



TO: Chair and Members of the Board of Health

FROM: Christopher Mackie, Medical Officer of Health / CEO

DATE: 2019 January 24

## ACTIVE TUBERCULOSIS IN A SHELTER

### Recommendation

*It is recommended that Report No. 004-19 re: “Active Tuberculosis in a Shelter” be received for information.*

### Key Points

- On December 13, 2018, MLHU received a report of a case of active pulmonary tuberculosis (TB) who had been living in the City of London shelter system since 2017. Early investigations determined that this individual was highly infectious, with a long period of communicability.
- In response, the IDC Team is currently completing a comprehensive contact investigation, supported by local and provincial partners.
- Individuals who are homeless and/or under-housed remain vulnerable to myriad communicable diseases, including tuberculosis, hepatitis A, and invasive Group A streptococcal disease.

### Background

The Infectious Disease Control (IDC) Team monitors and responds to reports of active and latent tuberculosis (TB) in the community. TB infection is caused by the *Mycobacterium tuberculosis* bacteria complex. People with pulmonary and laryngeal TB can spread the bacteria through coughing, sneezing, or talking. The small bacteria can linger in the air for an extended period of time and be transmitted to others who share the same airspace.

Those who are exposed to the bacteria can develop latent infection (LTBI) or active disease. People with LTBI have no signs or symptoms and cannot spread TB to others. However, some people with LTBI may develop active TB and become infectious to others. People with active TB disease are sick and can develop respiratory disease, with symptoms such as cough, fever, chills, and night sweats. Although TB can also occur in other parts of the body, only respiratory TB can be spread from person to person.

The Middlesex-London region has had 7 to 18 active TB cases per year since 2015. These cases occur almost exclusively among newcomers to Canada who were exposed to TB in a different country.

Type	2015	2016	2017	2018
Active	18	8	7	12
Suspect	28	36	39	51

When a case of active respiratory TB is reported to the Middlesex-London Health Unit (MLHU), the IDC Team attempts to identify and screen all susceptible contacts for active and latent disease. Treatment with antibiotics is provided, and in this way the ongoing spread of tuberculosis in the community is controlled.

## Case of TB in Shelter System

On December 13, 2018, the IDC Team received a report from the London Health Sciences Centre (LHSC) identifying a hospitalized individual with active pulmonary TB who had been living in the City of London shelter system since 2017. Early investigations determined that this individual was highly infectious, with a period of communicability from June 1 to December 13, 2018.

People who are under-housed or homeless are at higher risk of exposure to TB. Transmission of the bacteria occurs more easily in communal and congested living spaces, such as shelters. Additionally, poor nutrition and other stressors increase susceptibility. In such locations, it is more difficult to identify who exactly is at risk and, as a result, a more generalized approach must be taken to ensure comprehensive screening for disease. In this situation, all those who stayed in the shelter system during the period of communicability are considered to be at risk. Those who shared a sleeping space with the case are considered to be at higher risk and are of greatest priority for screening.

In collaboration with shelter staff and administrators, IDC staff initiated screening in December for both active and latent TB. Residents with symptoms consistent with potential active TB were asked to provide sputum samples and undergo a chest x-ray. All residents were eligible for screening. Traditional screening consists of a tuberculin skin test (TST). The TST is of limited use in this population because it requires the client to return for interpretation within 48–72 hours, and individuals in this population have had historically low rates of return. An alternative screening test is a blood test called an Interferon Gamma Release Assay (IGRA). This test is not publicly funded. Initially, only TSTs were available as a screening tool; however, as anticipated, only a small number of those screened (16 of 47) returned to have their results interpreted. Henceforth, LTBI screening will be completed using the IGRA blood test, in partnership with a local lab.

## Next Steps

MLHU has communicated the situation to its provincial partners, including the Ministry of Health and Long-Term Care (MOHLTC) and Public Health Ontario (PHO). MLHU has requested and received approval from the Chief Medical Officer of Health to access rifapentine via the Drugs for an Urgent Public Health Need pathway. This newer TB medication, when administered with isoniazid, can be given once weekly for twelve weeks in treating LTBI. It is as effective as the standard nine-month daily treatment of monotherapy isoniazid, and results in a higher treatment completion rate.

Screening clinics will be held in the shelters throughout January 2019. All additional cases of active or latent TB will be referred to a local respirologist for assessment and treatment. Hepatitis A vaccine will also be offered at the screening clinics as part of the ongoing effort to address that.

This situation highlights the fact that individuals who are homeless and/or under-housed remain vulnerable to myriad communicable diseases, including tuberculosis, hepatitis A, and invasive Group A streptococcal disease.

This report was prepared by the Infectious Disease Team ([Appendix A](#)), the Environmental Health and Infectious Diseases Division, and the Associate Medical Officer of Health.



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