

**Development and Implementation of a  
Strategy to Address HIV, Hepatitis C, invasive  
Group A Streptococcal Disease and Infective  
Endocarditis in Persons Who Inject Drugs in  
Middlesex-London, Ontario**



April 20<sup>th</sup>, 2017

For information, please contact:

Todd Coleman  
Middlesex-London Health Unit  
50 King St.  
London, Ontario  
N6A 5L7  
phone: 519-663-5317, ext. 2505  
e-mail: [todd.coleman@mlhu.on.ca](mailto:todd.coleman@mlhu.on.ca)

---

## Table of Contents

---

Introduction .....	3
Rising HIV rates in London .....	3
Hepatitis C, infective endocarditis and invasive Group A streptococcal infections in London ...	3
Injection drug use in London, Ontario .....	3
Development and implementation of an HIV strategy for London .....	4
Additional epidemiological analyses .....	4
Initial stakeholder conversations .....	4
Declaration of a public health emergency .....	4
Deployment of a Field Epidemiologist from the Public Health Agency of Canada .....	4
Convening of an HIV Leadership Team .....	5
Environmental scan of public health units .....	5
Continuing stakeholder engagement and activities .....	6
Adaptation of the STOP HIV/AIDS model .....	6
Increased HIV Testing .....	6
Elgin Middlesex-Detention Centre .....	6
Campaign to increase awareness among PWID .....	7
Harm reduction services in London .....	7
Supervised injection sites .....	7
Enhanced surveillance .....	7
Public Health Agency of Canada Grant .....	8
Advocacy for provincial support .....	8
Appendix A: Epidemiologic summary of the HIV epidemic in Middlesex-London and Ontario .....	10
Appendix B: Epidemiologic Summary of Hepatitis C (HCV) and invasive Group A Streptococcal (iGAS) disease in Middlesex-London .....	11
Appendix C: Map of community services serving people who inject drugs in London, Ontario, 2016 ..	13
Appendix D: Interview Findings from Community Service Providers .....	14

---

# Introduction

## *Rising HIV rates in London*

In 2016, the Middlesex-London Health Unit (MLHU) saw a concerning rise in new HIV cases in London. A record high number of new HIV diagnoses (58 cases) were reported to the Health Unit that year, not explained by random variation or increases in HIV testing (see Appendix A). This represents the highest number of cases seen in one calendar year in Middlesex-London (M-L) since the 1980s. The majority of these cases resided in the City of London (54 out of 58), resulting in a city-specific rate of 14.1 cases per 100,000 in 2016, almost three times higher than the provincial average (see Appendix A). This increase in HIV rates in London is unique and is not comparable to anything seen in the rest of the province. In fact, HIV rates across the province have been declining over the past decade. The HIV rates in similar regions, such as Ottawa and Hamilton, were 5.8 per 100,000 and 3.7 per 100,000, respectively. Persons who inject drugs (PWID) have, at their highest, represented just under 10% of new cases of HIV in Ontario. In contrast, two thirds of new cases of HIV in M-L were attributed to PWID. Approximately one out of six were identified as being under-housed/homeless. Also, the majority of these cases were diagnosed in hospitals and were in more advanced stages of illness or have multiple comorbidities (e.g., mental health issues, infective endocarditis) at the time of diagnosis. During 2011-2016 (up to April, 2016) in M-L, a recent viral load test was performed on 97 cases out of 183 new cases during the same time period. Of the cases with viral load information, only 27% had an undetectable viral load on their most recent test.

## *Hepatitis C, infective endocarditis and invasive Group A streptococcal infections in London*

Similar to HIV, Hepatitis C rates are higher in M-L compared to the rest of the province, but have been higher for several years. In 2016, there were 231 newly diagnosed cases of Hepatitis C (see Appendix B), with the rate for London being 57.3 per 100,000 (220 cases). Again, similar to HIV, the majority of these cases were in PWID. In contrast, the Hepatitis C rates in Toronto have been decreasing over the past decade, with 24.6 per 100,000 in 2015. In Toronto, approximately one third of cases reported injection drug use, whereas in M-L, over 60% reported this risk factor.

Further, an unusually high number of invasive Group A streptococcal (iGAS) cases were reported to MLHU in 2016, with 64 cases reported, compared to the five-year average of 25 between 2011-2015 (see Appendix B). Of the 64 cases reported in 2016, 30 (47%) were in PWID and 14 (22%) were identified as underhoused or homeless. The majority of cases occurred in London, resulting in a city-specific rate of 15.6 per 100,000 (60 cases). As of March 15, 2017, 28 cases have been reported for this calendar year.

