

NURSE-LED CARDIAC ARREST RESUSCITATION: JUST A QUESTION OF TIME

Dear Sir,

I read with interest the review article by Heng et al regarding the current position and proposed future role of Singapore nurses in the management of in-hospital cardiac arrests.⁽¹⁾ The authors should be commended for not only identifying the cultural practice barriers that hinder more widespread acquisition of advanced resuscitation skills but also for raising awareness of the potential role of nurses in both acute clinical management of resuscitation events and in training personnel.

I would like to share my experience with the teaching of advanced resuscitation skills to advanced nurse practitioners and intensive care unit (ICU) nurses. As part of the faculty on a well-established national course in the United Kingdom (UK), the Cardiac Advanced Life Support (CALS) course, we routinely teach ICU nurses (in addition to junior surgeons and anaesthesiologists) an array of advanced resuscitation skills for the management of perioperative cardiac arrest following heart surgery. Successful treatment of cardiac arrest after cardiac surgery is a multi-practitioner activity, with six key roles that should be allocated and rehearsed on a regular basis: in ventricular fibrillation, three sequential attempts at defibrillation (where immediately available) should precede external cardiac massage; in asystole or extreme bradycardia, pacing (where immediately available) should precede external cardiac massage; and where the above measures fail and in pulseless electrical activity, early re sternotomy is advocated.

While the aetiology and treatment of cardiac arrest in this select group is clearly quite different from the general patient population, CALS demonstrates that structured training and management of cardiac arrests can be taught effectively to non-doctors with objective improvements, such as a reduced time to return of spontaneous circulation (ROSC).⁽²⁾ Nurse practitioners and ICU nurses gain experience and competence with advanced skills such as chest re-opening, internal cardiac massage and internal defibrillation, in addition to the generic skills of airway management and effective external chest compressions. This has important implications for delivery of service in the UK, as the time constraints of the European Working Time Directive, with a maximum 48-hour work week, have resulted in fewer doctors (e.g. cardiac surgical registrars) being resident on-call and thus immediately available in an emergency. A similar scenario may arise in Singapore in the future. Hence, it is important to recognise and cultivate the potential within this large group of healthcare professionals. Our CALS experience suggests that even non-surgeons rapidly became confident and competent, and that it is possible to train nurses to carry out such life-saving interventions in a safe but expeditious manner.

Improvements in the broad-based resuscitation training of non-specialist, non-ICU nurses is necessary and highly beneficial, but will require a paradigm shift of attitudes within both the medical and nursing professions. This is necessary in order to create a supportive 'no-blame' environment, without which, nurses will be justifiably reticent to be proactive. Changes in healthcare work patterns globally may make this a necessity, as in the future, doctors may be less readily available to attend to ward emergencies such as a cardiac arrest.

Yours sincerely,

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REFERENCES

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2. Dunning J, Nandi J, Ariffin S, et al. The Cardiac Surgery Advanced Life Support Course (CALS): delivering significant improvements in emergency cardiothoracic care. *Ann Thorac Surg* 2006; 81:1767-72.

Editor's note: Heng et al have declined to respond to the above letter, but would like to thank Dr Sachithanandan for his comments on their article.