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Nurse's Role in the Modern Resuscitation Era

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ABSTRACT

Cardiopulmonary resuscitation (CPR) is a medical practice for all cardiac arrests except where a "do not resuscitate" (DNR) order has been given for a particular patient. Nurses are generally the first responders to a cardiac arrest and initiate basic life support while waiting for the advanced cardiac life support team to arrive. Throughout the years, as CPR guidelines are altered, the roles of the multidisciplinary team members are also subjective to change. Factors such as improvement in nursing education, increased needs for expert nurses due to the requirements of specialized fields of medicine, and an increase noted in the autonomy of the nursing role have led to a change in nurses' responsibilities during CPR. Some of these new roles include: the rapid response nurse, the initiation of external defibrillation, the involvement in CPR decision making, the understanding of the use of resuscitation drugs and the family support in the cases of witnessed resuscitation. Although changes have not been made in all health care settings, many hospitals are attempting to implement new strategies by giving to the nurses increased responsibilities and making them a more active member of the multidisciplinary CPR team.

KEY WORDS: *cardiac arrest, resuscitation, nurses' role, CPR, nursing role*

Cardiopulmonary resuscitation (CPR) consists of the treatments performed in an effort to restore a person's heartbeat¹. The caring profession is a complicated and multi-dimensional area, and therefore requires effective teamwork, in its attempt to accomplish its main and various goals.

The event of resuscitation is known as being an extremely stressful experience for health professionals². Resuscitation requires a skilled team with the appropriate team members³. During cardiopulmonary resuscitation, the main roles of the multidisciplinary team are held by the medical and nursing staff, as the rest offer assistance only when called on. Therefore, according to Meerebeau and Page⁴, it is essential for teams to show effective communication and professional competence.

Nurses are generally the first responders to a cardiac arrest and initiate basic life support while waiting for the advanced cardiac life support team to arrive⁵. This study's purpose is to outline the new roles that have been given to nurses in the modern resuscitation era.

For this review a literature review was conducted with databases Medline and CINAHL using the keywords "cardiac arrest, resuscitation, nurses' role, CPR, and nursing role".

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CHANGES IN ROLE

Cardiopulmonary resuscitation (CPR) is a medical practice for all cardiac arrests except where a "do not resuscitate" (DNR) order has been given for a particular patient⁶. However, although a cardiac arrest may occur at all units and wards in a hospital setting, they are most common in areas such as the Intensive Care Unit, the Accident and Emergency Department, and the Coronary Care Unit. Nurses that practice in the cardiac department are more frequently involved with CPR compared to other departments due to the relevance of the unit's interest. The nurse is the key to success of the entire system of coronary care⁷.

When sudden death impends, CPR is the final hope for survival, and involves external cardiac compression and mouth- to- mouth ventilation, which maintains circulation until normal circulation and ventilation has been restored through definitive therapy^{7,8}. The necessary skills for conducting CPR are taught throughout the nursing courses, both theoretically and practically. The fact that resuscitation skills quickly decay has resulted in the CCU staff in the U. K. being required biannual certification in Advanced Cardiac Life Support (ACLS) and annual certification in CPR⁷. The European Resuscitation Council (ERC) (1992) has produced guidelines concerning training in Basic Life Support (BLS) and Advanced Life Support (ALS). Besides training guidelines, the council has offered recommendations, including:

1. Training in BLS should be compulsory in all European medical and dental schools and nurse training institutions.
2. Hospitals within Europe should provide programmes to ensure that all staff involved in direct patient care receives compulsory training and retraining in CPR skills.

Throughout the years, as CPR guidelines are altered, the roles of the multidisciplinary team members are also subjective to change. Factors such as improvement in nursing education, increased needs for expert nurses due to the requirements of specialized fields of medicine, and an increase noted in the autonomy of the nursing role have led to a change in nurses' responsibilities during CPR. Therefore, the traditional roles of nurses during CPR which held them responsible for limited duties, such as preparing the drugs administered and monitoring the patients' vital signs, have evolved; hence the nurse has become a more active member of the multidisciplinary team.

MODERN NURSING ROLES

Although changes have not been made in all health care settings, many hospitals have been experimenting by attempting to implement new strategies. As the role of the

nurse continues to expand, the boundaries between what is considered to be medical care and what is deemed nursing care become less obvious⁹. Nurses have been given increased responsibilities that require both high standard knowledge, as well as skills. Among these new roles, this study mentions the five most widely used.

RAPID RESPONSE NURSE

The rapid response nurse was first introduced at the Ohio State University Medical Center, where the manager of the Emergency Department was asked to develop a team of nurses who could respond to crisis situations³.

Involving a rapid response nurse to the resuscitation team can help with trauma interventions and ensure the continued care of Emergency Department patients. Possessing critical care skills and critical thinking, the response nurse is beneficial to the trauma resuscitation, as well as the hospital as a whole³.