Locally, infectious disease specialists have also observed alarming increases in infective endocarditis cases. London Health Sciences Centre has seen a 166% rise in first episodes and a 277% rise in total episodes of endocarditis associated with injection drug use, resulting in steep increases in hospital stays. In 2008, there were less than 200 total days of hospital stay due to injection drug use associated infective endocarditis, in comparison to approximately 2000 total days in 2015.

## *Injection drug use in London, Ontario*

London has a large population of injection drug users, which is believed to be one of the largest in the country relative to the size of its population. While the exact size of the population of PWID remains

largely unknown, it has been estimated by local harm reduction professionals that there are approximately 6000 PWID in London (under 2% of the total population). The harm reduction program in London distributed over 2.7 million needles in 2015 and close to 3.0 million in 2016. By comparison, in 2015, Hamilton, which is similar in population-size as London, distributed just under one million needles, and Toronto distributed 2.6 million needles, albeit for a much larger population of 2.8 million. Both the 2012 I-Track survey and a recent survey of injection drug users in London reported very high rates of unstable housing and homelessness and unsafe injection practices (e.g. sharing needles, injecting in public places). One in five injection drug users surveyed recently reported being engaged in sex work and one in ten have been incarcerated. Drug use patterns are also unique with a high prevalence of crystal methamphetamine and prescription opioids (hydromorphone) injection. The recent Ontario Integrated Supervised Injection Site Feasibility Study (OISIS), which gathered data from local PWID, found 83.8% had injected crystal methamphetamine in the past 6 months, 88.4% had injected opioids, and 71.4% had injected both.

## **Development and implementation of an HIV strategy for London**

### ***Additional epidemiological analysis***

Since only partial information is available through passive surveillance of reportable diseases at the local level, MLHU engaged with Public Health Ontario (PHO) Laboratories to request additional data. PHO provided MLHU with data related to the number of HIV tests performed in M-L, broken down by risk factor and test result. Further to this, in order to ensure the rise in new HIV cases was truly at the magnitude observed, MLHU submitted a special request with PHO to perform an assessment of the data quality. PHO undertook this special project and was able to identify where potential duplicate entries were in the provincial database. These duplicate entries were rare, however, and a rise in cases of HIV was still evident.

### ***Initial stakeholder conversations***

In March 2016, the MLHU coordinated a meeting between community agencies to advise them of the epidemiologic situation in M-L, and to discuss next steps. The stakeholders included providers from St. Joseph's Infectious Diseases Care Program (IDCP), the London InterCommunity Health Centre (LIHC), Regional HIV/AIDS Connection (RHAC), the Elgin Middlesex-Detention Centre (EMDC), local Infectious Disease physicians, representatives from academic and research communities, and the AIDS Bureau of the Ministry of Health and Long-Term Care.

### ***Declaration of a public health emergency***

In June 2016, MLHU declared a public health emergency due to the rise of HIV and other infections in PWID in London. The purpose of this was to alert local PWID communities, stakeholders who work with these communities, and other health care providers about the rapid increase in infectious disease in this population.

### ***Deployment of a Field Epidemiologist from the Public Health Agency of Canada***

Given the magnitude and scope of the emerging issue, a field epidemiologist was requested from the Public Health Agency of Canada (PHAC) to support the MLHU Epidemiologist and Data Analyst to:

1. Map the geographical distribution of cases of HIV and HCV in PWID to determine possible clusters.
2. Map harm reduction and addiction services in relation to HIV and HCV cases to identify service gaps (Appendix C).
3. Determine locations where used needles are discarded to discern high risk areas.
4. Conduct interviews with community service providers to explore the reasons behind the increased rate of infections. The PHAC Field Epidemiologist and an MLHU Program Evaluator engaged community service providers in M-L to conduct in-depth individual interviews in order to gain a better understanding of the potential causes of emerging infections in PWID (Appendix D).

### ***Convening of an HIV Leadership Team***

In August, 2016, a group of local health and community service leaders who work with PWID was convened. This group is comprised of representatives from RHAC, LIHC, IDCP, Addiction Service Thames Valley, and the Southwest Local Health Integration Network (SWLHIN). The purpose of this group is to work together towards developing and implementing an HIV strategy based on effective evidence-based strategies implemented in other regions. Enhanced surveillance, primary and secondary prevention, harm reduction, and HIV treatment (including “Treatment as Prevention” or “TasP”) were identified as core pillars of this newly-formed strategy. It was recognized that any strategies adopted from other regions would need to take into account the local context and unique circumstances in London. Further, any adaptation of a strategy would need to take into account the services and assets currently available, working within the context of existing services, filling any potential gaps found. The group committed to collaborating with the newly-formed local Community Drug and Alcohol Strategy’s Steering Committee, which was established based on Vancouver’s four pillar model and which has been co-led by the MLHU since April 2016.

