**Nurse-led manual defibrillation in Cardiothoracic surgical adult ICU**
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## Introduction
Defibrillation is the single most effective therapy with the ability of improving survival of sudden cardiac arrest if performed early within five minutes. Queen Mary Hospital is one of the three cardiothoracic surgery centres in Hong Kong. There are high chances of different arrhythmias occurred after surgeries. Surgeons are the in charge doctors of ICU and always work in operation theatre and out patient clinic because of the long queue of open heart surgery. Although most CTS ICU nurses got ACLS certificate and ECG course certificate, they can only attach pads, continue BLS and wait for surgeons who need to run out from OT when they once recognize the shockable rhythm. The time needed to first defibrillation is crucial to determine the survival rate, it is necessary to initiate a nurse led defibrillation program in order to shorten the time to first shock and increase the survival rate.

## Objectives
To enhance knowledge and skills in life support so as to attain self advancement professionally through involving evidence based practice. To implement the evidence-based practice of nurse-led manual defibrillation so that changes can be facilitated and quality of delivery system is assured. To evaluate the competency of nursing staff on manual defibrillation to manage clients with fatal rhythms

## Methodology
Due to high resignation rate and postpone of cardiac course, 15 CTS ICU nursing staffs with adult ICU experiences under 5 years as a pilot study. Nurse-led defibrillation program includes pre and post assessment on the knowledge and skills of defibrillation before and after the education session. Lectures were held in the time of one hour. Pre stimulated workshop was set up with a group of 3-4 nursing staff. During the workshop, all of them were rotated to be the in-charge of defibrillation role in different scenario. They should be able to identify different shockable rhythms happened in the specific case scenario and carry out optimal management. The time first recognized the rhythm to the time of first shock was recorded.

## Result

The average result of the pre test paper is 12.9/22 (58.5%) while the post test paper average result is 18.1/22 (82%). The mean time to first recognized rhythm in pre-stimulated workshop is 30-60s, but the mean time to first recognized rhythm after education sessions is 5-30s. Also, the time to first shock in pre-stimulated workshop is 8-10 minutes but after the education sessions the time to first shock is shortened, at 4-5 minutes only. They all passed the audit of defibrillation with all critical points were done at the end of the defibrillation program. The passing rate is 100%. All nursing staff agreed that the workshop has achieved its objectives and the content is practical in the workplace and the workshop can enhance their learning. Therefore, clinical workshop would be encouraged to newly joined staff for skill enhancement.