UNIVERSITI TEKNOLOGI MARA

CASE STUDY ON THE EXPLORATION OF PEDIATRIC CARDIOPULMONARY RESUSCITATION AMONG INVOLVED TEAM MEMBERS IN PEDIATRIC INTENSIVE CARE UNIT INSTITUT JANTUNG NEGARA

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ABSTRACT

Background: Compared to adult cardiopulmonary resuscitation (CPR), there is a relative scarcity of high-quality research and evidence on pediatric CPR. This knowledge gap hinders the development of optimal guidelines and best practices for resuscitating children. **Objectives:** To explore current Pediatric Intensive Care Unit (PICU) CPR practices in PICU Institut Jantung Negara (IJN) and evaluate the Resuscitation Feedback Form currently in use in PICU IJN. **Method:** The research employs a qualitative approach, utilising a case study design as outlined by Yin (2014). The data collection process involves an interactive method. It employs in-depth interviews and reviews of the Resuscitation Feedback Form and patient medical records. Purposive sampling was applied to select two cases, case 1 of 6 informants and case 2 of 8 informants. The individuals chosen for the study comprised a cardiologist, an anaesthetist, and twelve nurses. The study involved individual, semi-structured interviews to explore resuscitation and evaluate the Resuscitation Feedback Form. The data was transcribed and entered into NVivo software to facilitate theme development. The transcripts were provided to 20% of the informants for face-to-face verification. Subsequently, a thematic analysis was conducted. **Findings:** The study yielded key findings regarding the enhancement of PICU CPR practices. These findings are categorized into four themes, namely routine procedures, resuscitation techniques, team dynamics, and individual contributions. The establishment of a cohesive team is crucial in facilitating the effectiveness of resuscitation. According to participants, the absence of confidence, skills and knowledge presents significant obstacles to effective PICU CPR. Resuscitation Feedback Form was reported to possess user convenience; however, some staff expressed concerns regarding the complexity of the form's arrangement during the completion process. In relation to the evaluation of the form, three suggestions were emphasized, enhancing team/online form, taking into account relevant considerations, and form evaluation findings. Inclusion of nursing assessment, investigations, patient status, and resuscitative pediatric drug dosages in the form is advised. **Conclusion:** The findings of this study indicate that the informants express overall satisfaction with the current practices of PICU CPR. However, the research also highlights the need for enhancements in various areas, including routine procedures, resuscitation techniques, as well as team dynamics and individual factors. Additionally, a proposal was put forth for a Resuscitation Feedback Form that is specifically tailored to the needs of pediatric patients. Furthermore, it was suggested that additional training be conducted on the resuscitation process to enhance the preparedness of the medical team. In subsequent research, it is recommended to evaluate the viability of implementing this form in wards by testing it across various hospitals.

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CHAPTER 1

INTRODUCTION

1.1 Research Background

As a nurse in Pediatric Intensive Care Unit (PICU), the researcher has encountered unsuccessful pediatric resuscitations, sparking a keen interest in investigating enhancements to pediatric cardiopulmonary resuscitation (CPR). Pediatric resuscitation, marked by a notable frequency, often results in high mortality rates and associated morbidities (Morgan et al., 2021). The foundation of modern CPR, developed in the late 1950s and early 1960s, aimed to provide artificial ventilation and perfusion to victims (Gabr, 2019). CPR, as a structured sequence, is designed to achieve the return of spontaneous circulation (ROSC) (Ujevich & Pozun, 2022). A study by Berg et al. (2016) showed that in the United States of America Pediatric Intensive Care Unit (PICU), 1.4% of mortality cases received CPR for one or more minutes and/or defibrillation. There is a growing concern in medical society on how actions around PICU CPR can be improved and to better capture the event in reporting documents post-resuscitation.

For the pediatric in-hospital cardiac arrest, much of them involves cardiac and respiratory causes (Jones et al., 2017). However, compared to the initial predictions, mortality was much lower among the children who were admitted to PICU post-cardiac arrest occurrences (Appiah et al., 2018). With current technology and knowledge advancement, pediatric CPR management needs to apply training in the hospital, using available facilities efficiently and building the best teamwork. Furthermore, the event managers are highly skilled individuals, for instance when pediatric CPR happens in PICU IJN, the attendees should be the cardiologists, anaesthetists, surgeons and pediatric specialized nurses. The strategies have evolved to include vast knowledge of chest compressions, pharmacology, airway management, defibrillation, physiologic monitoring of the patient, high-quality cardiopulmonary resuscitation, extracorporeal membrane oxygenation and planned systems of care (Geller & Abella, 2018).