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Nurses Compliance Regarding Caring of Children Undergoing Cardiac Surgeries

Thesis

Submitted to Partial Fulfillment of the Requirements for
Master Degree in Pediatric Nursing

By

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Signature /
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List of Abbreviations

Abbreviations	Full-term
3D	: Three –Dimensional
4D	: Four-Dimensional
ABGs	: Arterial Blood Gases
AP	: Action Potential
ASD	: Atrial Septum Defect
AV	: Atrio/Ventricular
AV Node	: Atrio- Ventral –Nodal
BMI	: Body Mass Index
CAMP	: Cyclic Adenosine Monophosphate
CHD	: Congenital Heart Diseases or Defect
CLABSI	: Central Line Assosiated Blood stream Infection.
CNS	: Central Nervous System
COA	: Coarctation Of Aorta
CPB	: CardioPulmonary Bypass
CRF	: Coronary Flow Reserve
CVP	: Central Venous Pressure
CVP	: Central Venous Preessure
DHCA	: Deep Hypothermic Cardiac Arrest
ECHO	: EchoCardiography
ECMO	: Extracorporeal Membrane Oxygenation
EDV	: End-Diastolic Volume
EF	: Ejection Fraction
ETT	: Endo Tracheal Tube
LA	: Left Atrium
LAD	: Left Anterior Descending Artery
LAP	: Left Atrial Pressure Pressure
LCA	: Left Coronary Arteries
LCOS	: Low Cardiac Output Syndrome
LCX	: Left Circumflex

LV	: Left Ventricle
LVH	: Left Ventricular Hypertrophy
NSAIDs	: Non-Steroidal Ant Inflammatory Drugs
PAP	: Pulmonary Artery Pressure
PCICU	: Pediatric Cardiac Intensive Care Unit
PDA	: Patent Ductus Arteriosus
PDA	: Posterior Descending Artery
PVR	: Pulmonary Vascular Resistance
RA	: Right Atrium
RCA	: Right Coronary Arteries
RV	: Right Ventricle
SA Node	: Sinus-Atrium Node
SV	: Stroke Volume
SVC	: superior Vena Cava
SVR	: Systemic Vascular Resistance
TAPVR	: Total Anomalies Pulmonary Venous Return
TEE	: Trans-Esophageal Echocardiography
TGA	: Transposition Of Greater Arteries
TOF	: Tetralogy Of Fallot
UK	: United Kingdom
VSD	: Ventricular Septum Defect

ABSTRACT

Background: Nurses' compliance regarding caring of children undergoing cardiac surgeries should clearly understand cardiac surgeries including cardiac structure, pathophysiology, major cardiac complications, post-operative nursing care, improve nurses competency during care of children and provided child family education to supported child care from admission till wellbeing. **Aim of the Study** was to assess the nurses' compliance regarding caring for children undergoing cardiac surgeries. **Design:** This study was a descriptive design. **Setting;** the study was conducted at the Pediatric Cardiac Intensive Care Unit (PCICU) of Cardiac Surgery and Cardio-Thorax Surgery Ward at Specialist Abou El-Reesh Children's Hospital Children's Hospital in Cairo University. **Subjects :** A purposive sample (50 nurses) selected from the previously mentioned settings. **Tools of data collection :** Included (I) structured questionnaire sheet to assess nurses' / characteristics and knowledge about cardiac surgeries (II) Observational checklists to assess nurses' compliance regarding care to children undergoing cardiac surgeries. **Results:** This study shows that more than three quarters of studied nurses was aging average 20-30 years old, more than half of them were males, more than two quarters of studied nurses were complied and competent during caring of children undergoing cardiac surgeries and more than three quarters of the studied nurses had satisfactory knowledge about caring of children undergoing cardiac surgeries. This study reveals that, there was a positive statistical correlation between total studied nurses' knowledge and compliance regarding caring of children undergoing cardiac surgeries ($r=.053$, $P=.01$) . **Conclusion:** The studied nurses had an appropriate compliance regarding care of children undergoing cardiac surgeries. **Recommendations:** Designing and implementing educational programs for nurses about caring for children undergoing cardiac surgeries and designing a standardized nursing competency to ensure nursing highly competent during care of children undergoing cardiac surgeries.

Keywords: Nurses' Compliance, Caring, Children, Cardiac Surgeries, PCICU.

Introduction

Cardiac surgery is surgery on the heart and great blood vessels. Frequently, it done to treat complications of ischemic heart disease, for example, correct congenital heart defects or treat valvular heart disease caused by various things including endocarditis and heart transplantation. Open heart surgery is any surgery in which the chest is opened and done on the heart muscle, valves, arteries, or other parts of the heart (such as the aorta). The term "open" means that the chest is "cut" open (**Feng et al., 2020**). The heart may or may not be open depending on the particular type of surgery. Open-heart surgery is a common medical procedure that can save lives and improve the quality of the heart. Heart surgery aimed at improving the functioning of a heart in children (**Abusaad et al., 2019**).

Open-heart surgery is when the surgeon uses a heart-lung bypass machine. An incision is made through the breastbone (sternum) while the child is under general anesthesia (**Kempny et al., 2017**).

Children's cardiac surgeries can define as another way to fix defects in the heart is to insert small tubes into an artery in the leg and pass them up to the heart. Only some heart defects can be repaired this way some heart defects need repair soon after birth. For others, it is better to wait months or years. Certain heart defects may not need to be repaired (**Worthington, 2015**).

Children who had cardiac surgeries should be closely monitored for complications such as dysrhythmias, mediastinal bleeding, cardiac tamponade, mediastinitis, and sternal dehiscence (**Molina, 2018**). Hemodynamic Monitoring is vital to the nurses clinical assessment of critically ill childrens,

supported post operative care and complex congenital cardiac defect repair for childrens undergoing cardiac surgery (**Hussain etal ., 2017**) .

The role of pediatric nurses is to provide information to children and families regarding the disease, its treatment, prognosis, and complication, Also, adjusting the child's emotional as well as physical reaction to illness and hospitalization. The nurse should become familiar with parent and teach them how to reassure without minimizing the danger of the defective surgery. The nurse should teach the parents how to deal with their cardiac children before and after the operation until the discharge from the hospital (**Wong, 2014; Brosig, Sood, and Butcher, 2017**).

Nursing compliance means respect laws, policies, procedure in caring , competent or commitment and dedication to meeting the health needs of all children undergoing cardiac surgery through direct care to promote, maintain , restore health in a various setting to individuals, families, and communities through nurse's satisfactory knowledge and practical skills (**Russell, 2017**).

Nurses Compliance regarding caring of children undergoing cardiac shouldbe clearly understand heart defects including structure, pathophysiology and major cardiac complications, common cardiac procedure and post-operative nursing care. This would make them deeply understand and provide better and holistic care to the children and their families effectively. Besides, principles and guidelines of nursing care should focus on children and family education during caring of children and family. Pediatric cardiac nurses should provide essential health information and instruct the parents to take care of their