

IREDELL HEALTH SYSTEM

Nasal MRSA PCR Protocol	
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Antimicrobial Stewardship Committee P&T Committee	Date: 09/2022 Date: 10/2022

Purpose:

To allow pharmacist ordering of nasal MRSA PCR in order to facilitate de-escalation of empiric antibiotic coverage of MRSA pneumonia.

Frequently treatment of pneumonia lacks microbiological data to aid in streamlining empiric antibiotics. It is difficult to obtain lower respiratory tract cultures. Data show that MRSA pneumonia is highly unlikely in the absence of detectable MRSA in the nares. A negative nasal MRSA PCR results has a negative predictive value of > 98% for MRSA pneumonia.

Policy:

All adult patients admitted to IMH will be screened for nasal MRSA, if receiving vancomycin or linezolid, for suspected or confirmed pulmonary indication including but not limited to:

- hospital acquired pneumonia (HAP);
- community-acquired pneumonia (CAP); or
- acute exacerbation of chronic obstructive pulmonary disease (COPD)

MRSA nasal screen should be ordered within 48 hours of initiation of vancomycin or linezolid therapy for any respiratory infection.

Patients will be excluded from nasal MRSA screening if *any* of the following conditions are met:

1. MRSA screening culture collected in the previous 7 days
2. Confirmed MRSA in respiratory culture or nasal culture in the last 14 days (If nasal MRSA screen by culture is pending or negative, pharmacist should still order a nasal PCR)
3. Treated for MRSA infection in the last 30 days
4. Mechanically ventilated \geq 48 hours
5. Structural lung disease (cystic fibrosis, bronchiectasis, etc)
6. Clinical presentation with high risk for MRSA (empyema, necrotizing lung infection)
7. Previously de-colonized for nasal MRSA with mupirocin

Procedure:

1. Pharmacist to order nasal MRSA screen by PCR for new Vancomycin – Pharmacy to Dose or linezolid orders with indication stated as pulmonary. See above for inclusion and exclusion criteria.
2. Upon receipt of order, nursing shall collect MRSA nasal swab via standard technique and send to lab for processing.

3. Pharmacist shall monitor the nasal MRSA PCR results.
 - a. If *negative*, pharmacist shall contact ordering provider to recommend de-escalation of empiric anti-MRSA therapy, if clinical disposition does not suggest MRSA pneumonia.
 - b. If *positive*, patient shall continue current empiric anti-MRSA therapy and follow-up on pertinent labs and studies to re-assess the need and duration of anti-MRSA therapy.

Note: With *positive* results, laboratory personnel shall call results to nursing staff and isolation precautions shall be implemented per standard protocol.
4. Pharmacist shall document actions within the pharmacy-monitoring program.

INITIAL EFFECTIVE DATE: 11/2021
DATES REVISIONS EFFECTIVE: 10/2022
DATES REVIEWED (no changes):