### ***Environmental scan of public health units***

In June, 2016, an environmental scan of five public health units in Ontario was conducted to obtain an overall understanding of their harm reduction outreach programs, including the populations they serve, their staffing roles, their modes of service delivery, the specific services provided and any evaluation outcomes. This summarized some basic information to see how other health units were serving PWID communities and allowed MLHU to generate potential ideas about how to adapt our services.

A second environmental scan was conducted with the same health units in November 2016. The purpose was to obtain additional information regarding satellite harm reduction services, including site locations, client location preferences, and benefits and challenges of working through satellite sites. Findings showed these health units have between 7 and 48 satellite sites, located in shelters, pharmacies, AIDS service organizations, mobile vans, community health centres, drop-in centres, a hospital, addiction treatment centre, and other local community-based organizations. Staff from these other health units indicated clients preferred accessing services from sites that are comfortable, convenient, non-judgmental, confidential and met clients where they were at. Benefits of satellite sites included increasing access points for clients, and integrating harm reduction approaches in multiple sites. Some of the challenges included keeping up with the demand for supplies and confidentiality concerns.

### ***Continuing stakeholder engagement and activities***

Over 50 provincial and national experts and other stakeholders have been consulted thus far. The scientific literature was reviewed to identify effective strategies to address HIV epidemics in PWID populations. The MLHU had multiple consultations with Public Health Departments in British Columbia and Saskatchewan to learn from their experiences with managing HIV outbreaks in PWID. We seconded the Manager of the MLHU's Sexual Health Clinic to Vancouver to learn about the Seek and Treat for Optimal Prevention of HIV/AIDS (STOP HIV/AIDS) model. We also consulted with the BC Centre for Disease Control (BC-CDC) and the Ontario HIV Treatment Network (OHTN) on developing enhanced surveillance to monitor HIV cases based on the cascade of care approach. We consulted with PHO Laboratories, the BC-CDC and the OHTN in exploring additional strategies in investigating the outbreak, such as HIV genotyping and incidence testing algorithms. We also consulted with the Chief Medical Officer's office. To research the outstanding questions that have arisen in our investigation we are in the process of organizing a meeting between local and national researchers.

### ***Adaptation of the STOP HIV/AIDS model***

Based on extensive consultations and review of evidence, the MLHU internally reallocated \$270,000 towards the adaptation of the STOP HIV/AIDS model to London. This program aims to reduce HIV rates and increase the quality of life of people living with HIV. The reduction is achieved by preventing secondary transmission of HIV infections through a proactive public health approach to finding people living with HIV, promoting TasP, linking clients to HIV care and treatment programs, and supporting them to adhere to treatment. STOP HIV/AIDS aims to improve the experience of people living with HIV or AIDS in every health and social service interaction and significantly improve linkage and engagement across the full continuum of services in HIV prevention, testing and diagnosis, treatment, and care and support. The STOP HIV/AIDS team consists of interdisciplinary "pods" containing an outreach nurse, an outreach worker, and a social worker. The work is almost exclusively outreach based with a focus on connecting people who are disconnected from care into care. This means meeting clients wherever they are – in their homes, in parks, in streets and alleys, hotels, clinics, and community centres. The STOP HIV/AIDS team works closely with other services responsible for mental health, substance use and community health.

### ***Increased HIV Testing***

A lack of point-of-care (POC) testing sites in London was identified as a gap in the community, particularly in areas of the city with large numbers of new HIV cases. Increased targeted HIV testing for this population, connecting them with care, and enabling retention in care is based on STOP HIV/AIDS. To enhance the capacity for testing in the community setting, all Sexual Health Public Health Nurses at the MLHU were trained in Fall 2016 to provide POC testing. There are currently 11 sites where POC testing is available in London, with more sites to be available in 2017. LIHC and the MLHU will continue working collaboratively to target screening of PWID in the community.

### ***Elgin Middlesex-Detention Centre***

In review of the 58 HIV cases reported to the MLHU in 2016, 11 were diagnosed at the EMDC. Several meetings with key stakeholders providing health care programs and services linked to EMDC were held with representatives from the EMDC, MLHU, Infectious Disease team from St. Joseph's Health Care and

LIHC. Some areas identified for improvement in services at EMDC included better co-ordination of programs and services between different service providers, addressing the lack of capacity to initiate opioid maintenance therapy for inmates, increasing capacity for HIV testing, discharge planning for HIV clients and increasing communication between different stakeholders.

