

Increase of *Mycoplasma pneumoniae* Activity Internationally and in Some US Jurisdictions

DATE:	12/7/2023
TO:	Health Alert Network
FROM:	Debra L. Bogen, MD, FAAP, Acting Secretary of Health
SUBJECT:	Increase of <i>Mycoplasma pneumoniae</i> Activity Internationally and in Some US Jurisdictions
DISTRIBUTION:	Statewide
LOCATION:	Statewide
STREET ADDRESS:	n/a
COUNTY:	n/a
MUNICIPALITY:	n/a
ZIP CODE:	n/a

This transmission is a “Health Advisory,” and provides important information for a specific incident or situation; may not require immediate action.

HOSPITALS: PLEASE SHARE WITH ALL MEDICAL, PEDIATRIC, INFECTION CONTROL, NURSING AND LABORATORY STAFF IN YOUR HOSPITAL
HOSPITAL EMS COUNCILS: PLEASE DISTRIBUTE AS APPROPRIATE; **FQHCs:** PLEASE DISTRIBUTE AS APPROPRIATE; **LOCAL HEALTH JURISDICTIONS:** PLEASE DISTRIBUTE AS APPROPRIATE; **PROFESSIONAL ORGANIZATIONS:** PLEASE DISTRIBUTE TO YOUR MEMBERSHIP

Summary:

- *Mycoplasma pneumoniae* is a bacteria that typically causes mild respiratory infections, but can sometimes cause pneumonia.
- Epidemics occur cyclically every 1 to 3 years, impacting pediatric pneumonia rates globally. Recent surges were reported in specific regions of China, Europe, and certain U.S. states.
- Clinical presentation includes tracheobronchitis or pneumonia, persistently nonproductive cough, headache, fatigue, and other respiratory signs.
- Transmission in crowded settings like schools, long-term care facilities (LTCF), and hospitals poses a risk, as *M. pneumoniae* primarily impacts school-aged children, older adults, and people with weakened immune systems.
- Molecular test methods are widely used for detection of respiratory pathogens including *Mycoplasma p.*, with FDA-approved kits available.
- Antibiotic treatment using macrolides, tetracyclines (in older children and adults), or fluoroquinolones (in adults) is common, but caution in macrolide use is advised due to emerging resistance.
- Public health recommendations include immunizations against influenza, COVID-19, respiratory syncytial virus (RSV), and pneumococcal vaccines, along with comprehensive respiratory testing, enhanced surveillance, respiratory hygiene, and environmental cleaning to manage outbreaks effectively.
- Report *Mycoplasma* outbreaks to your local health authorities or the Pennsylvania Department of Health at 1-877-PA-HEALTH (877-724-3258).

Background

Mycoplasma pneumoniae infections have a wide spectrum of clinical symptoms and disease manifestations. Pneumonia caused by *M. pneumoniae* is a type of atypical bacterial pneumonia that is sometimes called “Walking Pneumonia”. *M. pneumoniae* is the second most common cause of community acquired pneumonia and accounts for approximately 10% of all cases of pneumonia. *M.*

pneumoniae primarily affects younger persons and spreads person-to-person in families or closed groups.

M. pneumoniae epidemics typically occur every 1 to 3 years. The increase this year follows a 3-year period of very limited transmission. The Center for Disease Control and Prevention (CDC) is closely monitoring reports of increased respiratory illness activity around the world, including recent reports of elevated pediatric pneumonia levels in China, some European countries, and Ohio and Massachusetts in the US. In the US, the weekly percent of emergency department visits with diagnosed pneumonia is largely consistent with previous years for children aged 0 to 4 years. There have been slight increases above typical levels for children aged 5 to 17 years, but levels are still consistent with pre-pandemic years. These increases are likely caused by viruses and bacteria we expect to see during the respiratory illness season.

