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A Collaborative and Streamlined Approach to Improve Difficult Airway Management in an Intensive Care Unit

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Introduction

A project on improvement in managing patient with difficult airway was implemented in an adult intensive care unit (ICU) in addressing the gaps identified by nurses and doctors after a patient was rescued in a “cannot Intubate, cannot ventilate” situation. The project demonstrates the effort on establishing a healthy work environment to enhance work satisfaction of ICU nurses and doctors.

Objectives

The objectives of the project were to enhance confidence and clinical competency of ICU nurses and doctors, to promote teamwork among ICU nurses and doctors; and to ensure proper maintenance and availability of difficult airway devices in ICU.

Methodology

The project divided into 2 parts: difficult airway workshops for ICU nurses and doctors attending together; and re-organization of ICU Difficult Airway Kit. The workshop consisted of both technical skills sessions and simulation-based training sessions. The technical skills stations provided opportunities for participants to practice varies difficult airway devices in small group. The simulation sessions focused on both hands-on practice and the training of effective team dynamics among ICU nurses and doctors in performing the procedures. Special emphasis was placed in ICU nurse-physician collaboration and empowering nurses to sustain open communications with doctors. Following each session, there was an in-depth structured debrief to echo the workshop aims. A post-workshop questionnaire on a 1-6 Likert scale (1-strongly disagree to 6- strongly agree) was used as outcome measures of the workshop. Difficult airway management display board was created 4 months after the workshop for refreshing participants' memory. To re-organize the difficult airway kit, the LEAN tool 5S steps of sort, set in order, sweep, standardize and sustain concept was used.

Result

Total 6 identical difficult airway workshops were conducted with 54 ICU nurses and 7

ICU doctors attended. ICU nurses and doctors were highly satisfied with the workshop (mean score 5.5) with increased confidence (mean score 5.5) and team work (mean score 5.3) in handling difficult airway situation. The difficult airway kit was redesigned and stocked with essential equipment in a logical manner. Difficult airway kit signage and equipment cue cards were added with checking system enforced. This project shows the enhancement in clinical competency and nurse–physician collaborative relationship; plus streamlining the equipment set-up in difficult airway management, contributing the establishment of a healthy work environment in an ICU.