### ***Campaign to increase awareness among PWID***

With the increase in HIV and other infectious diseases in PWID, a health promotion campaign was developed to educate and promote harm reduction practices for this local population. RHAC and the MLHU worked together to develop harm reduction messages promoting the use of clean injection equipment at every use. Also, messaging was created to educate PWID on the warning signs of common medical conditions that can arise from injection drug use, including iGAS, which might require immediate medical assistance. Feedback collected from pilot testing with needle exchange clients indicated the preference for using stickers affixed to the needle exchange equipment kits handed out at the needle exchange sites. Different stickers and messages are used every week to increase awareness and promote safe injection practices.

### ***Harm reduction services in London***

RHAC's Counterpoint Needle Syringe Program (CNSP) is funded by the MLHU and the AIDS Bureau, Ministry of Health and Long Term Care. CNSP is acknowledged by the Ontario Harm Reduction Distribution Program (OHRDP) as one of the busiest needle exchange programs in Ontario. In the 2016 calendar year, CNSP was involved in 17,140 client interactions and distributed almost 3.0 million needles and syringes (from both fixed and mobile delivery programs) and over 6,000 sharps containers. Home delivery and outreach services performed almost 1,800 home deliveries in 2016, distributing almost 1 million of the total 3 million needles and syringes through this program. Currently, the MLHU and RHAC are working together to enhance harm reduction services and increase availability of supplies through small fixed satellite sites, as well as increasing service hours and availability of harm reduction supplies during the weekend.

### ***Supervised injection sites***

In 2016, a survey of local PWID and key stakeholders was conducted to determine the feasibility and willingness to use a supervised injection site and acceptability and feasibility of SIS from community stakeholders' perspectives. The study recruited 199 local PWID and interviewed 20 stakeholders. Study results found that 72% of participants had injected in public in the past 6 months and that 86% would use a supervised injection site. Further investigation and public input will be gathered to determine what a supervised injection site should look like for the London area, including whether there should be one central site or smaller satellite sites incorporated into the existing services to ensure accessibility.

### ***Enhanced surveillance***

Recognizing the limitations of passive surveillance systems in collecting the necessary information to assess potential causes of increased HIV infections and other infectious diseases in PWID, enhanced surveillance systems are currently being developed and implemented at MLHU. Enhanced surveillance questionnaires are incorporated in case management process and are directly aiming to determine factors

associated with increasing numbers of cases of HIV and iGAS. Each of these are administered separately and ask questions related to injection practices, needle sharing, as well as social and demographic factors such as current housing situation or Aboriginal background. In addition, MLHU is exploring implementation of cascade of care indicators for ongoing monitoring and evaluation of the HIV strategy.

Further to this, the MLHU had completed a preliminary agreement with the PHAC related to London being a site for their I-Track 4 enhanced surveillance. I-Track collects information from PWID related to drug use behaviour, sexual behaviour, HIV and hepatitis C testing and treatment, access to health services, and collects a finger-prick blood sample to test for HIV, Hepatitis C, and syphilis antibodies.

The MLHU is negotiating with the PHO laboratory to release the number of HIV positive test results, as well as number of HIV tests performed in M-L quarterly for the next two years to allow us monitoring of the impact of increase awareness and testing on HIV epidemic. Additionally, we are exploring the possibility of obtaining genotyping and drug resistance data to facilitate rapid initiation of HIV treatment.

### ***Public Health Agency of Canada Grant***

The Public Health Agency of Canada has merged its funding for community based organizations into the HIV and Hepatitis C Community Action Fund. The Community Action Fund will make available up to \$26.4 million annually to support comprehensive responses to HIV, Hepatitis C, and related sexually transmitted and blood borne infections. Funding will be available for approved and eligible community-based programs on April 1, 2017. If successful in receiving grant funding, the alliance of stakeholders in London, including RHAC, LIHC and the MLHU, would leverage existing resources and work towards adapting the STOP HIV/AIDS model with a multi-agency coordinated response. Outreach workers will be able to further enhance client engagement, bridging clients into care and helping support client stability (e.g. housing, income).

### ***Advocacy for provincial support***

Board of Health Chair Jesse Helmer, Acting Medical Officer of Health Dr. Gayane Hovhannisyan and Acting Chief Executive Officer Laura Di Cesare met with the Deputy Premier of Ontario, Deb Matthews in February 2017 to discuss the local context and issues arising from substance use in London. At that meeting, the delegation was able to present data describing trends related to increasing number of cases of HIV, Hepatitis C, iGAS and infective endocarditis to the Deputy Premier. In response, Deputy Premier Matthews asked the MLHU to report back to her outlining strategies to respond to the growing rate of HIV in London and identify areas for provincial support.

