

Disaster preparedness for pediatric emergency nurses in British Columbia

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B.C.'s Children's Hospital (BCCH) is the only tertiary pediatric hospital and the sole accredited pediatric trauma centre in British Columbia (B.C.). When disaster occurs, BCCH becomes the major medical facility for pediatric patients and will likely receive adult patients as well. Nurses working in the emergency department (ED) at BCCH need to be specially trained and ready to provide emergency care and stabilization for unstable children during disasters or mass casualty events. Establishing a disaster nursing support system and regularly refreshing knowledge of disaster management are needed to ensure preparedness for any mass casualty events in non-disaster time.

A one-group, pre-post longitudinal efficacy study was designed to identify the specific learning needs of ED nurses at BCCH regarding disaster management, and to evaluate the effectiveness of a learner-focused education session. In 2006–2007, qualitative and quantitative (survey) data collection on ED nurses was conducted to identify knowledge gaps on this topic. An education session was then established based on the feedback from nurses in the department. This education session was incorporated into the 2007 in-service day for ED nurses. Introduction of an updated response plan on disaster, review of nursing duties in different treatment areas, introduction of the presentation folder content, “table-top case study discussion” on different treatment areas, and speaker presentations on nursing experiences responding to disaster and mass casualty events were included in the education session on disaster management.

A disaster information folder designed by the disaster committee at BCCH ED has been developed as a user-friendly guideline and given to ED nurses as a take-home written resource on responding to disaster. Description of nursing duties based on the pediatric CTAS system for different colour treatment areas were explained in this handy presentation folder. In addition, a checklist for the charge-nurse duties during code orange situation, the philosophy of patient care

during mass casualty events, a brief guideline on home preparedness for disaster, and “the emergency nurse preparedness when being called to work to respond on disaster” were included. This presentation folder can be of future use at BCCH, as well as other agencies throughout B.C. or elsewhere.

Quantitative data were obtained via the Pediatric Emergency Disaster—Competencies Questionnaire (PED-CQ) used for this study. Nurses' knowledge, skills, attitudes and confidence levels on responding to disaster had been assessed before and three times (immediately after the education session, one month and six months) after taking this education session. All data collection for the follow-up phases was completed in February 2008. Analysis of data is now in progress.

86.7% of emergency nurses attending this education session responded that the content was meeting their learning needs on disaster management. 62% of emergency nurses agreed that the presentation folder given out during the education session is the most helpful resource. Both the “table top exercises” (scenario discussion) (54.8%) and “identifying different colour treatment areas” (54.8%) were reported to be helpful education resources next to the presentation folder in preparing nurses to work in mass casualty events.

This study is funded by the Emergency Nurses Group of B.C.—National Emergency Nurses' Affiliation (NENA), the Chief of Nursing of C&W, and C&W Emergency Management department. As little literature, and essentially no Canadian studies have addressed this topic to emergency nurses (both on pediatric and adult nursing), we expect to add to the understanding of nurses' needs for disaster management knowledge, and provide models for both the design and the evaluation of such educational programs. This pioneer study will also provide information for future development of departmental and institutional nursing support systems to ensure preparedness for disasters. This is a fundamental aspect of preparing the hospital and community to react appropriately to crisis when it occurs, and to further improve the efficiency and quality of our emergency health care delivery systems for children and their families. 