“SINGLE” approach for Acute Non-Invasive Ventilation Service in a regional acute hospital in Hong Kong

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Keywords:
Non-invasive ventilation
Quality and Safety

Introduction
Non-invasive ventilation (NIV) has been shown to reduce intubation and in-hospital mortality in patients with Acute Respiratory Failure. NIV is increasingly utilized with high demand. In a district hospital, the NIV service is mainly provided in 13 units and one high dependence unit under the Department of Medicine & Geriatrics with 502 in-patient beds. There are 30 NIV machines, which serves more than seven hundred times every year.

Objectives
To establish a mechanism in place to ensure safe and effective care for patients and, use on NIV. To describe the service deliverables

Methodology
The care of patients on NIV by a trained and experienced team with specialty nursing standard could optimize patient outcomes. In order to ensure safe and quality care for patients on NIV, an approach of “SINGLE” was initiated as follows: Service review The NIV service is reviewed regularly against international guideline and updated practice to identify area to improve or enhance by a workgroup. In-service training Staff competence on caring patients with NIV is assured by regularly training and workshop. Net-information There are procedure guideline and video demonstration on machine operation available on hospital website. Guideline Procedure guideline has been developed with reference to HA guideline for specialty nursing service, standard no.2 Care of Patient with NIV and best available evidence. Logistic management Utilization record, storage, maintenance, dis-infection arrangement are centralized in a respiratory specialty unit. The utilization trend is closely monitored to ensure adequate and appropriate level NIV machines could effectively be utilized. Evaluation Regular audit on compliance with caring patients on NIV is conducted against the HA specialty nursing standard.

Result
Result There are around 240 nurses caring patients on NIV in the department. Since 2008, more than 80% of them and newly recruited staff had received 2-hour lecture and workshop. Also, there are 10 competent trainers responsible for training. The lecture conducted had granted more than 600 Continuous Nursing Education Points for 265 colleagues in a district hospital since 2007. Nearly all (98%) candidates were satisfied with the training programs. Conclusion The “SINGLE” initiative could assure quality and safety of caring patients on NIV with growing demand. Care for patients who need long term NIV should also be initiated and formalized.