Through a gap analysis, a review of the literature and other best practices in addressing similar outbreaks, and through consultation with the local HIV Leadership group, the MLHU has identified the immediate need to increase harm reduction services in the community. Additionally, while several successful programs exist in London, they are not sufficiently resourced to provide the level of service required to support the growing number of clients PWID and other marginalized populations living with HIV. Services must be augmented and coordinated quickly in order to provide comprehensive wrap-around care to an estimated 200 to 300 high-risk HIV clients with complex mental health and addiction issues. These services include: integrated community-based primary care and comprehensive addiction (counseling, withdrawal management, medical detox, opioid maintenance), mental health service and HIV



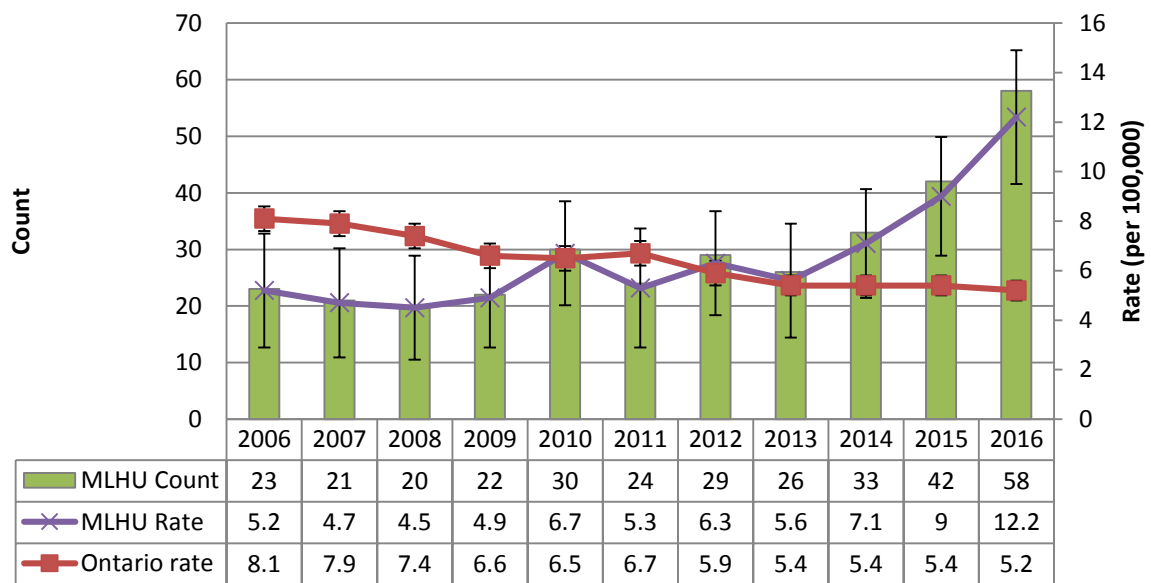
treatment programs, street-level outreach, and housing support. In Vancouver, where similar efforts are coordinated through the Dr. Peter Centre, cost estimates to provide these services are approximately \$40 per patient per day. The MLHU requests that the provincial government provide sufficient funding to the community to enhance existing services, and to introduce new services that do not currently exist, such as comprehensive and coordinated addiction services and medical detox.

Several meetings were held between the Acting MOH with the office of the Chief Medical Officer of Health for Ontario to inform them about situation in London and to seek support. Currently internal discussions are being held at the Ministry of Health and Long-Term Care on how best support the MLHU in their endeavours to contain the epidemic and address the complex health issues in PWID in London.

**Appendix A. Epidemiologic summary of the HIV epidemic in Middlesex-London and Ontario**

The crude rate of reported HIV infection in M-L for 2016 was 12.2 per 100,000, with 58 cases reported as of December 31, 2016. This represents the highest number of cases seen in one calendar year in M-L since the 1980s. Prior to 2016, the crude rate of reported HIV infection in M-L had increased from 5.9 per 100,000 in 2005 to 9.0 per 100,000 in 2015, while the rate in the rest of the province has decreased (7.4 per 100,000 in 2005 to 5.5 per 100,000 in 2015; see Figure 1). It is estimated that four cases were from outside of London, residing in Middlesex County, whereas 54 were in the City of London, placing the crude rates of HIV in these two locations at 5.6 per 100,000 and 14.1 per 100,000, respectively. The largest proportional increase in HIV diagnoses in M-L residents in 2016 has been in 30-39 year olds, who, in 2016, represented half (50.0%) of new HIV cases. Additionally, of the 58 cases reported to MLHU, 37 (63.8%) were male, 20 (34.4%) female, and 1 (1.7%) unspecified. Injection drug use was the most frequent exposure category in 2016, reported by 39 (68.4%) of those with exposure classification listed (n=57). This is starkly different than the proportions in other, similar sized regions. Looking at a region that had, at one time, one of the largest HIV epidemics among persons who inject drugs, the most recently available data from Vancouver Coastal Health indicated that, in 2015, only 11 new cases of HIV were reported in this population (out of 128 new cases). M-L’s rates of HIV are an outlier in terms of exposure categories. Persons who inject drugs in Ontario have, at their highest, represented just under 10% of new cases of HIV, in contrast to the two thirds of new cases in M-L.

**Figure 1. Reported count and crude rate of new cases of HIV in Middlesex-London and Ontario, 2006-2016**



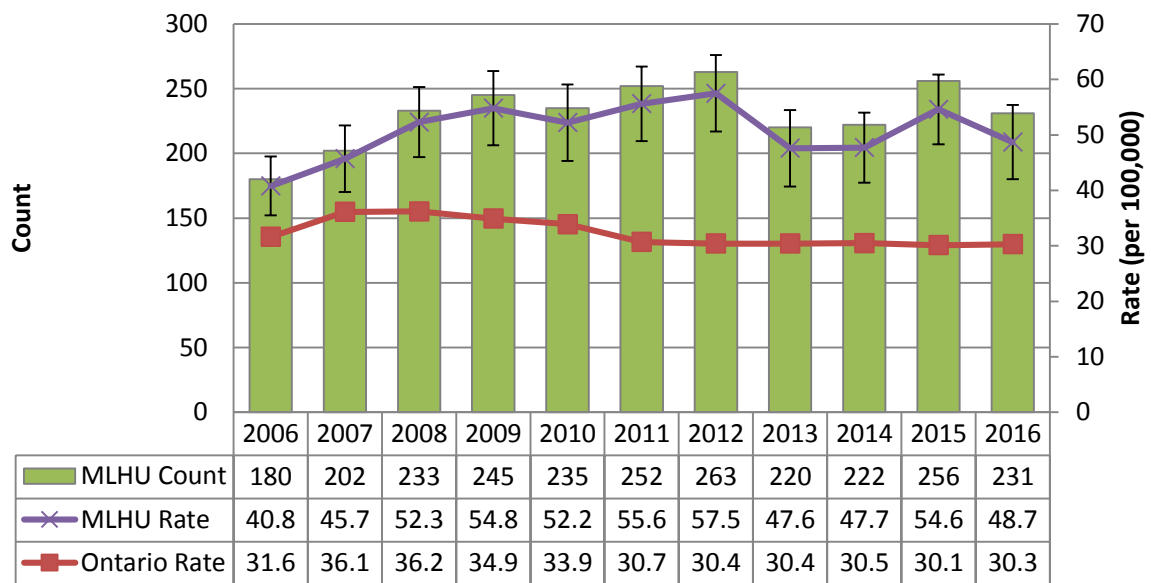
\*Data source: PHO Query, January 31, 2017

NOTE: Ontario rate excludes MLHU

**Appendix B. Epidemiologic Summary of Hepatitis C (HCV) and invasive Group A Streptococcal (iGAS) disease in Middlesex-London**

In 2016, 231 hepatitis C cases were reported to the MLHU, resulting in a crude rate of 48.7 per 100,000, a small decrease over the previous year. Prior to 2016, The crude rate of reported hepatitis C (HCV) infection in M-L has increased from 40.8 per 100,000 in 2006 to 54.6 per 100,000 in 2015. The rate in the rest of the province has remained steady and has consistently been lower than the rate in M-L (31.6 per 100,000 in 2006 to 30.3 per 100,000 in 2015; see Figure 4). Age trends in 2016 indicate an increase in the 20 to 29 year age category over the previous year, with 35.1% of infections in this group in 2016, compared with 29.0% the previous year (see Figure 5). Risk factors were identified for 82.7% (n=1968) of MLHU HCV cases from 2006-2015. Injection drug use was identified as a risk factor for 61.2% (n=1205) of HCV cases who lived in the MLHU area from 2006-2015. In 2016, of those with risk factor data gathered (n=182), 73.1% (n=133) of cases were attributed to injection drug use as a risk factor. Comparing to other regions, we see the MLHU region remains higher than most other regions in the province. In Toronto, for example, there have been decreasing crude rates of HCV over the past decade (37.3 per 100,000 in 2006 compared to 24.6 per 100,000 in 2015). “Injection Drug Use”, in Toronto was identified as a risk factor in 37.7% (n=130) of the total of new cases with reported risk factor data (n=345).