Clinical presentation and diagnosis:

Mycoplasma infection presents as tracheobronchitis or pneumonia with headache and a persistent nonproductive cough. Signs and symptoms range from sore throat, fatigue, headache and fever, to wheezes and shortness of breath. The most common age range for symptomatic *M. pneumoniae* infection is between 5 and 15 years, and the disease accounts for more than one-third of all cases of pneumonia in teenagers. The disease often appears as a sporadic, endemic illness in families or closed communities because of its long incubation period (2-3 weeks) and prolonged shedding in nasopharyngeal secretions. In families, attack rates in susceptible persons approach 60%. Asymptomatic infections occur, but most studies have suggested that more than two-thirds of people with infection develop some evidence of respiratory tract illness. High risk groups include school aged children, older adults, and people with weakened immune systems, but anyone can be infected. Infections in children younger than 6 months are uncommon. Transmission is most efficient in crowded settings such as schools, college residence halls, military training facilities, LTCFs, and hospitals.

Currently, molecular test methods are widely used in clinical and public health laboratories. There are multiple commercially available molecular test kits cleared by the U.S. Food and Drug Administration (FDA) for the detection of *M. pneumoniae*. Most of these kits are used for detection of multiple respiratory pathogens, including *M. pneumoniae*. The type of bacteria that is currently circulating worldwide has not changed antigenically and can be identified using the approved molecular kits.

Most *Mycoplasma pneumoniae* infections are self-limiting; however, clinicians routinely treat pneumonia caused by *M. pneumoniae* with antibiotics. All mycoplasmas lack a cell wall and, therefore, all are inherently resistant to beta-lactam antibiotics (e.g., penicillin).

Clinicians may treat the disease with macrolide, tetracycline, or fluoroquinolone classes of antibiotics, taking age of the patient and local antibiotic resistance patterns into consideration:

- Macrolides (e.g., azithromycin): Children and adults
- Tetracyclines (e.g., doxycycline): Older children and adults
- Fluoroquinolones: Adults

Clinicians should not prescribe tetracyclines and fluoroquinolones for young children under normal circumstances. Macrolides are generally considered the treatment of choice. However, clinicians should practice prudent use of macrolide drugs due to the emergence of macrolide-resistant strains of *M. pneumoniae*.

Public health recommendations:

- Immunizations are available for three major fall and winter viral respiratory diseases – influenza, COVID-19, and RSV which can also cause pneumonia. Pneumococcal vaccines are also available to prevent the most common types of bacterial pneumonia. Pertussis (whooping cough)

vaccines are available to prevent another common bacterial respiratory infection that can lead to pneumonia.

- Test for *M. pneumoniae* in cases of respiratory infections when patients test negative for influenza, COVID-19 and other common respiratory pathogens.
- Consider *M. pneumoniae* as a potential diagnosis among high-risk groups.
- In congregate settings such as LTCFs, consider using a comprehensive respiratory testing panel that includes *M. pneumoniae* if cases of influenza-like illness (ILI) test negative for COVID-19, influenza, and RSV. This is important, as treatment, prophylaxis, and isolation and quarantine measures vary between these pathogens.
- Like other respiratory outbreaks, enhanced surveillance, case identification and treatment, respiratory hygiene and etiquette, and environmental cleaning and disinfection help reduce transmission of *M. pneumoniae*.

Public Health reporting:

Although *M. pneumoniae* infection is not reportable in PA, reporting of outbreaks including *M. pneumoniae* is mandatory. To report an outbreak, call your local health department or DOH at 1-877-PA-HEALTH (877-724-3258).

For questions, please call your local health department or DOH at 1-877-PA-HEALTH (877-724-3258).

Additional Resources

- [CDC's Mycoplasma Pneumoniae Guidance for Clinicians and Laboratorians](#)
- [CDC's Pediatric Pneumonia Update](#)
- [Upsurge of respiratory illnesses among children – Northern China](#)

Individuals interested in receiving future PA-HANs can register at <https://ondemand.mir3.com/han-pa-gov/login/>.

- Categories of Health Alert messages:

Health Alert: conveys the highest level of importance; warrants immediate action or attention.

Health Advisory: provides important information for a specific incident or situation; may not require immediate action.

Health Update: provides updated information regarding an incident or situation; unlikely to require immediate action.

This information is current as of December 7, 2023 but may be modified in the future.