



Service Priorities and Programmes
Electronic Presentations

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Simulation + Integrated Mechanical Ventilator (SIMV) Course - for doctors in Kowloon Central Cluster

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Introduction

Apart from the Intensive Care Unit (ICU), mechanically ventilated (MV) patients in Queen Elizabeth Hospital can be managed in ventilator ward, Cardiac Care Unit, various High Dependence Units or even in general wards. All doctors need to acquire basic skills in managing ventilated patients. Simulation-based training has proven an effective means of education to shorten learning curve in a simulated ward like environment.

Objectives

To provide simulation-based MV training to empower non-ICU doctors on basic MV management, which could in turn decrease ICU consultations, shorten non ICU ventilator days and improve MV patient management outside ICU.

Methodology

The SIMV course is an upgraded version of last year's Basic Mechanical Ventilator Simulation trial run. It is a half-day course running half-yearly, recruiting up to 18 participants each time. The 3 featured small-group simulation-based training are delivered in the simulation laboratory. The participants need hands-on to study the case history, laboratory results, X-rays, cardiac monitors in order to tackle the evolving clinical difficulties simulated by the SIM-MANs and the mechanical lungs. The 3 scenarios are designed focusing on patient safety, crisis management and crew resource management, while technical MV aspects are broadly covered. There are 3 additional lectures on basic physiology, basic modes and troubleshooting. These lectures are featured with live demonstration simulating various problem solving skills. A voting system for multiple choice questions enhances interactions. Capability of participants is assessed by their performance during simulation training together with the pre- and post-course assessment. Their feedbacks are received through evaluation forms.

Result

29 doctors participated in the first and second SIMV courses. 29 evaluation forms were received. 100% agreed or strongly agreed that the simulation-based training

allowed better understanding of MV. More than 90% agreed or strongly agreed that they became more confident in managing MV patients after the course. 100% were more aware of the limitations of MV outside ICU and they were more confident in determining when to seek help. 22 pre- and post-course assessment forms were received. Out of the 8 questions, the mean post course score was much higher than that of pre-course (7.1364+/- 1.1668 vs 3.863 +/- 1.754; $p < 0.001$)