15.1	3.1	66.4
Registered Practical Nurse	0.2	0.0	0.0	10.7
Registered Dietitian	8.0	5.2	0.8	22.9
Mental Health Worker	0.0	0.0	0.0	4.5
Social Worker	19.2	12.5	3.0	48.2
Pharmacist	5.4	4.2	0.6	13.6
Educator	0.0	0.0	0.0	5.8
Other	8.6	6.1	0.7	28.3
Total	89.9	63.7	10.7	279.0
Total Interdisciplinary Health Professionals per 10,000 population	2.0	1.7	7.7	2.6

*Nurse Practitioners in NPLCs are counted within the primary care provider numbers.

Figure 7. Interdisciplinary health professionals in team-based care (2015). *Source: South West Local Health Integration Network.*

B. Health Services Utilization

In examining the most common reasons for visits to a primary care office, we came across a list of top 10 chronic conditions managed by Canadian primary health care providers published by the Canadian Institute for Health Information (CIHI) in 2011 (**Figure 8**). Hypertension, arthritis, and chronic pain topped the list (“A Snapshot,” 2011).

The city of London has the lowest rate of unnecessary emergency department visits (5.9 per 1000 residents) within the South West LHIN. However, readmission rates for chronic disease patients (18.4%) are higher than the surrounding area (17.1% in the South West LHIN). This may be due to the increased severity of disease states witnessed in academic teaching hospitals.

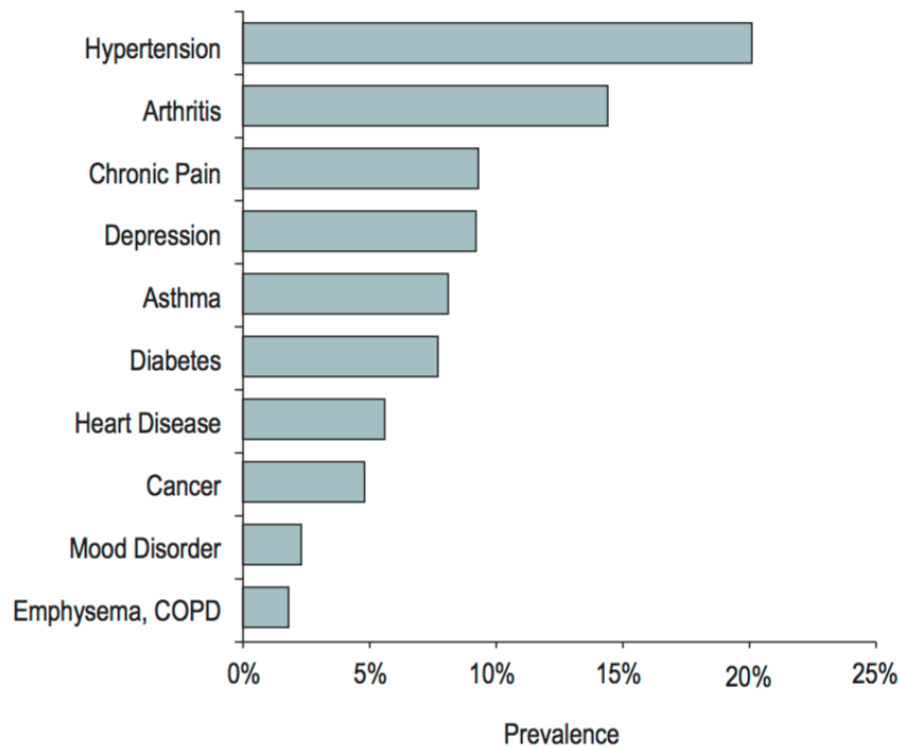


Figure 8. Prevalence of chronic conditions managed by primary health care providers in Canada (2011). *Source: Canadian Institute for Health Information, Health Council of Canada and Statistics Canada; Canadian Survey of Experiences with Primary Health Care, 2008.*

According to the National Ambulatory Care Reporting System managed by CIHI, the top three reasons for visiting an emergency department (ED) in 2014-2015 varied by age group. In those aged 20-64, the top three reasons were abdominal/pelvic pain, throat/chest pain, and back pain. In those 65 years and older, pain in throat/chest topped the list, followed by urinary system disorders and abdominal/pelvic pain. According to the same report, frequent ED users, defined as those visiting the ED 4 or more times over the year, accounted for over 30% of all ED visits (“Emergency Department,” n.d.).

