

## **Evidence-Based Practice (EBP) - E207**

Poster

### **Abstract Title:**

Implementation of a Multidisciplinary Timeout and Checklist for Bronchoscopy-Guided Percutaneous Tracheostomy

### **Authors:**

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### **Background & Purpose:**

Unanticipated difficulties can occur during surgical procedures in the critically ill patient. Early complication rates of Bronchoscopy-Guided Percutaneous Tracheostomy Insertion (BPTI) have been published and have ranged from 5-25%. At an Urban Level 1 Trauma Center with an average of 90 BPTIs per year, a procedural timeout and checklist was developed to achieve even lower complication rates than reported in the literature. Assurance of patient safety requires preparation for unforeseen problems, the elimination of near misses, and a coordinated team with equipment at the ready.

### **Study/Project Design:**

Prospective implementation of a timeout and checklist to reduce complication rates of BPTI.

### **Setting:**

Trauma/Surgical ICU (TSICU) is a 16 bed unit with an average of 600 admissions per year.

### **Sample:**

23 patients ranging in age from 17 – 83, who required bedside BPTI in the TSICU.

### **Procedures:**

A multidisciplinary approach was utilized to develop a procedural timeout and checklist for bedside BPTI. Respiratory therapists, nurses, trauma surgeons, and critical care technicians collaborated to determine the critical steps involved in BPTI. A checklist was created which included the following: pre-procedural check-in prior to administration of sedation; verification of patient allergies and medications; assembly of essential equipment; timeout and verbal introduction of team members; an opportunity for each team member to voice concerns prior to incision being made; and sign-out at the end of the procedure. This timeout and checklist process was piloted in the TSICU. Feedback from team members was obtained and evaluated , and subsequent revisions to the checklist were made.

### **Findings/Results:**

Review of completed timeout and checklists found multiple pre-procedural near misses and an improvement in quality performance of BPTI. A total of 7 incidents out of 23 BPTIs performed using the timeout and checklist were identified. In 3 incidents, the checklist prevented a near miss of essential equipment not being readily available. In one incident the patient was not on appropriate ventilator settings for the procedure. In one incident, confirmation of signed consent was not completed by the surgeon prior to set-up. Use of a Bovie electrocautery was found to be inappropriate for use in one patient with a pacemaker. In one significant incident, the opportunity for team members to express concerns prior to the procedure led to the BPTI being aborted, and the patient subsequently underwent an open-tracheostomy procedure in the operating room. The use of the timeout and checklist resulted in identification and correction of pre-procedural issues in 7/23 (30%) of patients.

### **Discussion/Conclusions/Implications:**

The implementation of a procedural timeout and checklist has demonstrated to be a successful measure to protect against errors. This timeout and checklist ensures that critical steps of BPTI are not overlooked. It provides a groundwork for collaboration, coordination, and communication among team members. The institution where this pilot took place has widely accepted this new safety tool for use during Bronchoscopy-Guided Percutaneous Tracheostomy Insertion in critically ill patients. A new standard of care will now include the utilization of this multidisciplinary timeout and checklist.