American Journal of Nursing Research, 2015, Vol. 3, No. 1, 1-3
Available online at http://pubs.sciepub.com/ajnr/3/1/1

DOI:10.12691/ajnr-3-1-1

Ethical Issues about Children Cardiopulmonary Resuscitation

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Received December 29, 2014; Revised January 29, 2015; Accepted February 04, 2015

Abstract There are cases of cardiopulmonary resuscitation that include ethical issues. An ethical issue that health professionals confront is the moral situation in which the person has to decide what is proper to do based on their values and the legislation. If the victim is a child, the parents are the ones to make the decision for stop or not the resuscitation efforts. The physician can intervene in the decision making in the best interest of the child, though. The purpose of this article is to identify ethical issues about children resuscitation and stress the presence of parents during resuscitation. A literature review was conducted using the electronic databases PubMed and Google scholar. Exclusion criteria of articles were the language, except English. The paediatric resuscitation aims not only for the restoration of the fuctions but, also, a life with the lack of neurogenous malfactions. If such malfactions are present, CPR should stop. Another ethical dilemma is the presence of parents while the procedure is in progress. Usually, it is allowed and they are supervised for not interrupting the efforts and empathically informed by a member of the resuscitation team. A greater focus should be made on educating resuscitation. Only specialists have the right to perform CPR but unspecialized staff has to be educated, too. There is a great need for further research between medical and social sciences in order to give answers in special ethical issues about children resuscitation.

Keywords: *child, paediatric, resuscitation, CPR, ethics, issues*

Cite This Article: Maria Lavdaniti, Evangelos Bolis, and Greta Hotza, "Ethical Issues about Children Cardiopulmonary Resuscitation." *American Journal of Nursing Research*, vol. 3, no. 1 (2015): 1-3. doi: 10.12691/ajnr-3-1-1.

1. Introduction

Cardiopulmonary resuscitation (CPR) includes all the techniques and manoeuvres which are used for the recognition of respiratory and circulation failure and their restoration [1]. The long-term goal of CPR is to preserve life, to restore health, to relieve suffering and to limit disability. There are cases of resuscitation that conclude in ethics. An ethical issue that health professionals confront is the moral situation in which the person has to decide what is proper to do based on their values and the legislation [3]. For example, the CPR termination; do attempts for the resuscitation of the victim stop when the provider is exhausted or when the victim comes around? Sometimes, either the victims themselves, or their relatives or the legislation allow the termination of the CPR or even the lack of its application. Also, it is reported "when the baby is critically ill, and decisions need to be taken quickly, the medical complexities amplify the moral, legal, and psychological concern." [4].

The purpose of this article is to identify ethical issues about children resuscitation and stress the presence of parents during resuscitation.

2. Methodology

A literature review was conducted using the electronic databases PubMed and Google scholar. The following key words were entered: "ethical issues", "cardiopulmonary resuscitation", "parents" and a combination thereof. Exclusion criteria of articles were the language, except English.

3. Results

In this paper, we provide a review of the literature describing ethical issues related to resuscitation. We first present the literature on termination/lack of application of the CPR which is one of the most frequently mentioned areas in ethics. Next, we review approaches to presence of parents and announcing the news.

3.1. Termination/Lack of Application of the CPR

The CPR was developed in the 60's for patients with heart failure that were victims of drowning, electrocution etc. According to American Heart Association "The

American Heart Association started a program to acquaint physicians with close-chest cardiac resuscitation and became the forerunner of CPR training for the general public." [5] Nowadays, it is used in every case of heart failure. [6] When it comes to children, its success is aiming at a long-term survival with real meaning without the existence of any neurological problems, and not just the restoration of the automatic respiration and circulation. It is documented that its success in children varies between 5-33%, and this varies to type of resuscitation (out of hospital, prehospital emergency respone survival, in-hospital). Its results are more positive when the resuscitation takes place inside the facilities of the hospital rather than in places outside of it [7].

The purpose of the CPR is the avoidance of sudden death [8] and hence it begins when one starts manifesting signs of heart failure [9]. The problem with it relies in the children's expectation [8] whom the doctor does not always have the possibility to communicate and discuss with [10]. It should be underlined that the patient is always the one to make a decision. In cases of pediatric patients, the decision must be made by the guardian(s). Then, the doctor must contemplate what would be best for the child [11] and resort to the legislation where they must refer with every detail and the reason why therapy is of a vital meaning [9].

One controversial subject about the CPR refers to as when the therapist should stop. The CPR can be terminated when:

- There are signs of biological death.
- The rescuer has been exhausted or is at risk.
- There are victims that need immediate help and have more possibilities of surviving.
- There is the command of physical death.
- There have been 20 minutes of basic and specialized CPR and the victim has not managed to restore automatic circulation. However, in the case of a hypothermic child, a victim of sustained ventricular fibrillation or when the resuscitation team thinks it is right, the attempt to resuscitation can be continued.
- The victim has restored automatic circulation and respiratory function [9].

In delivery rooms resuscitation is mandatory. However, there are certain cases when the termination of the attempt for resuscitation is recommended. The approach of the parents and the discussion with them must be done with carefulness [8]. Those cases include:

- "Great prematurity" (<23 weeks of pregnancy), [11].
- Low birth weight (<400 g) [8].
- Congenital malformations, such as anencephaly [12].

