
Subject: Significant Increase in Sexually Transmitted Infections in Niagara:
Recovery Efforts

Report to: Public Health and Social Services Committee

Report date: Tuesday, May 10, 2022

Recommendations

1. That this report **BE RECEIVED** for information.

Key Facts

- Incidence of most sexually transmitted/blood borne infections (STI/BBIs) in Niagara have seen a significant increase over the past two years.
- Chlamydia, gonorrhea and syphilis are the three most common bacterial STI/BBIs in Niagara which are reportable to the Medical Officer of Health under the Health Protection and Promotion Act, RSO, 1990, c.H.7.
- Between 2019 and 2021, syphilis cases in Niagara region have tripled, while HIV cases have doubled.
- The COVID pandemic negatively affected the delivery of Sexual Health services due to redeployment of staff to pandemic response efforts and changes to the provision of in-person clinical care for clients.
- Recovery resources will be required from the Ministry of Health to address the rising rates of STI/BBIs.

Financial Considerations

The Ministry of Health provides cost shared funding (Ministry 70%: Region 30%) for the Sexual Health program and the Social Determinants of Health Outreach program as per the Ontario Public Health Standards (2021) in the amount of \$2,713,077, for 23.4 FTE. Appendix 1 to Report PHD 3-2022 summarizes the Sexual Health program and services.

Analysis

Sexually Transmitted Infection Rates

In 2021, 1,982 sexually transmitted and blood-borne infections (STI/BBIs) occurred among Niagara residents. This accounts for 8.7% of all cases of diseases of public health significance, and 84.2% of reportable diseases excluding COVID-19. Anonymous sex and sex without a condom are the two biggest risk factors for STI/BBIs in Niagara.

Of all STI/BBIs, syphilis rates have seen the most precipitous rise in Niagara. There has been a 10-year trend of consistently increasing rates of infectious syphilis cases across Canada and including Niagara. From 2019 to 2021, syphilis rates in Niagara increased by 300%. There were 179 cases diagnosed in 2021, compared to the five-year average from 2015-2019 of 47.6 cases.

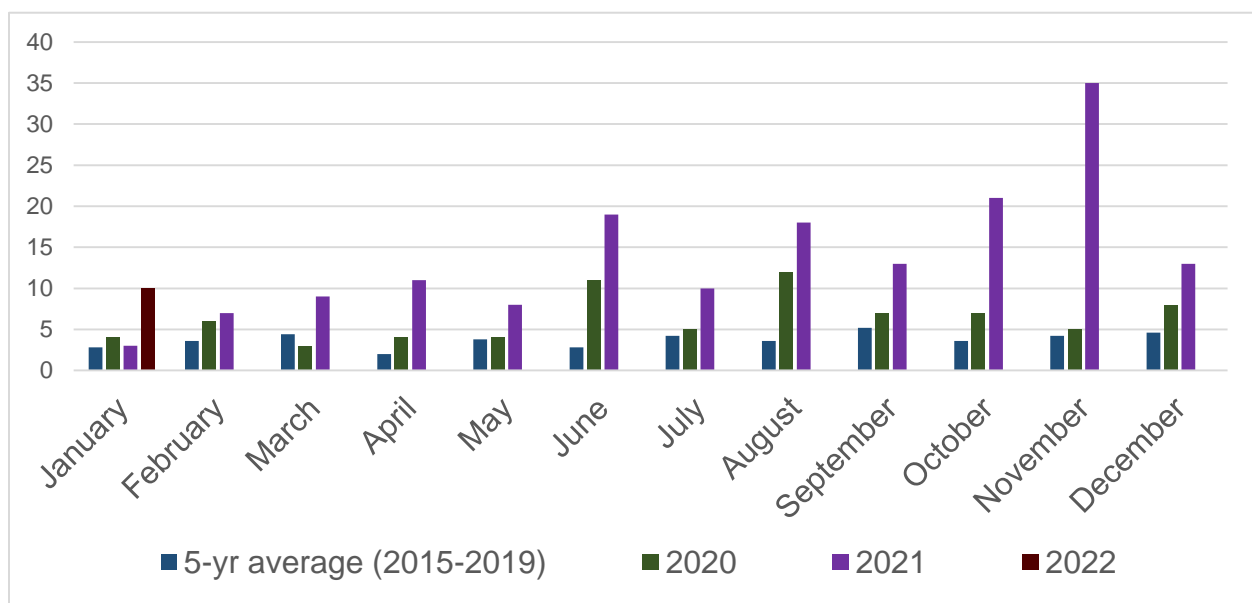


Figure 1. Syphilis cases in Niagara by month for 2015-2019, compared to 2020, 2021, and 2022. Recent years have seen large increases in syphilis diagnoses.

