

## KNOWLEDGE ABOUT CARDIAC ADVANCE LIFE SUPPORT SURGERY

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### ABSTRACT

**Background:** Every year, over 250,000 patients have cardiac surgery and the incidence of cardiac arrest. When treated quickly, 17% to 79% of patients who experience cardiac arrest after cardiac surgery survive to discharge. Many of health care providers found this was disorganised and they would have performed better if they had well defined roles. **Objectives:** The aim of the study is to assess knowledge about cardiac advance life support surgery among nursing working. **Study Design:** Cross Sectional study. **Setting:** CICU and D1 department of AKU. **Period:** Jan 2018 to Jun 2018. **Material and methods:** The descriptive cross-sectional study done. The 15 nurses were selected as sample to assess knowledge. **Results:** Nurses were not aware about CALS but after getting education nurses were well aware about CALS. **Conclusion:** The study helps to make module of CALS for nurses taking care of patient underwent open heart surgery.

**Key words:** Cardiac advance life support, Cardiac arrest Nurses, Cardiac Surgery.

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### INTRODUCTION

Every year, over 250,000 patients have cardiac surgery and the incidence of cardiac arrest after cardiac surgery is around 0.7—2.9% (Mackay, Powell, Osgathorp, & Rozario, 2002) and has reduced in recent years. The cardiac arrest in post cardiac surgery patients may be due to reversible causes like ventricular fibrillation, major bleeding, cardiac tamponade, tension pneumothorax, and surgery specific complications. When treated quickly, 17% to 79% of patients who experience cardiac arrest after cardiac surgery survive to discharge (Herrmann, 2014). After cardiac surgery common complications are arrhythmias which contributes major source of morbidity and mortality. Atrial tachyarrhythmias are the most common postoperative heart rhythm disorder. Ventricular arrhythmias and Brady arrhythmias are less frequent (Herzog & Lynch, 2007).

The literature was obtained through several electronic databases such as Google scholar, pub med, American association of critical care nurses, research gate, and the period covered in the search extended from 2006 to 2017. Keywords of cardiac

AND surgery AND resuscitation was searched and it gave 102 hits and 5 of them were found relevant in terms of title abstract and other articles were found from the different sources total 11 articles were considered relevant to the initial search.

The clinical project placement area for my project was Cardiac Surgery Intensive Care Unit (CICU) and Cardio-pulmonary department (D1) from service line one. The service line one is the largest service line in Aga Khan University Hospital (AKUH) and it consists of Cardiology, Cardiothoracic Surgery (CTS) and Pulmonology departments. The targeted population of this population was the nurses of CICU and D1 who are working with cardiac surgery patients.

In 2003, in a hospital of United Kingdom, after four hours of cardiac surgery a patient had cardiac arrest and his chest was reopened three times and the patient was re-graft on his ICU bed. Many of health care providers found this was disorganised and they would have performed better if they had well defined roles. In response to this Cardiac Surgery Advance Life Support was developed, which was accepted as



the European Association of Cardiothoracic Surgery's official protocol and has been accepted by the European Resuscitation Council (ERC) and Society of Thoracic Surgeons (STS).

The aim of the study is to critically appraise the literature review in views of current theoretical literature review which justifies the need for the present study. The review of literature is divided into three parts. The first section present the cardiac surgery advanced life support course was designed with a sequence of protocols to manage cardiac arrest patient after cardiac surgery. The second section shares the effect of this course on the management cardiothoracic surgery patients who develop cardiac arrest after cardiac surgery, while the third section will discuss the outcomes of the Cardiac Surgery Advance Life support Course (CALs).

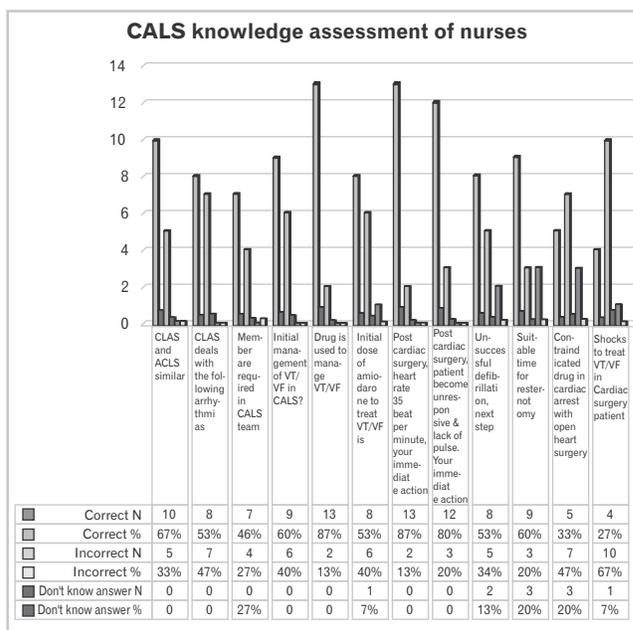
The final section will give the limitation and gap in the available literature. It's a three days course designed by European council in this course they designed series of protocol to manage cardiac surgery patient in an arrest situation.

**MATERIAL AND METHODS**

The cross sectional study designed was selected for identifies the knowledge of nurses of CICU and D1 the need assessment was done from nurses. The nurses who attain the sessions about CALs were selected. The multiple choice questionnaire was developed with the help of co-preceptor and course faculty, considering the important components of CALs. The participants were selected on the voluntary bases and asked to fill the questionnaire with written informed consent. Total 15 nurses were selected to complete the questionnaire. Data was analyzed by using SPSS 20. To address the result of the need assessment three main categories (knowledge about CALs, Knowledge about rhythms, and knowledge about arrhythmias) were developed. To assess the knowledge each question was analyzed as correct, incorrect, and don't know.

**RESULTS**

The below graph shows the percentage of CALs knowledge obtained in each item of knowledge. The result of the need assessment revealed that there is a need to develop a teaching module for nurses which includes all the important components about cardiac advance life support surgical. Different articles were searched from different data bases like PubMed, CINAHL and studied. Therefore, teaching module for the nurses who are working with cardiac surgery patients will developing after discussion with my preceptor. Furthermore, the nurses who are working with cardiac surgery patients a flyer will made according to the CALs guidelines.



Furthermore, the expert review was taken from the preceptor and course faculty simultaneously. In the next step of the feedback was incorporated and again discuss with the clinical preceptor and the module was finalized. In the last step, preceptor advised me to implement the module once the staffs of cardiac surgery get training from the experts.

**DISCUSSION**

The evaluation of the teaching module was not assessed, as the staff of cardiac surgery attained the orientation class about CALs and they will be trained from experts in future. As per advise of the

