

PHSA Laboratories

BCCDC Public Health Laboratory

January 17, 2017

BCCDC Public Health Laboratory Discontinuation of *Mycoplasma pneumoniae* IgM Serology

The BCCDC Public Health Laboratory (PHL) has been using IgM serology in addition to nucleic acid testing (NAT) for detection of acute *M. pneumoniae* infection. *M. pneumoniae* IgM serology has significant limitations when used for the detection of acute infection. A recent analysis of *M. pneumoniae* IgM serology at the BCCDC PHL demonstrated that up to 70% of prenatal women had reactive *M. pneumoniae* IgM test results. This is consistent with highly variable positivity rates in the general population, ranging between 4%-55% depending on the population's age and the assay used^{1,2}. Another challenge is that the laboratory typically does not receive acute and convalescent sera to assess for seroconversion which would help identify recent infections. Ultimately *M. pneumoniae* IgM reactive serologic results are unable to differentiate between acute disease, remote disease or a false-positive test result.

As a result, effective January 2017, testing for *M. pneumoniae* IgM will be discontinued at BCCDC PHL.

Acute *M. pneumoniae* infection can, instead, be detected by NAT on respiratory specimens; lower respiratory specimens, such as sputum, are preferred.

If a sample is sent for *M. pneumoniae* IgM serology, the order will be resulted with the following comment: *"Mycoplasma pneumoniae IgM serology is no longer available. Reactive test results do not differentiate between acute infections, resolved infections, or false-positive results. If an acute infection is suspected please submit a sputum for Mycoplasma pneumoniae nucleic acid testing. If a post-infectious syndrome is considered please consult the BCCDC medical microbiologist at on-call at 604 661-7033."*

References:

1. Thurman et al. Comparison of laboratory diagnostic procedures for detection of *Mycoplasma pneumoniae* in community outbreaks. Clin Infect Dis. 2009; 48:1244-9.
2. Nir-Paz R, Michael-Gayego A, Ron M, Block C. Evaluation of eight commercial tests for *Mycoplasma pneumoniae* antibodies in the absence of acute infection. Clin Microbiol Infect 2006; 12:685-8.



Mel Krajden, MD, FRCPC
Director, Public Health Laboratory
Program Head, Virology
BCCDC Public Health Laboratory



Linda Hoang, MD, FRCPC
Associate Director, Public Health Laboratory
Program Head, Bacteriology and Mycology
BCCDC Public Health Laboratory