Gay and bisexual men-who-have-sex-with-men (gbMSM) have disproportionately borne the greatest burden of syphilis infections; however, in the past two years, cases are increasing in frequency in women (approximately 22% of cases in 2021) and in individuals who have sex with opposite-sex partners. Untreated syphilis can lead to neurological illness, blindness, hearing loss and damage to the heart and other major organs. Congenital syphilis is especially concerning, occurring when a fetus is infected

with the bacteria during pregnancy, and can cause a number of deformities and lead to stillbirth or neonatal death.ⁱ

Syphilis infections require meticulous, labour-intensive follow-up, involving careful staging of the infection to determine appropriate treatment. Depending on the stage of disease, the level of contact tracing varies and treatment then consists of between one to three weekly doses of injectable penicillin. The steep increase in case numbers results in a challenging caseload for the Sexual Health program. Case management of one straightforward case of syphilis can take approximately two to four hours of nursing time to complete. A complex case may take upwards of 20 hours. With a tripling of cases over the past two years, the increase in nursing time is significant. It should be noted that provincial funding for Public Health has been frozen for most of this period and there has been a decrease in capacity to manage Sexual Health in the community as Public Health has reduced staff in order to manage cost inflation.

Human Immunodeficiency Virus (HIV) infection rates have also had a concerning rise in 2021, from a five-year average of 13 cases per year in Niagara from 2015 - 2020 to 28 cases in 2021. HIV attacks the immune system and if untreated leads to the development of acquired immunodeficiency syndrome (AIDS), a chronic, often life-threatening condition. Careful case and contact management of HIV is paramount in order to connect clients with disease management and treatment resources, and to conduct careful follow up of cases in order to ensure compliance with treatment and protection of sexual partners. With connection to proper medical care, HIV can be controlled. People with HIV who get effective treatment and medical follow up, and are compliant with that treatment, can live long, healthy lives.

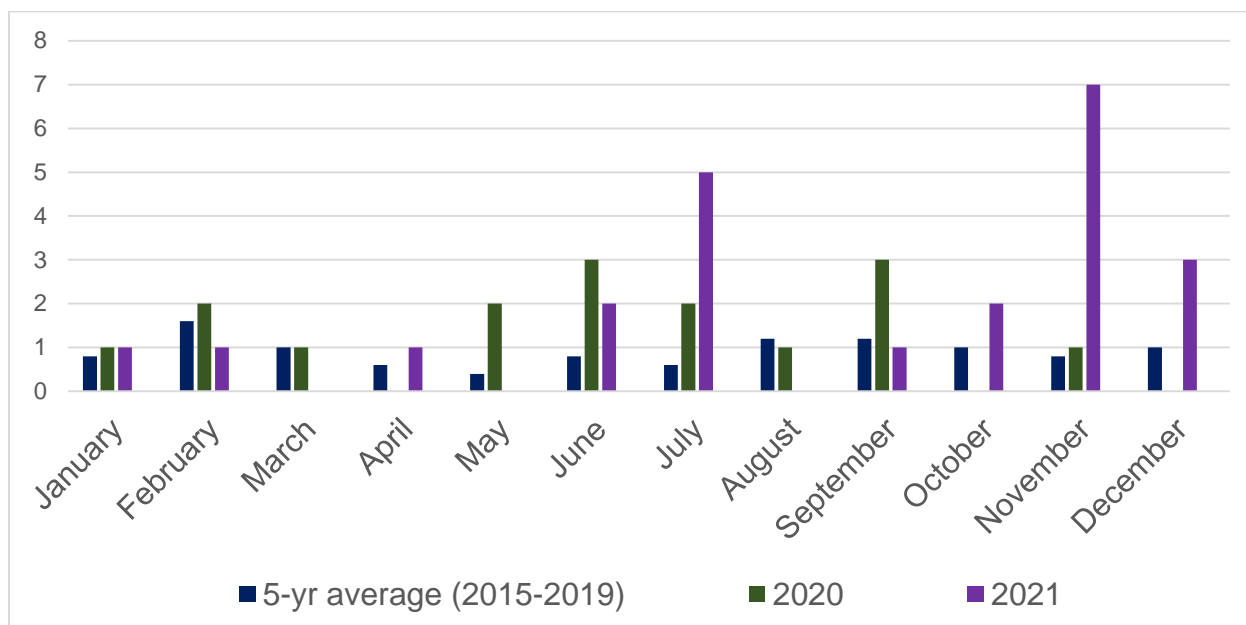


Figure 2. HIV cases in Niagara by month for 2015-2019, compared to 2020, 2021, and 2022. Recent years have seen large increases in HIV diagnoses.

