



Service Priorities and Programmes Electronic Presentations

Convention ID: 1176

Submitting author: Mr Shu Wah Ng

Post title: Ward Manager, Ruttonjee & Tang Shiu Kin Hospitals, NULL

How Does A Ventilation (VEN) Program “D.E.S.E.R.V.E.”!

Ng SW(1)(3)(4)(5), Wai SFW(6), Hung CK(7), Lit PKM(1)(4)(8), Choo KL(6), Chu CM(3)(4)(9), Chan HS(2)(10), Yu WC(2)(11)

(1) Specialty Advisory Group (Resp), COC (N) (2) Central Committee (Chronic Obstructive Pulmonary Disease) (CC (COPD)) (3) Non-invasive ventilation workgroup, CC (COPD) (4) Invasive ventilation workgroup, CC (COPD) (5) Department of Integrated Medical Service, Ruttonjee & Tang Shiu Kin Hospitals (6) Department of Medicine, North District Hospital (7) Department of Medicine & Geriatrics, Kwong Wah Hospital (8) Department of Medicine, Queen Elizabeth Hospital (9) Department of Medicine & Geriatrics, United Christian Hospital (10) Department of Medicine, Alice Ho Miu Ling Nethersole Hospital (11) Department of Medicine & Geriatrics, Princess Margaret Hospital

Keywords:

Ventilation
Nursing care

Introduction

A significant number of critically ill patients requiring ventilatory support are cared for in acute general units. According to a survey in HA, there were 3484 patients requiring non-invasive ventilation (NIV) in the Department of Medicine of 5 acute hospitals in 2015. These patients have been reviewed to have better nursing care and might have better clinical outcomes if they could be cared for in designated areas since 2013. There have been thirty eight designated VEN beds in total 13 pilot hospitals in 7 clusters under HA since 2013 in order to enhance the appropriateness of care for cases requiring ventilatory support.

Objectives

To establish a mechanism to enhance the nursing care for these cases To enhance the competency of staff To preliminarily review the nursing care

Methodology

Designated beds: The designated beds were equipped with adequate respiratory equipment and enhanced monitoring capabilities. **Standard of care:** There were two nursing guidelines for care of patients with non-invasive and invasive ventilation had been supported by CC (COPD) and endorsed by COC (N) in 2014 and 2015 respectively. **Enhancement of Competency:** Competency enhancement programs had been conducted respectively before the commencement of the program in the pilot hospitals since 2013. Besides, an e-learning module for care of patients requiring NIV has been established on HA's web in 2015. Moreover, the components for management and care for patients requiring ventilation support were

reinforced and consolidated in the curriculum of Post-Registration Certificate Course in 2014. Review and monitor Ventilator utilization: There is a mechanism in place to assess and monitor the bed day activities for cases in the designated VEN beds and acute general medical units respectively every day. The occupancy of the designated VEN beds is also reviewed regularly via CDARS. Evaluation: Nursing audits have been conducted every year for agreed pilot hospitals since 2013. There are nursing quality indicators formulated and evaluated for the VEN cases. Specific nursing care and clinical outcomes were preliminarily explored in sub-group analysis.

Result

The overall occupancy of the designated VEN beds was 97% in November 2015. Three audits had been conducted for total 397 VEN cases from designated and non-designated beds during audit period since 2013. It was statistically significant that there were higher compliance rate of enhanced nursing care, less adverse effects and less complications in designated VEN beds. There were better compliance rate of 97.6%-98.52% versus 83.68%-91.72%, less mask related skin lesion of 3.8% versus 12.5%, less average numbers of adverse effect from NIV of 1.2-1.22 versus 1.79-1.94. The less mask leak was 16.59-22.44L/min versus 20.22-32.79L/min. and associated with lower mortality risk. The unplanned extubation was also lower of zero versus 5%.