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To: Nova Scotia Health, Public Health Practitioners

From: Jayne Boutilier, Health Protection Director & Dr. Jenni Cram, Provincial Medical Officer of Health, Department of Health and Wellness

Date: March 14, 2023

Re: HIV Case and Contact Follow up

From September 2022 to January 2023 regional Public Health was directed to enhance surveillance and follow-up of HIV cases and contacts in response to a provincial cluster. The Department of Health and Wellness, Public Health branch supports this approach. Enhanced measures to support HIV case and contact management should be maintained.

The purpose of this memo is to clarify expectations regarding **routine** HIV case and contact management moving forward. This policy enhancement aims to reduce the risk of HIV transmission:

- Public Health Nurses (PHNs) should routinely break codes for all positive results from non-nominal testing to initiate case investigations.

- PHNs should initiate case investigations for *all* new reports of HIV cases including case management, contact notification and follow-up as appropriate. PHNs should continue to contact health care providers for preliminary information; however, a request for assistance from the health care provider is not required to lead case investigations.

- A plan for contact notification should be developed with the case. The case may notify contacts themselves with support or assistance from PHNs or a primary care provider as needed. In some situations, PHNs may lead contact notification.

Although there are specific Reporting Requirements for HIV Positive Persons Regulations, this change in case management falls under the *Health Protection Act*. The current HIV regulations are being considered for review and revision.

This memo will be added to the Nova Scotia Communicable Disease Manual HIV Chapter. As a reminder, all chapters in the Nova Scotia Communicable Disease Manual are evergreen and online versions are the most up-to-date.

HUMAN IMMUNODEFICIENCY VIRUS (HIV)

Case definition

CONFIRMED CASE

Adults, adolescents and children ≥18 months:

- detection of HIV antibody with confirmation (e.g. EIA screening with confirmation by Western blot or other confirmatory test)

OR

- detection of HIV nucleic acid (e.g. DNA polymerase chain reaction (PCR) or plasma RNA)

OR

- HIV p24 antigen with confirmation by neutralization assay

OR

- isolation of HIV in culture

Children < 18 months (on two separate samples collected at different times):

- detection of HIV nucleic acid (e.g. DNA PCR or plasma RNA)

OR

- HIV p24 antigen with confirmation by neutralization assay

OR

- isolation of HIV in culture

Causative agent

- *Human immunodeficiency virus* (HIV-1 and HIV-2), a retrovirus
- HIV-1 is the predominant strain in Canada and worldwide.

Source

Humans

Incubation

Antibodies can typically be detected in the blood 1 to 3 months after infection. In some cases, the time from infection to detectable antibodies can range from 2 to 3 weeks to 6 months.

Transmission

Established routes of transmission include:

- sexual contact with an HIV-infected person
- percutaneous blood exposure (from an HIV contaminated needle or other sharp instrument)
- perinatal transmission from an HIV-infected mother
- HIV-infected blood or other body fluids coming in contact with an open cut or mucous membrane
- transfusion, transplantation or ingestion of HIV-contaminated blood, blood products, cells, organs, tissues or breast milk

Communicability

HIV infection is communicable from early infection onward extending throughout life. Communicability is highest during the initial infection, and rises with increasing viral load, increasing immune deficiency and with the presence of other sexually transmitted infections.

Symptoms

- Typically, acute HIV symptoms arise within two to six weeks after infection. The most common signs and symptoms present as a non-specific illness and may include, but are not limited to: fever, myalgia, rash, fatigue, nausea or vomiting, pharyngitis, headache and lymphadenopathy. These symptoms usually resolve within two weeks. During this acute retroviral phase individuals are considered to be highly infectious. A proportion of clients with acute infection may be asymptomatic.
- Following primary infection, persons may be asymptomatic for months to years.

Diagnostic testing

- HIV screening tests are performed at regional laboratories in Nova Scotia. All positive HIV screening tests are sent to the QEII Health Sciences Centre virology laboratory for confirmatory testing. The confirmatory test is an immunoblot assay.
- There are three options for HIV testing. These options are noted in the ***Reporting Requirements of HIV Positive Persons Regulations***.
    - **Nominal testing** means that the client's name is used on the form that is sent to the laboratory with the blood sample. The name is also used on the test result when the lab sends it back to the ordering health care provider. If the result is positive, the lab and PCP report the test result and name to the Medical Officer of Health (MOH) in the Public Health office covering the jurisdiction where the testing originated.

- **Non-nominal testing** means that a code developed by the ordering health care provider is used on the form that is sent to the laboratory with the blood sample. The code includes 6 numbers representing the full date of birth (day, month, and year), 1 letter representing gender (either M or F), first 3 letters of the county of residence, and 3 letters chosen by the individual. The code is also used on the test result when the lab sends it back to the ordering health care provider. If the result is positive, the lab and ordering health care provider report the test result and code to the MOH. The MOH has the authority to request the name and other identifying information from the health care provider as per the regulations (e.g. positive individual has donated blood or after consultation with the health care provider the medical officer of health is of the opinion that the protection of the public health requires it).
- **Anonymous testing** means that the client's name is not used on any forms. The client contacts an anonymous testing clinic and makes an appointment using their first name or pseudonym only. At no time is the client's name recorded.

Treatment

Treatment of HIV is a rapidly evolving and complex area. Advances in treatment have slowed disease progression to such a degree that HIV infection is currently viewed as a chronic and manageable condition. HIV-infected individuals should be advised to consult their PCP or Infectious Diseases Specialist for treatment options.

