



Technical Alert

NAAT Replacement for Influenza Virus and Streptococcus Group A Antigen

TO: Medical Staff and Clients

FROM: Dr. Matthew J. Bankowski, PhD, M.S., D(ABMM), HCLD/CC(ABB)
V.P. - Technical Director, Clinical and Molecular Microbiology and Infectious Disease

Terrie Koyamatsu, M(ASCP)
Manager, DLS Microbiology

Dr. Wesley Kim, MD
Medical Director DLS
and QMC West

Dr. Ana Ortega-Lopez, MD
Medical Director QMC Punchbowl,
North Hawaii and Molokai

DATE: November 28, 2017

SUBJECT: **Influenza virus types A and B and Strep group A (GAS) antigen testing will be discontinued and replaced with nucleic acid amplification testing (NAAT) using rapid PCR**

The influenza virus and Strep group A (GAS) antigen testing will be replaced with rapid NAAT (PCR) testing using the LIAT instrument at DLS Microbiology and all hospital sites. Influenza virus antigen will be discontinued effective December 18, 2017. GAS antigen will be discontinued effective January 1, 2018, at the Central Laboratory, and by February 5, 2018, at the hospital laboratories of QMC Punchbowl, QMC West Oahu and North Hawaii Community Hospital.

This test replacement was made in order to offer patients a diagnostic test with the highest test performance, while still maintaining a rapid turn-around-time in order to optimize patient care and outcome. The introduction of rapid NAAT (PCR) with the LIAT technology will now offer the highest test performance with a testing time comparable to antigen testing (i.e. 15 to 20 minutes test time from receipt in the lab). The comparison of test performance for these methods is shown in the following tables:

Test	Sensitivity Flu Type A	Sensitivity Flu Type B	Specificity Flu Type A	Specificity Flu Type B
Influenza A/B Antigen	83.0%	81.3%	97.6%	99.8%
Influenza type A and B RT-PCR	100%	100%	96.8%	94.1%

Test	Sensitivity	Specificity
Direct Group A Strep Antigen ¹⁻³	95.0%	98.0%
Strep A by Nucleic Acid Test	98.3%	94.2%

- Notes:
1. A negative test with persisting symptoms may indicate other pathogens are present (e.g. beta Strep group C/G or *Arcanobacterium hemolyticum*). In such cases and if clinically indicated, followup testing by culture is suggested.
 2. All negative Strep group A (GAS) antigen tests are reflexed to culture with a turn-around-time of ≥ 18 - 24 hours. It should also be noted that even though culture is considered the "gold standard", it will also fail to identify all GAS.
 3. In addition, the sensitivity and specificity for the antigen test was compared to only culture recovery as the reference method.

Test codes that will be inactivated:
5782 Direct Group A Strep with Reflex Culture
5647 Influenza A/B Antigen
5647R Influenza A/B Antigen with Reflex RT-PCR

Replacement test codes:
6234 Influenza type A and B, RT-PCR
5824 Strep A by Nucleic Acid Test

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