



## Service Priorities and Programmes Electronic Presentations

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### **A clinical audit on enhanced aftercare for patients receiving endotracheal intubation in Accident and Emergency Department**

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#### **Keywords:**

post intubation

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#### **Introduction**

In Accident & Emergency Department, it is not uncommon to encounter patients in critical status requiring emergency airway control with rapid sequence induction (RSI) and endotracheal intubation. A comprehensive post intubation care plan is essential to alleviate patient's discomfort and minimize complications like ventilator-associated pneumonia (VAP) which was associated with significant morbidity and tremendous hospital cost. A complete clinical audit was conducted to review the performance followed by an enhancement program.

#### **Objectives**

To evaluate the post-intubation care standard followed by improvement measures to enhance the care standard and minimize complications.

#### **Methodology**

All patients who had received RSI and intubation from June to November 2014 were reviewed as baseline. The outcome index measured were cuff-pressure measurement, rate of use of analgesic and sedatives and VAP rate. A series of interventions and improvement measures were adopted in June 2015, including setting up a departmental guideline, standardized checklist, preparation of necessary equipment, education, setting up of surveillance and audit system. The interventions included routine measurement of cuff-pressure, sterile tube handling, administration of adequate sedatives, analgesics and neuromuscular blockers and a series of measures for VAP prevention. The protocol also provided guidance on the initial ventilator settings for standardization of care. A post-interventional audit was then carried out from June to November 2015.

#### **Result**

The audit included 47 and 53 patients before and after intervention respectively. No cuff pressure measurement was done before the intervention while 81% had cuff measurement after the intervention ( $p < 0.001$ ). Sedation was given in 14 out of 47

(29.8%) in pre-interventional group and 30 out of 53 (56.7%) in post-interventional group ( $p=0.007$ ). Analgesic was given in 3 out of 47 (6.4%) in pre-interventional group and 22 out of 53 (41.5%) in post intervention group ( $p<0.001$ ). Without adjustment of confounders and limited sample size, the incidence of VAP did not have significant difference with 6.4% (3 out of 47) in pre-interventional group and 9.4% (5 out of 53) in post-interventional group ( $p=0.575$ ). An audit on comprehensive post-intubation care improved the quality of care and it is recommended to continue audit and surveillance on the VAP rate.