Abstract for ISC 2011

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Title: The Need for Stroke Education Globally: Effectiveness of the Advanced Stroke Life Support Course for Prehospital and Hospital-based Healthcare Providers in Hong Kong.

**Introduction:** Comprehensive stroke education is necessary for rapid and effective diagnosis and treatment of stroke victims, especially in the prehospital and emergency department settings. Advanced Stroke Life Support (ASLS®) is a 1-day evidence-based stroke course consisting of 2 hours of lectures and 6 hours of interactive instruction. The participatory sessions include video-based cases where the learners diagnose and develop a management plan for patients with strokes or stroke mimics, skills sessions where learners evaluate standardized patients (portrayed by instructors) who simulate 5 major stroke syndromes (left hemisphere, right hemisphere, brainstem, cerebellum, and subarachnoid hemorrhage), and an interactive game as a course summary.

**Purpose:** To assess the efficacy of a one-day interactive stroke course for prehospital and hospital-based providers in Hong Kong.

**Methods:** We implemented the Advanced Stroke Life Support curriculum in the Hong Kong Hospital Authority through the Accident & Emergency Training Centre. The course was adapted minimally to ensure consistency with local practice and language variations. The instructors from Hong Kong initially participated in a train-the trainer program in the United States prior to implementing the course. A total of 65 nurses, paramedics and physicians participated in the course between November 23, 2009 and May 9, 2010. Outcomes were measured using previously validated 20-item written precourse and postcourse assessments.

**Results:** The precourse assessment mean score for all participants was 13.88 (69.4%) and the postcourse mean was 17.83 (89.2%) (p<.001). The mean improvement was 3.95 (SD 2.84, 95% C.I. 3.25-4.66) or 19.8%. Pretest scores were lowest for prehospital providers (12.78 (64%)), followed by nurses (14.27(71%)), and doctors (15.00(75%)). Prehospital providers had the greatest improvement in knowledge (5.61(27.4%)) (Pre 63.89%, Post 91.25%), followed by physicians (3.50(17.5%) (Pre75.0%, Post 92.5%), and nurses (3.31 (16.5%)) (Pre 71.5%, Post 88.0%).

**Conclusions:** Prehospital and Hospital-based emergency providers in Hong Kong significantly improved their knowledge of stroke diagnosis and management after participating in a 1-day stroke course.
Effectiveness of a one-day, case-based, hands-on simulation course for enhancing EMS provider knowledge in emergency airway assessment and management.

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Introduction

- Comprehensive stroke education is necessary for rapid and effective diagnosis and treatment of stroke victims, especially in the prehospital and emergency department settings.
- Advanced Stroke Life Support (ASLS®) is a 1-day evidence-based stroke course consisting of 2 hours of lectures and 6 hours of interactive instruction.
- The participatory sessions include video-based cases where the learners diagnose and develop a management plan for patients with strokes or stroke mimics, skills sessions where learners evaluate standardized patients (portrayed by instructors) and an interactive game as a course summary.
- 5 major stroke syndromes—left hemisphere, right hemisphere, brainstem, cerebellum, and subarachnoid hemorrhage are emphasized.

Methods

- Comprehensive stroke education is necessary for rapid and effective diagnosis and treatment of stroke victims, especially in the prehospital and emergency department settings.
- We implemented the Advanced Stroke Life Support curriculum in the Hong Kong Hospital Authority through the Accident & Emergency Training Centre.
- The course was adapted minimally to ensure consistency with local practice and language variations.
- The instructors from Hong Kong initially participated in a train-the-trainer program in the United States prior to implementing the course.
- A total of 65 nurses, paramedics and physicians participated in the training between November 23, 2009 and May 9, 2010.
- Outcomes were measured using previously validated 20-item written precourse and postcourse assessments.

Results

- The precourse assessment mean score for all participants was 13.88 (69.4%) and the postcourse mean was 17.83 (89.2%) (p<.001).
- The mean improvement was 3.95 [SD 2.84, 95% C.I. 3.25-4.66] or 19.8%.
- Pretest scores were lowest for prehospital providers [12.78 (63.8%), followed by nurses [14.27(71%)], and physicians [15.00 (75%)].
- Prehospital providers had the greatest improvement in knowledge [5.61 (27.4%)] [Pre 63.9%, Post 91.2%], followed by physicians [3.50 (17.5%)] [Pre 75.0%, Post 92.5%], and nurses [3.31 (16.5%)] [Pre 71.5%, Post 88.0%].
- ASLS continues to be taught in Hong Kong and has also expanded to Mexico, the United Kingdom, and Saudi Arabia in addition to the United States.

Conclusions

- Prehospital and Hospital-based emergency providers in Hong Kong significantly improved their knowledge of stroke diagnosis and management after participating in a 1-day stroke course.

Purpose

- To assess the efficacy of a one-day interactive stroke course for prehospital and hospital-based providers in Hong Kong.

Results by Discipline

- Pre-course and Post-course Written Assessment Scores for course participants by discipline.

Figure 1: A group of learners practice the Miami Emergency Neurologic Deficit (MEND) examination on a normal patient.

Figure 2: Learner group from the first Advanced Stroke Life Support Course in Hong Kong.

Figure 3: Pre and Postcourse Written Assessment Scores for course participants by discipline.