



Service Priorities and Programmes Electronic Presentations

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LEAN approach: All-in-one Ventilator Kit Set improves efficiency and effectiveness in post intubation care.

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Introduction

Timely retrieval of appropriate resuscitation equipment is critical in delivery of prompt and efficient resuscitation. Currently, the average lead time of preparing ventilator equipment for post intubation care in 11B ward of United Christian Hospital requires over 180 seconds (> 3 minutes). Compare with the time for caring the critical ill patient, this preparing equipment time is really an enormous time waste. Therefore LEAN approach was adopted to improve the efficiency and effectiveness of care delivery.

Objectives

1) Minimize wastage in searching or locating in preparing ventilator equipment for post intubation care. 2) To eliminate staff frustration on the preparation of the ventilator equipment.

Methodology

LEAN approach aims to provide the best quality at the lowest cost, and in the efficient manner, through eliminating waste (Krafcik, 1988). In order to engage our nursing staff, a LEAN working group was formed in 11B ward in 1Q 2015. Brainstorming session in the working group for the preparation of the ventilator equipment. Consequently, a central provided opportunities for staff to ventilate their concerns and ideas on ventilator equipment preparations so as to identify their frustrations on current practice. Fish bone analysis was utilized to identify the root causes for the long lead time in preparing ventilator equipment. It found that there was various equipment scattered in different locations around treatment room and store room which contributed to the time required for the preparation of the ventilator equipment. So, All-in-one Ventilator Kit Set was created. It contains all necessary instruments and equipment for post intubation care. It saved time not only for nurses but also for the patients. They did not need to wait for the nurse fetching items from elsewhere in ward. Furthermore, centralizing storage also allows nurses to identify refilling needs easily.

Result

The lead time of preparing ventilator equipment has been reduced from > 180 seconds to 10 seconds. All nursing staff reported reduction in time spent on finding and retrieving equipment resulting in less frustration and faster to provide post intubation care for patient.