

## 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 injured patients admitted to VUMC trauma surgery service with pre-hospital intubation status.
  - b. All traumatically injured patients transferred from a referring institution with an endotracheal tube in place and who are within 24h of injury
  - c. Traumatically injured patients who are non-electively intubated within 24h of admission
2. Aspiration Screening Protocol
  - a. All patients who meet criteria listed above will have an aspiration screen 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 screening 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
4. Documentation
  - a. Aspiration will be added to the patient problem list for patient with a positive aspiration screen
5. Endpoints
  - a. Patients who develop pneumonia within 5 days of admission and a positive aspiration screen will be classified as having aspiration pneumonia.
  - b. Pneumonia that develops >5 days after admission will be classified as ventilator associated pneumonia unless a documented aspiration event has occurred while inpatient at VUMC.

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