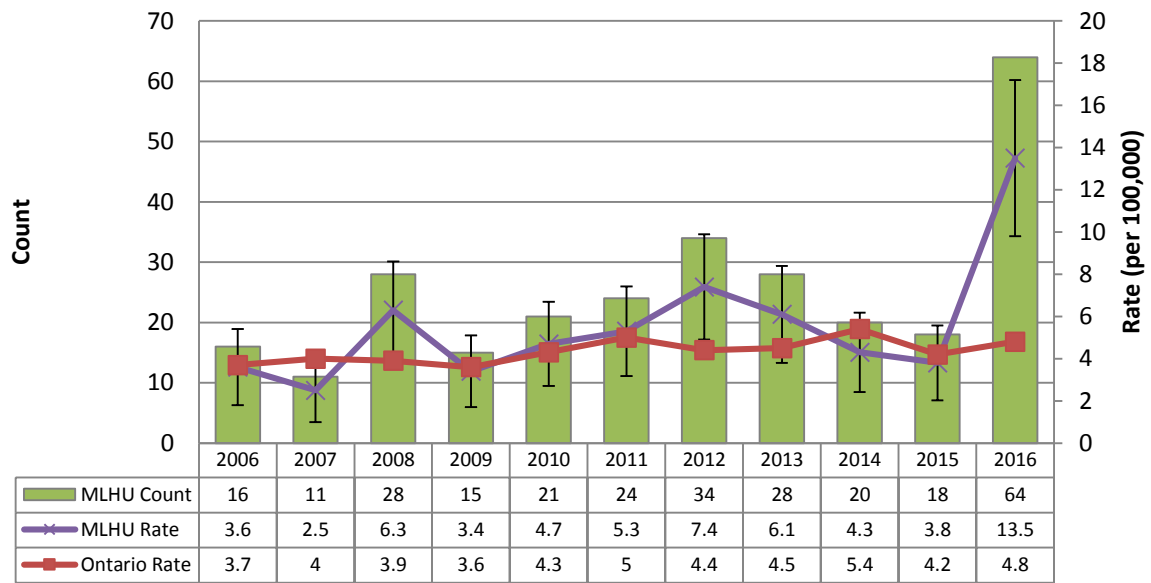
**Figure 2. Reported count and crude rate of newly reported cases of Hepatitis C in Middlesex-London and Ontario, 2006-2016**



