

## Aspiration Screening Protocol

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Background: Traumatically injured patients, particularly those with traumatic brain injury and facial trauma, are at increased risk of aspiration which can lead to clinically significant pneumonia. The aspiration event may occur at the time of injury, during prehospital care including prehospital intubations or during trauma bay resuscitation and subsequent rapid sequence intubation. Often these patients require mechanical ventilation. Duration of mechanical ventilation increases the risk of ventilator associated pneumonia. It can be difficult to ascertain the etiology of pneumonia as due to aspiration or ventilator associated. The aspiration screening protocol will be used to identify patients with aspiration within 24h of admission to accurately attribute causality if the patient subsequently develops pneumonia.

1. Patient selection
  - a. All traumatically brain injured patients admitted to VUMC trauma surgery service with pre-hospital or referring institution intubation status.
  - b. Traumatically brain injured patients who are intubated within 24h of admission to VUMC due to depressed GCS or mental status change
2. Aspiration Screening Protocol
  - a. All patients who meet criteria listed above will have an aspiration screen performed within 24h of admission
  - b. Aspiration Screen will consist of a deep tracheal lavage and aspiration, to be performed by respiratory therapy providers
  - c. If the patient requires bronchoscopy prior to the aspiration screen being performed, then a bronchoscopic alveolar lavage (BAL) sample will be obtained.
3. Interpretation of Aspiration Screen Results
  - a. Negative aspiration screen = No growth or light growth of oropharyngeal flora
  - b. Positive aspiration screen = Moderate or heavy growth of oropharyngeal flora or isolated bacterial species
  - c. Do not start antibiotics for pneumonia due to results of aspiration screen
4. Documentation
  - a. Aspiration will be added to the patient problem list for patient with a positive aspiration screen
5. Endpoints
  - a. Patients with positive aspiration screen who subsequently develop pneumonia within 5 days of admission be classified as having aspiration pneumonia. The patient problem list will be updated from aspiration to aspiration pneumonia.
  - b. Pneumonia that develops >5 days after admission will be classified as ventilator associated pneumonia regardless of aspiration screen results unless a documented aspiration event has occurred while inpatient at VUMC.
  - c. Follow Trauma and Fever PMG regarding antibiotic management of pneumonia.

## References:

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