In their 2013 literature review “Synthesis of the Evidence and Discussion Report,” Soril et al. attempted to characterize frequent ED users in Canada. Based on their results, key demographic risk factors, clinical risk factors and health care utilization of the most common ED users were described. A frequent ED user is most likely to be >65 years old, female, unemployed and without a high school diploma. The frequent ED user is more likely to suffer from a chronic disease or to have been diagnosed with a mental health disorder. High use of primary care resources, having previous in-patient admissions, having previous frequent ED visits and having previous psychiatric hospitalizations are all factors associated with frequent ED users.

C. Lived Experiences of the Population

A survey aimed at assessing people's lived experiences in accessing primary care was made available to the population of the South West LHIN between December 2015 and January 2016. 261 adults from the London Middlesex sub-LHIN responded. Of these, 6.1% identified as a visible minority and 2.9% identified as Indigenous. Of the respondents, 95.0% reported having a primary care provider (PCP).

The survey posed 22 Likert-scale questions regarding barriers to accessing primary care, in addition to two open-ended questions asking respondents to provide details about their experiences with these barriers and any suggestions for improvement. There were 12 potential barriers reported by more than 10% of the respondents, with the timing of appointments being the most commonly reported barrier. Waiting too long for an appointment was identified as a barrier by 29.1% of respondents and inaccessible office hours by 23.5%. Of the respondents, 8.8% specifically referred to the need for extended office hours to encompass evenings and weekends. Furthermore, 16.6% of respondents indicated not having enough time to discuss all of their concerns with their PCP during the same visit.

Tying into the issue of timing of appointments is geographic and financial accessibility. 23.9% of respondents stated that the location of their PCP is not a convenient distance from home or work, while 28.3% identified not being able to afford taking time off work for appointments as a barrier. Paying for transportation to get to appointments was another deterring factor.

Other concerns included not knowing what to expect during treatments (10.9%), feeling judged (10.1%), and not being able to speak honestly to a PCP (9.7%).

D. Experiences of Vulnerable Populations

Indigenous Population

- There were only seven respondents to the survey from London Middlesex who self-identified as Indigenous. Five indicated having a PCP. However, the sample size was too small for further analysis. One respondent described poor relationships with PCPs, writing that "as a light-skinned First Nations woman, I absolutely get better care...but I have friends and family who have been treated poorly and racially discriminated against in the same office."
- In addition, a focus group (n=15) was conducted with health service providers (HSPs) who work directly with Indigenous patients. Focus group participants described challenges like transitional barriers between federal and provincial funding and inadequate access to mental health services, and lack of funding for family members to travel with the patient when care is needed off reserve.

Ethno-cultural Groups and Recent Immigrant Population

- Survey respondents and focus group participants in this category most frequently identified challenges in the areas of health literacy and communication. This was a result of difficulty with system navigation as well as language barriers. One respondent wrote that “some [recent immigrants] are using family members, including kids, as interpreters for complex appointments” while an HSP described some patients paying for an interpreter out-of-pocket when feeling very sick.

Seniors Population

- Many senior survey respondents identified time as a major barrier, specifically indicating that they have had to wait too long when booking appointments, and even when they were seen by their PCP, there was not enough time allotted to discuss all of their health concerns. Geographical accessibility was also identified as a challenge, both in terms of distance from home or work to PCP, as well as due to loss of license or physical mobility issues (see **Note 1** below). Another challenge identified was financial accessibility, as PCPs did not always take into account seniors’ ability to pay when prescribing medications (See **Note 2** below). Health literacy and communication were also cited as barriers, as some respondents felt that they were not given adequate resources and education to understand their own care plans and were not included in decisions about care.

Note 1. It is well documented in the literature that both the incidence and the severity of falls increase after age 60. Gait and balance disorders are similarly very prevalent in the elderly. According to Trueblood and Rubenstein, 20-40% of those over 65 years of age have a detectable gait abnormality (1991).

Note 2. In Ontario, persons 65 years and older are eligible for the Ontario Drug Benefit (ODB) program. This program covers a large portion of the cost of over 4000 prescription medications. A senior is required to pay a portion of drug costs based on yearly income and marital status (“What You Pay,” 2016). In 2011, Canadian households spent \$476 out of pocket on prescription medications on average. However, expenditures exceeded \$600 for households with persons over 55 years of age (Hennessy et al., 2016).

Rural Population

- Rural respondents frequently identified geographical accessibility as a concern, with one of the respondents writing: “It’s difficult for me (and many others) to travel to the doctor’s office when acutely ill.” In terms of financial accessibility, many rural respondents indicated that they have difficulty taking time off work and covering transportation costs to appointments. Rural respondents were more likely to report poor relationships with PCPs as well; one HSP wrote that patients often feel judged by their PCP and other

staff, especially if they are First Nations or if they cannot afford to spend money on clothing.

People with Low Socioeconomic Status (SES)

- One of the greatest concerns among this group was timing of appointments, including having to wait too long to book appointments, not having enough time to address all concerns at appointments, and the PCPs office hours not fitting respondents' schedules.
- Transportation issues were closely tied to challenges in financial accessibility, as one HSP wrote that many patients were not able to drive, had difficulties with public transportation, and could not afford a taxi. Taking time off work for appointments was a further challenge for this group, particularly as many minimum wage jobs do not have benefits or paid personal days.

E. Experiences of PCPs

The PCP survey was completed by 100 PCPs across the LHIN, with 29 from London Middlesex, of which 27 were family physicians (FPs) and 2 were nurse practitioners (NPs). A PCP engagement session was also held in the London Middlesex sub-LHIN area, in the city of London; 38 FPs and 11 NPs participated in this session.

The small proportion of PCP respondents who filled out the open-ended questions frequently mentioned challenges providing care for patients with mental illness as well as patients with addictions, and providing culturally safe care. At the PCP engagement session, participants voiced concerns about a lack of resources, including mental health resources, to meet the needs of complex and special populations, particularly patients with low SES.

When asked for general suggestions to improve access to primary care for vulnerable populations within the South West LHIN, PCP respondents suggested including more community outreach (including home visits), more team-based care, additional support for addressing the social determinants of health, transportation assistance for patients, system navigation support for both patients and PCPs, and increased recruitment and retention of PCPs in the area.

V. Word on interprofessional work

As the modern healthcare system becomes ever more complex, interprofessional models of care have become necessary in the delivery of high quality healthcare. This is especially true in providing care for a marginalized, vulnerable patient population, where often the most effective interventions target not biopsychosocial components of illness, but rather the social determinants of health that give rise to these illnesses in the first place. Access to affordable housing, food security and

employment are just as—if not more so—important than access to a primary care physician (Marmot, 2015).

Therefore, there is a pressing need for the next generation of healthcare providers to be trained in interprofessional practice. Poor communication between individual providers is a major contributor to sub-optimal care, especially for patients with complex, chronic health needs that are seen by multiple providers. This is underscored by the persistent lack of proper continuity of care often experienced as patients transition between hospital and community care (Haggerty, 2003).

Effective interprofessional care is a skill that is acquired through practice. Education for healthcare providers should incorporate interprofessional communication and practice early on in order to build competence. In London, a number of existing organizations advocate and promote interprofessional education, including: the Office of Interprofessional Health Education and Research (IPHER) at Western, the Schulich Medicine Interprofessional Education and Integration Club, and the London Interprofessional Health Students Association.

VI. Recommendations

A number of recommendations regarding the role and operation of an ASPIRE clinic in the London community can be made based on the research contained within this report. They are as follows:

- ASPIRE clinic patients would especially benefit from evening and weekend hours of operation. This would eliminate patients' need to take time off work in order to address arising health concerns.
- Attention should be given to social determinants of health. If adequate funding is available, addressing patient needs could come in the form of providing compensation for transportation costs and fresh, healthy foods. Students could also work to connect patients with other available resources in the community to address social determinants, e.g. housing and employment.
- The clinic could hold presentations and/or workshops to help newly arrived immigrants and refugees to navigate the healthcare system. Such workshops could include basic information regarding the Canadian healthcare system, including health coverage and filling prescriptions.
- In the scope of disease management, common chronic conditions that medical and nursing students could help manage include diabetes, hypertension, and respiratory disease. Occupational therapy and physiotherapy students could aid in the management of chronic pain, arthritis pain, and mobility limitations in the elderly.

- Health promotion should be a key aspect of an ASPIRE clinic with students advising patients on healthy exercise levels, healthy diets, and smoking cessation, among others. Outside of the clinic, students have already embarked on health promotion in the community through educational lectures and workshops.
- It is advisable that all students participating in such a clinic shall receive training in cultural sensitivity and working with vulnerable populations including Indigenous, LGBTQ, and low SES patients.

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