Case management of a new case of HIV takes two hours of nursing time to complete at a minimum, including counselling in person, referral to a treatment centre for ongoing management of the infection, and ongoing follow-up if they develop other sexually transmitted infections in the future. A more complex case may take up to 10 hours or more of nursing time and may require consultation with an Associate/Medical Officer of Health.

Chlamydia and gonorrhoea are the most commonly reported STI/BBIs in Canada, and infection rates have been increasing since 2000. The percent positivity of chlamydia testing in 2021 increased to 8.7%, compared to a previous five-year average of 7.7%. Untreated chlamydia can result in serious health outcomes for both men and women, including infertility.

The rate of chlamydia infections is not evenly distributed across the population and is highest in those who have the highest levels of residential instability and highest levels of material deprivationⁱⁱ. In 2017, Health Canada identified a variety of risk factors for chlamydia infections including vulnerable populations (such as injection drug users, incarcerated individuals, sex trade workers, and street youth).ⁱⁱⁱ

Gonorrhea percent positivity and number of cases in 2021 are the highest they have ever been. In 2021, 4.8% of all gonorrhea tests were positive compared to the previous five-year average of 1.5% and there were 428 reported cases of gonorrhea in 2021 compared to the previous five-year average of 244 cases per year. Case and contact management by a nurse for a case of gonorrhea may take anywhere from 30 minutes to over five hours for more complex cases.

COVID-19 Pandemic and STIs

The rapid spread of COVID-19 and the need to respond forced a change in the delivery of and access to STI and BBI prevention, testing, harm reduction and treatment services. The pandemic also contributed to fewer people seeking non-emergency-related medical care, including for the care and treatment of STI/BBIs, which may be asymptomatic and perceived as non-urgent by many people. Additionally, staff redeployment to pandemic response and physical distancing also contributed to pressures on the Sexual Health program. This may have also contributed to fewer STI/BBI tests being performed and slowed case and contact management as the STI/BBI team was reduced from four nurses to two or fewer. The enormous demand across the health sector for additional health professionals to manage the pandemic, including in primary care, hospitals, long-term care, as well as public health made it difficult to recruit staff to keep up with core public health work such as this.

Prior to COVID-19, STI/BBI rates were significantly increasing and emerging data suggest an overall decrease in testing and increase in some STI/BBI rates during the pandemic.^{iv} COVID-19 underscores existing disparities within our communities and disproportionately impacts underserved and marginalized groups. These same groups that continue to be most affected by STIs and most in need of care and treatment are least likely to have regular access to testing and treatment options.^v

Measures to Address STI Rates: Recovery Efforts

Early identification and treatment of STI/BBI cases and notification of contacts by skilled staff is imperative in order to limit and/or stop the spread of infection in the community. Failure to provide timely case management, treatment and contact tracing follow up can lead to further spread of STI/BBIs, with possible long-term sequelae of untreated infections.

To address the increase in STI/BBI rates and the fallout from reduced services during the COVID-19 pandemic, several upstream and downstream approaches will be used

by the Sexual Health program. Downstream strategies focus on services after diagnosis, while upstream strategies focus on prevention by addressing the root causes of a health issue, improving fundamental social and economic structures to decrease barriers, and improve supports that allow people to achieve their full health potential^{vi}.

At a downstream level:

In order to support early identification and treatment of STI/BBIs and notification of contacts to limit the spread of infection in the community:

- Returning to full staff complement, including repatriation of staff redeployed to the pandemic response and filling remaining base funded positions
- Increasing staff complement for STI follow up by requesting additional recovery resources from the Ministry of Health
- Actively recruiting for a public health nurse STI Team Lead, vacant since early 2020, to provide coordinated leadership and to engage in assessment, planning, implementation and evaluation of the management of STI/BBIs
- Further supporting Outreach nurses in dealing with STI/BBIs for vulnerable clients by hiring Community Health Brokers to help reconnect with clients in the community. This approach is important to reach marginalized clients who are more at risk for STI/BBIs due to health inequities among this population.