However, it is recommended in neonates of >25 weeks of gestational age and in congenital malformations that can be fixed in the future [8]. According to Australian Resuscitation Council "resuscitation is not indicated, when gestation, birth weight, or congenital anomalies are associated with almost certain early death and an unacceptably high morbidity is likely among the rare survivors" [13].

The lack of application of the CPR also has a legal framework. The decision for the lack of the application of resuscitation (Do Not Attempt Resuscitation/ DNAR and Allow Natural Death/ AND) is precluded a) by scientific parameters and b) also legal and moral parameters [14]. The patient's personal opinion, which is also the most important, is included in the latter [10]. The scientific team is obligated to respect the patient's wish and what is more there is also the right for legal lack of consent to treatment [8]. DNAR and AND can be revoked at any time [9].

In the case of neonates and children, who cannot express their wishes, and those who can, do not have a legal status, the decision has to be made by the scientific team [8]. This is the point where the concern about who is in charge as to when the CPR can be terminated or even not applied at all arises. Usually, there are specific local treaties and protocols that define the person who is in charge for the making of this particular decision. In the cases outside of the facilities of the hospital, the rescuer is considered to be in charge, and is the one who makes that decision based on the legislation and usually after consulting a physician. Inside the hospital facilities, the person that has to make this decision is the doctor on call or the superior of the resuscitation team [9].

It is a medical fact that death occurs with brain death [11]. One reason for the continuation of the procedure of resuscitation is when donation of the organs will take place. The family must decide whether they wish to donate the organs after brain death has occurred or the valve in the case of heart death. The parents must be approached with sensibility and the phrase that is usually used is: "It will help other children." However, this procedure should not have an impact on their grief. Organ donation is not allowed when the victim has been a user of intravenous drugs, in metabolic disorders or in infections and cancer patients [9].

Furthermore there is issue of education [15]. Firstly, more research should be done in order for the actions for resuscitation to be improved, to create new ones and to exclude obsolete ones. Of course, that requires intensive research and there are also legal frameworks. Furthermore, the techniques for resuscitation are performed by specialized staff, but the unspecialized staff can be educated, too. On one hand, they are educated in neoplasms, but they should also practice in a real seminar. The body of a dead child can only be used under the parent's permission, while only certain actions can be performed on a living child under the permission of a superior [9]. Finally, the ethical principles of justice, benefice, respect to autonomy and nonmaleficence are present during every medical decision. [2]

3.2. The Presence of the Parents

Another dilemma that has concerned the experts is whether it is wise for the parents of the child to be in the room where the CPR should take place. Most of the parents wish to be present [17] so that they have an image of what is happening that will be closer to reality [9] Furthermore, they have the chance to say goodbye to their child, express their feelings [17] and that has been proved to be beneficial in their mourning process [9,15]. However, some parents that were present during the procedure and eventually lost their children have stated that they would have preferred to keep the image of their healthy child in memory [17].

If the presence of the parents has been accepted by both sides, a member of the team is in charge of describing and

giving information about every action that is taking place. Moreover, they watch them out so that the procedure will not be interrupted [9]. In case the parents interrupt the procedure or the rescuer thinks that their presence causes any kind of stress they are politely asked to leave the room. What is more, the actions for the resuscitation will be terminated when the superior of the team thinks it is right and not on the guardians' command [9]. Health prosesionals have conflicting opinions about presence of parents. Some of them believe that the presence of family have risks such as interfere with rescutation procedures and possibility of increased exposure to legal [2]. Some health professionals reported that parent presence affected their technical performance, therapeutic decision-making [18] and others argue that the reasons against parental presence were psychological trauma for the parents, risk of interference with medical management, and care team stress [19]. UK resuscitation guidelines suggest that parents and carers should be allowed to be present during a resuscitation attempt in hospital [20].

3.3. Announcing it to the Relatives

The process for the announcement of the news to the relatives must be followed that of the patient. Information should be given gradually and with clarity, as well as, with recognition of the emotional reactions of the family. More specifically, the process includes:

- The choice of an appropriate environment.
- Identification of the relatives and their relation to the victim.
- Informing with empathy that the child is "dead", using this word specifically.
- Encouraging of the parents to see and touch their child.
- In the case of sudden, unexplained death, the parents should be informed that the police will look into the case by a process of routine.
- Asking about their religious beliefs and expectations [9].

4. Conclusions

Ethical dilemmas occur quite often when performing CPR. In some cases they may mark the end of the resuscitation process or the lack of its application. DNAR/ AND orders are decisions of a mentally healthy victim and they can be reversed at any time they decide. In case the victim is a child, the guardian(s) is the one to make the decision. However the doctor, according to the law, may intervene if it is in the best interest of the patient. Various factors may be taken into account for the process of CPR to be considered over. Another case of ethical dilemma is the presence of parents at the performance of the CPR. Generally, it is allowed for the parents to be present when the resuscitation takes place, as more it is scientifically proven that helps them in the grieving process. A greater focus should be made on educating resuscitation. Only specialists have the right to perform CPR but unspecialized staff has to be educated, too. There is a great need for further research between medical and social sciences in order to give answers in special ethical issues about children resuscitation.

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