Date: November 13, 2024
From: Dr. Dueck, Medical Officer of Health
Re: Increase in Mycoplasma (M.) pneumoniae activity in Ontario

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Public Health Ontario (PHO) has alerted Ontario's public health units of an observed increase in Mycoplasma (M.) pneumoniae activity in Ontario. PHO notes that:

"M. pneumoniae tends to occur in late summer and early fall and there are cyclical increases every 3 – 7 years. Last year, there was an increase in disease activity in several jurisdictions globally. Ontario did not experience the same increase last year as other jurisdictions. M. pneumoniae is not a designated Disease of Public Health Significance (DOPHS) and is not subject to mandatory reporting, therefore there is no provincial or national surveillance system for the pathogen. However, preliminary PHO laboratory data has been summarized below.

In contrast to last year, Ontario is experiencing a marked increase in disease activity this year. Total specimens tested, total positive specimens, and percent positivity have increased compared to same period last year. Disease activity, as measured by these indicators, began increasing from inter-seasonal lows in May and June, with more rapid increases in July and August. Activity has remained high since August.

Based on preliminary data from PHO, disease activity is highest in children and adolescents. Activity is highest in those aged 10 – 19 years, then 5 – 9 years, followed by 1 – 4 years. This is notable because historically those under 4 years of age have had very low disease activity. There is lower disease activity in adult age groups. Similar trends have been seen both in the United States and in Ontario hospital labs that have anecdotally shared results of M. pneumoniae testing. This information should be interpreted in the context of potential testing bias, where some age groups may have been and continue to be tested at different frequency than others.

Additionally, preliminary data from PHO looking at molecular markers predicted to confer macrolide resistance have been detected in a minority subset of samples tested at PHO. The clinical significance of this data is unclear.

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Telephone: 519-383-8331
160 Exmouth Street
Point Edward, ON N7T 7Z6

Testing / laboratory information:

- M. pneumoniae testing is conducted by PHO as well as by many community and hospital laboratories in the province.
- Information on testing at PHO can be accessed at Mycoplasma pneumoniae – Respiratory PCR | Public Health Ontario. Please note that laboratory testing protocols, including testing criteria and the type and number of specimens, may differ between PHO laboratory and other community or hospital laboratories."

As such, PHO has recommended health care providers consider the following in their clinical practice:

- Awareness of increasing M. pneumoniae activity in Ontario, including in young and school aged children.
- Consider M. pneumoniae infection among patients with community-acquired pneumonia who aren't clinically improving on antibiotics that are known to be ineffective against M. pneumoniae, such as beta-lactams.
- Use PHO's testing kit or their local / institutional laboratory practice for testing (PHO information at: Mycoplasma pneumoniae – Respiratory PCR | Public Health Ontario).
- As PHO has identified molecular markers that are associated with macrolide resistance in a subset of samples tested, consider using a second-line antibiotic regimen to treat patients with suspected or confirmed M. pneumoniae infection who aren't improving on macrolides.

PHO has advised the following key messages that health care providers can share among their patients:

- Use multiple layers of protection to reduce the risk of respiratory illness, including those caused by M. pneumoniae as well as other pathogens such as influenza, SARS-CoV-2, and RSV:
    - Wash or sanitize hands often;
    - Cover coughs and sneezes;
    - Consider wearing a mask when indoors or in crowded spaces;
    - Practice physical distancing;
    - Spend time outdoors or in well ventilated indoor spaces when possible;
    - Stay home when sick;
    - Get vaccines recommended for age and health status, including seasonal influenza and COVID-19 vaccines.
- Common symptoms of M. pneumoniae infection are fever, headache, and a slowly worsening cough. Symptoms of M. pneumoniae infection are similar to other respiratory diseases, including some common seasonal respiratory viruses that may not require medical assessment or specific treatments like antibiotics. Seek medical care if new worrisome symptoms such as wheezing or difficulty breathing, or if symptoms are

severe, persistent, or worsening despite treatment. Those with pre-existing lung conditions may be at higher risk of more severe disease. Seek medical care for children with severe, persistent, or worsening symptoms, especially if at higher risk of developing severe disease.