\*Data source: PHO Query, January 31, 2017

NOTE: Ontario rate excludes MLHU

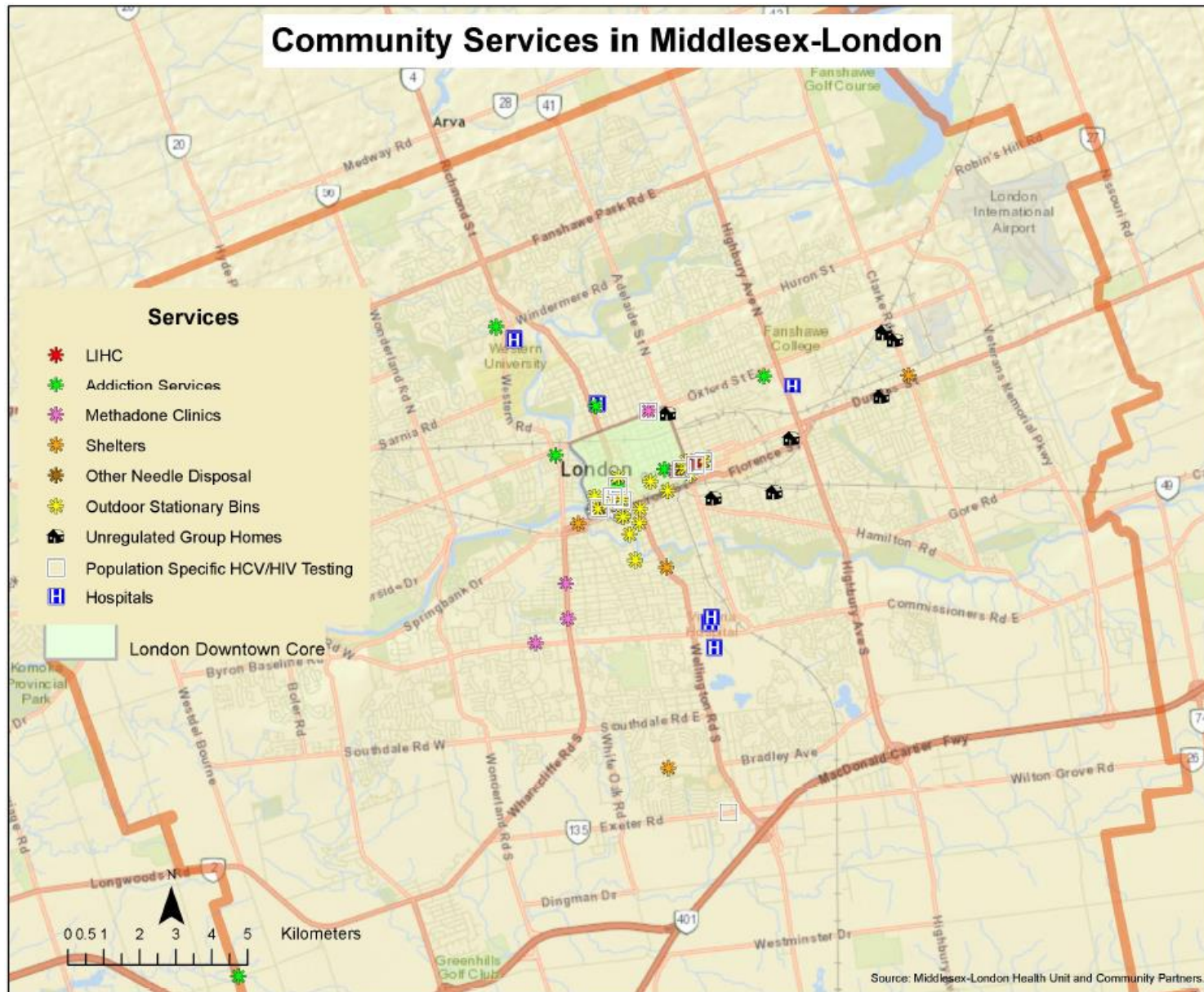
**Figure 3. Reported count and crude rate of newly reported cases of invasive Group A Streptococcal (iGAS) Disease in Middlesex-London and Ontario, 2006-2016**



**\*Data source: PHO Query, March 13, 2017**

**NOTE: Ontario rate excludes MLHU**

Appendix C: Map of community services serving people who inject drugs in London, Ontario, 2016



#### *Appendix D: Interview Findings from Community Service Providers*

Community service providers interviewed by the Field Epidemiologist and the Program Evaluator included those working in close contact with PWID: two infectious disease specialists, a family physician who works in addictions, the Director of Counterpoint Harm Reduction Services at the Regional HIV/AIDS Connection (RHAC), the Director of Client Services at London InterCommunity Health Centre (LIHC) and a case coordinator from London Cares. These service providers have an established rapport with PWID and can be considered gateways to the voices of PWID in the community.

The results of the thematic analysis showed four global themes: 1) increases in Infectious Diseases in PWID; 2) community strengths; 3) challenges to prevention and control; and 4) needs/opportunities for prevention and control. Under the global theme, increases in Infectious Diseases in PWID, the organizing themes that arose included: changes to drugs of choice, unsafe injection techniques, changes in injection equipment, lack of access to clean injection supplies and detection bias. The community strengths global theme consisted of the following organizing themes: commitment, collaboration and outreach. Within the global theme, challenges to prevention and control, the organizing themes that unfolded included: lack of understanding and buy-in from hospital, negative treatment of PWID, issues physicians face, conservative community, issues PWID encounter, and limits of epidemiology. From the global theme, needs/opportunities for prevention and control, the organizing themes included: harm reduction approaches, engaging health care institutions and practitioners, increasing education and awareness, and providing more funding and resources.

The interviews with community services providers generated hypotheses for further investigation into possible causes of emerging infections in PWID, such as Oxycontin being de-listed in 2012 and replaced with OxyNEO to prevent injecting or snorting. OxyNEO is rarely used by physicians in London, Hydromorph Contin is prescribed more frequently and ends up “on the street”. Hydromorph Contin does not crush/dissolve well, which increases the damage to the circulatory system and heart valves. The increase in crystal methamphetamine use is another potential cause of infection as it is believed that cookers are used or shared more than once because of the residue. The interviews also provided valuable insight into potential prevention and control measures including, among others, a comprehensive community response, improving access to opioid replacement, and expanding outreach to include peer outreach and supervised injection sites.