Implementation of an interprofessional evidence-based algorithm to guide clinical decision making for aspiration pneumonia (AP) prevention decreases rates of AP in the acute care setting

**PURPOSE**
This interprofessional quality improvement initiative was conducted to decrease rates of aspiration pneumonia (AP) among patients admitted to the medical units at the Hospital of the University of Pennsylvania (HUP).

**BACKGROUND**
- AP results from oropharyngeal or gastric contents entering the larynx and lower respiratory tract and becoming colonized by bacteria
- AP leads to increased morbidity, mortality, and longer lengths of stay
- Dysphagia is the most significant risk factor for AP
- Rates of AP for medical patients at HUP were higher than the national average
- Implementing a nursing based screening tool can improve patient outcomes

**METHODOLOGY**
- Setting
  - 3 medical inpatient units at a large urban academic medical center
- Participants
  - An interprofessional team (MD, SLP, RNs) created a nurse driven process to identify and screen patients at risk for aspiration
- Method
  - Utilized Plan-DO-STUDY-ACT quality improvement methodology to implement Project SIT-UP (Screen, Identify, Treat, Understand, Plan)

**RESULTS**
- PDSA approach yielded refinement of the SITUP Protocol
  - S = SCREEN for dysphagia using 3oz water test
  - I = IDENTIFY aspiration risk
  - T = TREAT underlying causes of dysphagia
  - U = UNDERSTAND patient's continued risk for AP prevention during hospitalization
  - P = PLAN for AP prevention
- Clinical Outcomes:
  - 90% compliance was achieved within 4 months of implementation
  - Aspiration rates decreased by 40% over 9 months

**WHAT WE LEARNED**
Implementation of an interprofessional evidence-based algorithm to guide clinical decision making for aspiration pneumonia (AP) prevention decreases rates of AP in the acute care setting

**QUALITY IMPROVEMENT PROCESS**

**PLAN:**
- Identify and organize interprofessional team
- Plan process for dysphagia screening and management

**DO:**
- Part I: Keep patient NPO and consult with speech therapy in any signs of swallowing difficulty are present
- Part II: Assess Psychomotor ability and level of consciousness
- Part III: Conduct 3oz water test

**STUDY:**
- Monitored compliance rates with dysphagia screening
- Monitored cases of aspiration pneumonia
- Monitored time to consult by SLP

**ACT:**
- Continue to Monitor
- Refine and standardize the SIT UP Protocol

**CONCLUSIONS**
- A multi-disciplinary approach to aspiration risk reduction has led to a decrease in diagnosed cases of AP
- Clinical nurses assume a vital role in AP risk detection and preventative care
- Use of an evidence-based algorithm to has improved documentation of a patient's risk for aspiration and guidance for an appropriate plan of care
- Program has utility across multiple settings – implement in medical ICU given success on medical units