Pharmacist-driven MRSA nasal screening for de-escalation of empiric vancomycin in patients with suspected pneumonia

Multiple studies have shown that MRSA pneumonia is highly unlikely in the absence of detectable MRSA in the nares, with a negative predictive value of >98%. Vancomycin can be safely discontinued in patients with a negative nasal MRSA screening with no clinical features to suggest MRSA as the etiology, with no adverse clinical outcomes. All patients admitted to medical or surgical unit will be screened for nasal MRSA if receiving vancomycin 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 (AECOPD)

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

- Ventilator associated pneumonia (VAP)
- MRSA screening culture in the previous 7 days
- Treated for MRSA infection in the last 30 days
- Structural lung disease (cystic fibrosis, bronchiectasis, etc.)
- Clinical presentation with high risk for MRSA (empyema, necrotizing lung infection)
- Previously de-colonized for nasal MRSA with mupirocin

MRSA nasal screen should be ordered within 48 hours of initiation of vancomycin therapy for any respiratory indication.
**Anti-MRSA therapy unnecessary**

**Recommend to discontinue empiric anti-MRSA therapy**

**New start vancomycin with respiratory indication**

**Identify empiric vancomycin use for suspected MRSA pneumonia (outside of ICU)**

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**Inclusion Criteria**
- Active vancomycin order
- Pulmonary Indication: CAP, HAP, or COPD exacerbation
  *Must meet all of the above criteria*

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**Assessment for MRSA pneumonia**
- Prior IV antibiotic use within previous 90 days of pneumonia
  *Consider contacting provider to discuss need for empiric anti-MRSA therapy*

**Order MRSA Nasal Culture**
- if within 48 hours of initiating vancomycin
  *(Turn-around time: ~2 days)*

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**Negative**
- Recommend to provider to de-escalate empiric anti-MRSA therapy if clinical disposition does not suggest MRSA pneumonia
- Document intervention

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**Positive**
- Continue empiric anti-MRSA therapy
- Follow-up pertinent labs and studies to re-assess need and duration of anti-MRSA therapy

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REFERENCES:


