



**Service Priorities and Programmes**  
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**Promoting patient safety through the competency-based assessment tool in a cluster emergency department in Hong Kong**

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**Introduction**

Ensuring emergency nursing (EN) competency is important for safe cares to patients. A cluster emergency department (ED) noted that there was 23% increased of incident rate (N=224) in the ED from the Hospital Incident Report System in the past 12 months (N=182) in Oct. 2012. In the root cause analysis results, many of them were related to inadequacy of nurses' competencies.

**Objectives**

The ED attempted to assess nurses' competency & identify nurses' perceptions in their inadequacies of EN competencies then develop training strategies to enhance patient safety.

**Methodology**

A Competency-based Assessment Tool (CBAT) with three sets competency statements was used for nurses with different experience. All statements were answered with 5 points Likert Scale to understand nurses' perceptions in their awareness, knowledge gaps and confidences to perform as competent emergency nurses. The tool was newly developed through 3 rounds Delphi study which consists of 22 domains with 154 competency items in the ED in 2012. Within these items, 74 items [rating percentage 62.7% (median), C.I. 7.64] in 14 domains were developed to be items for novice nurses; 64 items [rating percentage 52.5% (median), C.I. 7.89] in 15 domains for competent whilst 16 items [rating percentage 59.3% (median), C.I. 7.76] in 8 domains for expert nurses.

**Result**

A total of 114 sets of CBAT were delivered to nurses and 65 sets (57%) were returned in Dec. 2012. For novice group, 17% to 39% nurses expressed inadequate competency in 6 domains (42.9%) with 15 items (20.3%) out of the 74 items. Those items were belonged to triage decision making; handling of critical equipment; patient

restraint management; toxicology management; decision in prescribing investigation for emergent patients; major infection disease management, self-management upon stressful situation; & confident to build a good team. For competent group, 32% to 50% nurses expressed inadequacy in 6 domains (40%) with 17 items (26.6%) out of the 65 items. Those items were belonged to skills in mass casualty triage management; supervision on wound management; paediatric resuscitation; civil disaster management; chemical, biological, radiation, nuclear, & explosion (CBRNE) management; & pre-hospital EN management. For expert group, 12% to 13% nurses expressed inadequate competency in 2 domains (25%) with items (18.8%) out of the 16 items. Those items belonged to organ donation policy & CBRNE management. For novice group, it is suggested to conduct training workshops such as didactic lectures, stimulation-based trainings & algorithms posters focusing on those improvement areas with critical and reflective thinking. For the competent group, nurses expressed difficulties in handling civil disaster and CBRNE due to lack of chance to learn and practice. Simulation training is a useful for them to familiar with clinical situation. Structured team approach training augmented by simulation improves team performance. Nurses feel incompetent in handling some stressful situation, e.g. major incidents, paediatric resuscitation and dispatch of emergency response team. All such clinical situations need high critical thinking and accurate decision making ability with focused trainings. For the expert group, nurses lack of confidence in handling CBRNE and organ donation issue due to limited experience. Refresher lectures can be arranged to update their knowledge with operation guideline. Nurse competencies were assessed with their perceptions on their inadequacies on EN competencies were identified in the study. An on-going assessment with the CBAT with evaluation is paramount for management to develop training strategy to promote patient safety in the ED.