PUBLIC HEALTH MANAGEMENT & CONTROL

Case management

- Determine if the case has been previously reported (refer to the Nova Scotia Surveillance Guidelines for Notifiable Diseases and Conditions ***novascotia.ca/dhw/populationhealth/surveillanceguidelines.asp***). If not, continue with the investigation.
- Contact the health care provider and inform them of the role of Public Health in HIV follow-up.
- Obtain necessary information from the health care provider as required per the ***Reporting Requirements for HIV Positive Persons***.
- If blood transfusion or donation has been identified, specific information with respect to the dates of transfusion/donation, institution and the case's address at the time of transfusion/donation are collected with as much detail as possible.
- Document the required case management information, including risk factors in the public health electronic information system (Panorama).

- In discussion with the health care provider, determine whether the client or the health care provider will be notifying contacts and ensure Public Health is notified when this is completed. If the health care provider is notifying contacts refer them to ***Section 2 of the Canadian Guidelines on Sexually Transmitted Infections*** which outlines the elements of partner notification.
- If the health care provider requests assistance or public health deems that public health involvement is necessary, the public health nurse (PHN) proceeds with case management, contact notification, and follow-up.

Exclusion of a case

- HIV cases need not be excluded from work, school, play, childcare or other settings based on their HIV infection status.
- In situations where the case's work involves a high risk of transmission to others, consult with the MOH about a plan of action and/or an education plan.
- Consult MOH in situations where recreational activities (e.g., boxing) could involve higher risk of transmission.

Education of the case

- Provide information on HIV disease transmission, prevention and risk reduction measures.
    - For more information on prevention measures refer to ***https://www.catie.ca/en/home***
    - For more information about best practice recommendations for Canadian harm reduction programs, refer to ***https://www.catie.ca/en/programming/guides-tools#collections***
- Provide information on legal implications regarding HIV disclosure.
- Provide information on appropriately cleaning blood spills. Use gloves; soak up excess blood with paper towels and dispose of them in a sealed plastic bag; clean surface with detergent and water, and then disinfect the surface with a fresh bleach solution with 500ppm free available chlorine. Add 1-part bleach (5.25%) to 99 parts water to achieve a concentration of 500ppm. For more information see ***Public Health Ontario's online chlorine dilution calculator*****.** If another disinfectant is used it is important that it is used based on manufacturer recommendations.
- If the case is a health care provider discuss the need to review their employer occupational health or infection control policies and notify as required.

Contact tracing

Partner notification and contact tracing for HIV can be complex and must be undertaken with the goal of preventing unnecessary transmission.

The HIV positive person has a responsibility to notify partners in accordance with partner notification guidelines approved by the medical officer of health. Alternatively, this responsibility may be transferred to a physician or a public health nurse by the client, for e.g. in a situation where the case is unable to carry out partner notification for safety reasons.

Depending on the circumstance, a PHN may be required to conduct partner notification, for e.g. increase cluster of cases.

Definition of close contact/exposure criteria

Contacts of a case of HIV include:

- Sexual contacts
- Needle sharing contacts
- Newborns of infected mothers
- Children of a maternal case and
- Others who have had contact with the blood, body fluids, cells, organs and tissues of the case.

Susceptibility

Susceptibility is universal. The presence of other sexually transmitted infections increases the susceptibility to HIV. Refer to the ***PHAC HIV Screening and Testing Guide*** for more information on risk factors that increase one's susceptibility to HIV.

Initiate contact tracing

The trace back period for a contact of a case of HIV is variable. Prioritize with the most recent contacts; to a time of known onset of risk behavior or last known negative HIV test.

Newborns of HIV positive mothers should be screened at 14-21 days of age and if negative at 1-2 months of age and at 4-6 months of age. Newborns should be followed by Public Health and a specialist, as needed.

Prophylaxis

Nonoccupational postexposure prophylaxis (nPEP) involves initiating within 72 hours, a 28-day course of antiretroviral medications after a possible sexual or injection drug exposure to HIV.

Pre-exposure Prophylaxis (PrEP) involves the use of certain antiretroviral medications by HIV negative individuals who are at high, ongoing risk of HIV acquisition, prior to and continuing after potential HIV exposures.

PrEP and nPEP should be part of a combination prevention strategy that includes behavioural interventions, such as safer sex practices, regular HIV testing, screening for STIs and risk reduction counselling. PrEP and nPEP is to be prescribed by a healthcare practitioner knowledgeable in prescribing and monitoring such medications.

Refer to the ***Canadian guideline on HIV pre-exposure prophylaxis and nonoccupational postexposure prophylaxis*** for further information.

Exclusion of a contact

No exclusion is required

Education of the contact

- Inform contacts of their potential exposure
- Provide information on the disease transmission, symptoms etc.
- Provide recommendation for testing
- Counsel to practice risk reduction strategies at least until the results of HIV testing have been determined and preferably on an on-going basis
- Discuss PrEP as an effective strategy for individuals at high or ongoing risk of infection.

Outbreak Response

In the event of an increase in the number of cases of HIV, Public Health leads the case investigation of all cases of HIV. Public health measures above and beyond those outlined above may need to be instituted. This will need to be determined in consultation with the MOH.

Surveillance Guidelines

General Information Sheet

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