



Technical Alert

Legionella Testing by Urine Antigen & *Legionella* Culture

TO: Medical Staff and Clients

FROM: Dr. A. Christian Whelen, PhD, D(ABMM)
V.P. - Technical Director (Microbiology)

Terrie Koyamatsu, M(ASCP) Dr. Wesley Kim, MD Dr. Ana Ortega-Lopez, MD
Manager, DLS Microbiology Medical Director DLS Medical Director QMC Punchbowl,
and QMC West North Hawaii and Molokai

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SUBJECT: **Optimal *Legionella* testing consisting of specialized respiratory culture and rapid urine antigen testing is available at DLS**

Legionella species can be found in many types of environmental sources associated with water, and can pose a serious risk to vulnerable patients. Legionellosis can present with pneumonia (Legionnaire's Disease) or without pulmonary involvement (Pontiac Fever). *Legionella pneumophila* causes 80-90% of legionellosis with serogroup 1 accounting for >70% of disease. *Legionella pneumophila* serogroups 2-15 and other 25 or more *Legionella* species cause the other 30% of disease.

Optimal testing for legionellosis requires BOTH specialized culture (Test Code 111) of lower respiratory specimen (e.g., expectorated sputum, induced sputum, bronchial washing, transtracheal aspirate, lung biopsy) AND rapid testing for a soluble antigen that is present in urine as early as 3 days after onset of symptoms. Performing urine antigen alone, which only detects *Legionella pneumophila* serogroup 1, has the potential to miss 30% of true cases caused by the other serogroups and species. Furthermore, the antigen may be shed in the urine for up to a year after infection, so should be evaluated along with other clinical and laboratory evidence. Lastly, the urine does not contain viable *Legionella pneumophila* serogroup 1 bacteria, and is NOT a suitable specimen for culture.

Whenever possible and practical, submit a *Legionella* Culture request (Test Code 111) on a respiratory specimen in conjunction with the *Legionella* antigen on urine.

Effective Monday, July 16, 2018, testing will be performed in-house at the Central Microbiology Laboratory.

Test code: 5123
Test name: Legionella antigen, Urine
Preferred container: Urine cup
Optimal volume: 1 mL
Specimen stability: Ambient: 24 Hours, Refrigerated: 14 Days, Frozen: 30 Days
TAT: 1 day
Effective: July 16, 2018

Please refer any questions to Terrie Koyamatsu, Manager - DLS Microbiology Laboratory at 589-5196, or DLS Client Services at 589-5101.
