



## Microbiology Order Guidelines for Upper Respiratory Tract Specimens

### A. Nasal Specimen

- a. Identification of carriers of *Staphylococcus aureus* including methicillin-resistant *Staphylococcus aureus* (MRSA)
  - i. **Order:** MRSA DNA PCR or
  - ii. **Order:** MRSA/MSSA PCR Screen, Nasal (for Pre-Op Screening)
- b. No other orders are appropriate for this specimen source.

### B. Nasopharyngeal Specimen

- a. Detection of Respiratory Viruses and Bacteria
  - i. **Order:** Influenza A&B w/RSV PCR (Primarily Outpatients)
  - ii. **Order:** Respiratory Virus Detection Panel (Primarily inpatients and patients admitted through the ED
    1. Includes influenza A, influenza B, RSV, adenovirus, coronavirus, human metapneumovirus, parainfluenza, rhinovirus/enterovirus, *Bordetella pertussis*, *Bordetella parapertussis*, *Chlamydomphila pneumoniae*, and *Mycoplasma pneumoniae*
- b. Detection of *Bordetella pertussis* only
  - i. **Order:** *Bordetella pertussis* PCR

### C. Sinusitis

- a. Aspirates, washes, scrapings/debridements and biopsy material collected during endoscopic procedures are optimal since they are sampled directly from the infected sinus and avoid contamination by normal members of the microbiota in the nasal passages.
- b. Although swabs obtained with endoscopic guidance correlate well with aspirates for recovery of bacteria, they do a poor job of recovering fungi, which have been implicated as etiological agents of chronic sinusitis.
- c. For aspirates or swabs; **Order:** Abscess Culture; Specimen type – Aspirate or Swab; Specimen source – Left Sinus or Right Sinus
- d. For tissue biopsy; **Order:** Tissue Culture; Specimen Type – Tissue; Specimen source – Left Sinus or Right Sinus

## D. Throat

- a. Respiratory viruses account for 25-40% of the cases of acute pharyngitis. Adenovirus, rhinovirus, and coronavirus are among the leading causes of viral pharyngitis.
- b. Group A Streptococcus (*Streptococcus pyogenes*) is the most common bacterial cause of acute pharyngitis accounting for 5-15% of the cases of acute pharyngitis in adults in developed countries. GAS can lead to suppurative complications (otitis media, peritonsillar cellulitis or abscess, sinusitis, meningitis, bacteremia, and necrotizing fasciitis) and non-suppurative complications which are immune mediated and include acute rheumatic fever, poststreptococcal glomerulonephritis, and reactive arthritis.
  - i. **Order:** Group A Strep DNA
- c. Group C and G Streptococci is a less common cause of pharyngitis and most often occurs among college students and young adults. In contrast to GAS pharyngitis, group C and G have not been associated with acute rheumatic fever or other immune-mediated complications. **Rarely, if ever, ordered on pediatric patients.**
  - i. **Order:** Routine Culture; Specimen type – Swab; Specimen source – throat; Add Order Comment – Rule out Group C & G beta Strep
- d. *Arcanobacterium haemolyticum* is an uncommon cause of acute pharyngitis accounting for < 1% of cases and is most common in adolescents and young adults. **Rarely, if ever, ordered on pediatric patients**
  - i. **Order:** Routine Culture; Specimen type – Swab; Specimen source – throat; Add Order Comment – Rule out Arcanobacterium
- e. *Neisseria gonorrhoeae* requires collection with the BD female GC culture swab with charcoal (Lawson #76809) and transported to the laboratory as soon as possible.
  - i. **Order:** Gonococcus Culture; Specimen type – Swab; Specimen source – throat
- f. The following etiological agents rarely cause pharyngitis and require special transport medium or culture conditions. They are frequently sent to an outside reference laboratory. Please contact the Microbiology Laboratory at (717) 851-2583 before collecting specimens.
  - i. *Corynebacterium diphtheriae*
  - ii. *Fusobacterium necrophorum*
  - iii. *Mycoplasma pneumoniae*
  - iv. *Chlamydophila pneumoniae*

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