



Service Priorities and Programmes
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The Effectiveness of Simulation Training in Enhancing Nursing Practices on Caring Patients with Infectious Disease – A pilot study

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Introduction

The threat of infectious diseases is ongoing locally and globally. Using simulation to assess potential breaches in infectious disease practices is recommended.

Simulation training can facilitate learning of technical and non-technical skills (including situation awareness – SA) to minimize overall risk. This study collects baseline data concerning simulation drill and nursing practice in Princess Margaret Hospital (PMH). Data inferred can highlight the importance of simulation drill in nursing practice in Hong Kong.

Objectives

1. To evaluate the effectiveness of simulation drill on the improvement of situation awareness of nursing staff
2. To assess the feasibility of using simulation drill in nursing practice in a future large-scale study

Methodology

Study design: Prospective cohort study

Subjects: Clinical nursing staff in the Hospital Authority Infectious Disease Centre (HAIDC) in PMH

Sample Size: 20

Assignment: Subjects received two scenario-based simulation cardiopulmonary resuscitation (CPR) drills in pairs with one year apart. Subjects' roles were swapped in the second drill.

Result

The participants started chest compression and attached automated external defibrillator (AED) were 23 and 35 seconds faster than baseline respectively which statistically significant.

The participants separated used equipment and instructed supporting staff for aftercare were 70 and 133 seconds faster than baseline respectively which statistically significant.

As compared with baseline, the participants could correct the errors by confederate in

25% more which means the buddy system enhanced.

Median time for putting on appropriate Personal Protective Equipment (PPE) was 186 and 197 seconds for baseline and follow up respectively.

Subjects perceived that their situation awareness was improved after the drill.

This study is a pioneer to include: 1) infection control (IC) elements and evaluation of aftercare; and 2) response time for both resuscitation and infection control elements

Although no studies were done to measure the time used for putting up PPE for benchmark, the response time of about 3 minutes was regarded as efficient from clinical experience.

Limited subject joined this study in a volunteer basis but still found the lapse of IC measures. Therefore, buddy system implementation could be eroded under stressful situation in the high risk procedure, more simulation training is suggested.

This study provides more learning opportunities for all of our clinical nurses and their awareness were stimulated.