The basic job description is the same for any registered nurse, plus at least 2 years of critical care experience in a large intensive care unit setting. The role requires identification of nurses who possess the following qualities:

- Competencies for working on several different units
- A capacity to work independently
- Goal oriented
- Self- directed
- Able to identify and set priorities
- Assertive with a positive attitude
- Able to work well with the professional staff

Among the roles of the rapid response nurse besides responding to cardiac arrests and trauma activations, he/ she initiates difficult intravenous starts, troubleshoots peripherally inserted central catheter lines and other vascular access devices, assists with conscious sedations, and serves as a clinical recourse to staff and administration³. When trauma activation is called, the nurse can serve in multiple roles. These roles are dependent upon patient condition, staff availability, and intervention requirement during the resuscitation. Having this extra hand for everything, from running blood draws to the laboratory, setting up the rapid fluid equipment, ensuring the patient's family is accompanied to a quiet room, to even documenting patient care, can be essential in a cardiac arrest.

The use of rapid response nurses is a hot topic among healthcare agencies. The Ohio State University Medical Center is one that has set the lead for the positive use of these knowledgeable registered nurses. With almost 10 years of trial and tribulations, the rapid response nurse position continues to see the role become more defined and productive. Among other tasks, it provides a positive impact on patient care and staff morale, and is financially clever³.

USING EXTERNAL DEFIBRILLATORS

The Resuscitation Council (UK) recommends that doctors, nurses, medical students and student nurses should be trained to use automated external defibrillators (AEDs) to facilitate early defibrillation, and that AEDs should be available to all non-critical ward areas^{10,11}. The nursing position is reinforced by the Chief Nurse (UK) who, as part of the “NHS plan” to raise standards, recommends nurse defibrillation as a basic rather than an extended role¹².

Although the use of external defibrillators has been suggested and implemented in many hospitals, studies showing whether this practice leads to improved patient outcome are limited, and in conducted studies, sample sizes were small.

For nurses to initiate defibrillation there is clearly a need for a widespread change in philosophy as well as equipment¹³. Simply introducing AEDs may not be sufficient to improve survival. Nurses must accept defibrillation as a primary rather than extended role. The concept of nurse-initiated defibrillation is supported by many nurses¹⁴. Combining AED training with annual BLS training may facilitate the acceptance of defibrillation as a nursing role and assist in its wider dissemination¹³.

NURSES' INVOLVEMENT IN CPR DECISION MAKING

There are several factors that support the involvement of nurses in CPR decision making. As a result of lengthy stays, nurses spend a lot of time with many long-term care patients, and could be expected to have a good understanding of their values and beliefs¹⁵. Nurses are usually the first persons on a cardiac arrest scene, and must either initiate CPR or withhold it. In order to fulfill their role as patient advocates, nurses need to be informed about decisions that affect their patients. Due to the fact that they are infrequently consulted before the CPR decision making process, several studies have reported that nurses desire greater involvement in CPR decision making and that nurses believe they can offer a unique and worthwhile perspective¹⁵.

According to Godkin and Toth¹⁵, nurses could take a leading role in ensuring that relevant information about CPR is presented and that all patients have the opportunity to discuss their wishes. They state that incorporating discussions about CPR into the normal routine might diminish some of the discomfort health professional may experience when discussing death with patients.

UNDERSTANDING THE DRUGS USED DURING CARDIAC ARREST RESPONSE

During cardiac arrest the survival of the patient depends on a rapid response that provides high-quality treatment based on the latest guidelines. Administration of the correct drugs is an important aspect of this process and one in which nurses are taking an increasingly important role. In the modern resuscitation era nurses understand the use of drugs, can explain the rationale for their use, and they are aware of the dosages and of any significant problems and adverse effects likely to be encountered¹⁶.

NURSES AND WITNESSED RESUSCITATION

Boyd¹⁷ describes witnessed resuscitation as “the process of active medical resuscitation in the presence of family members”. In 1996, the Resuscitation Council of the United Kingdom supported the individual’s right to remain with their relatives following a sudden life-threatening event that required active resuscitation. Nurses, compared with physicians, are more open to witnessed resuscitation¹⁸. The issue of witnessed resuscitation is increasingly being discussed among health professionals. Every person involved in the resuscitation team has a personal opinion based on principles and experiences¹⁹.

Based on these opinions and experiences, there have been several proposals for initiating witnessed resuscitations. Rattrie²⁰ and Woning²¹ recommend the introduction of the role of a “family support nurse”. It would be the responsibility of this staff member to assess and prepare the family during and after resuscitation. Eichorn et al²² suggest that, first, the staff should decide if the family can cope with the experience and only then offer the option of entering the resuscitation room. Preparation for the experience would include giving information on the patient’s condition, discussion on what will be seen and heard, the patient’s appearance, the equipment used, and the procedures that will be undertaken. The family support nurse would remain with the family throughout the resuscitation, providing information and emotional support and not become involved in the resuscitation^{23, 24, 25}.

CONCLUSIONS

The above new roles mentioned are on a good experimental trail in several hospitals. Although they have not yet been implemented in the Hellenic health care setting, nurses are optimistic that their role during cardiopulmonary resuscitation is slowly but steadily improving. More nurses are interested

in continuing education and training, in increasing their knowledge and improving their skills. As a result, nurses that are working in departments such as Cardiology, Intensive Care Units and Accident and Emergency Departments where events of cardiac arrest are more common, are more involved in attending B- CPR seminars²⁶.

Finally, in the event of a cardiac arrest, nurses are perceived by the community to be competent and ready to perform effective CPR^{27, 28, 29}. Irrespective of their level, nurses have a professional responsibility to maintain competence in CPR through regular updates.

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