At a more upstream level:

- Targeted social media campaigns to address misinformation and stigma regarding STI/BBIs and STI testing
- Working with community agencies to encourage access of SHC/Outreach services, especially for vulnerable populations
- Host a continuing medical education event for Niagara's primary care sector (May 3, 2022) and send regular communications to local health care providers to provide updates about concerning increases in STI/BBIs, appropriate screening, testing and treatment of syphilis and other STI/BBIs
- Planning for a Live Chat feature, staffed by Sexual Health nurses, to encourage youth to seek information and services regarding sexual health and STI/BBIs

Furthest upstream:

- Implement the STI component of Public Health's Health Promotion Project, a comprehensive, evidence-based health promotion strategy aimed at decreasing the rate of new and repeat STI/BBIs in youth and young adults in Niagara
- Ongoing support to address the social determinants of health, an area where much more work needs to be done. Evidence shows that the most vulnerable in

the population are at highest risk for STI/BBIs including injection drug users, incarcerated individuals, sex trade workers, and street youth.

The COVID-19 pandemic significantly disrupted the delivery of health services globally, including the delivery of Sexual Health services in Niagara. The rates of STI/BBIs increased during the pandemic, especially those of syphilis and HIV which have serious long term effects if left untreated. The Sexual Health program will engage in a robust recovery effort in order to help address the increase in STI/BBI rates across the region.

Alternatives Reviewed

Alternative delivery models for STI testing and treatment in Niagara include family physicians, obstetrician/gynecologists, walk-in clinics and emergency departments. However, there are several barriers to accessing these resources:

- There is a significant shortage of family physicians in Niagara and few are taking new patients
- Many physicians have not seen patients in person during the pandemic
- Walk-in clinics do not often have continuity of care with a patient, may lack a full patient history, and do not have particular STI expertise
- Emergency departments are not the ideal service to deal with STI/BBIs which are usually not emergencies
- Many of the vulnerable among our population do not feel comfortable or do not have the means to access health care via traditional health care models. A long-term sustainable decrease in STI/BBIs will require improvement of the social determinants of health across Niagara. However, these efforts have a long-term horizon and in the short term, intense follow-up of individual cases is necessary to protect health and prevent spread.

Relationship to Council Strategic Priorities

This report aligns with Council's strategic priority #2 Healthy and Vibrant Community which aims to foster a high quality of life through safe, inclusive neighbourhoods and delivery of quality, affordable, and accessible human services.

Other Pertinent Reports

PHD 20-2017, Addressing Health Equity in the Sexual Health Program, Nov. 7, 2017
PHD 01-2017, Key Health Issues in Niagara, Jan. 31, 2017

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Appendices

Appendix 1 Niagara Region Sexual Health Program

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- i <https://www.canada.ca/en/public-health/services/reports-publications/canada-communicable-disease-report-ccdr/monthly-issue/2022-48/issue-2-3-february-march-2022/syphilis-canada-2011-2020.html>
- ii Niagara Health Issue Profile Sexually Transmitted Infections (2019) Ontario Marginalization Index (On-Marg)
<https://vine.niagararegion.ca/search/Pages/results.aspx?k=niagara%20health%20issue>
- iii Health Canada (2017) Canadian Guidelines on Sexually Transmitted Infections – Management and treatment of specific infections – Chlamydial Infections
- iv Rogers, Brooke PhD, MPH; Tao, Jun PhD, MS; Murphy, Matthew MD, MPH; Chan, Philip A. MD, MS The COVID-19 Pandemic and Sexually Transmitted Infections: Where Do We Go From Here?, Sexually Transmitted Diseases: July 2021 - Volume 48 - Issue 7 - p e94-e96
- v Rogers, Brooke PhD, MPH; Tao, Jun PhD, MS; Murphy, Matthew MD, MPH; Chan, Philip A. MD, MS The COVID-19 Pandemic and Sexually Transmitted Infections: Where Do We Go From Here?, Sexually Transmitted Diseases: July 2021 - Volume 48 - Issue 7 - p e94-e96
- vi National Collaborating Centre for Determinants of Health at
<https://nccdh.ca/glossary/entry/upstream-downstream>