

## FULL RESUSCITATION OR NO RESUSCITATION ATTEMPT: AN ETHICAL ASPECT

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**Abstract:** Cardiopulmonary resuscitation (CPR) is an emergency medical intervention undertaken in an attempt to restore breathing and circulation after respiratory or cardio-respiratory arrest. However, the likelihood of recovery varies depending on individual circumstances. Globally, the percentage of people who survive after cardiopulmonary resuscitation is relatively low, and just predicting the outcome after cardiac arrest in a hospital or out-of-hospital environment is not an easy task for health professionals. Do Not Attempt Cardiopulmonary Resuscitation (DNACPR) exist to ensure the immediacy and clarity of instructions in the event of cardiac arrest. This order is issued at the request of the patient or based on clinical judgment, as the likelihood that the patient will survive CPR is low. Accordingly, guidelines and policies have been developed across countries that aim to provide ethical, evidence-based recommendations to maximize the benefits of life-sustaining treatments and respect the patient's rights.

**Key words:** Cardiopulmonary Resuscitation; Decision Making; Ethics, DNACPR; Resuscitation Orders; Invasive Care

### 1. INTRODUCTION

Current changes in medicine and the social context in which it is applied create a series of ethical challenges for clinicians. The rapid advancement in resuscitation science and intensive care offers increasing opportunities for treating patients, while the aging population and the rising prevalence of individuals with multiple comorbidities raises the question of how much benefit these treatments can bring. At the same time, there has been a shift from paternalistic care to patient-centered care, with a more informed population and an increasing focus on individual rights and values. Key ethical documents and guidelines have reflected and contributed to this change, and there is also significant literature on the application of key ethical principles in resuscitation medicine [1].

Cardiopulmonary resuscitation (CPR) was introduced in 1960, and the American Heart Association (AHA) approved it for clinical use in 1974. [2]. CPR represents an emergency procedure performed in an attempt to revive patients suffering from cardiac and/or respiratory arrest. It includes one or all of the following: repeated chest compressions; mouth-to-mouth ventilation or artificial breathing with the aid of an oropharyngeal tube; defibrillation; and the administration of injectable medications. However, in certain situations, providing CPR may increase the suffering of patients with severe, often fatal illnesses, who have no prospect of a reasonable quality of life, even if revived [3]. Therefore, the AHA has suggested that if CPR is futile for the patient, the decision to refrain from starting or to discontinue it is considered a moral act [2].

### 2. DECISIONS NOT TO INITIATE CARDIOPULMONARY RESUSCITATION

Decisions not to initiate cardiopulmonary resuscitation (Do Not Attempt Cardiopulmonary Resuscitation; DNACPR) were introduced to protect patients from invasive treatments that had little or no chance of success [4]. These decisions aim to protect patients from invasive treatments they have declined, which they consider futile or from treatments that do not align with their values and preferences [5]. While they represent an important mechanism for protecting patients from harm, they have assumed practical, legal, and emotional significance far beyond their intended scope [4]. Discussion around DNACPR with patients and their caregivers has been the subject of intense ethical and legal debate in recent years. Legal cases and national guidelines have attempted to clarify the best approach to DNACPR through discussions; however, there is little evidence on how to best approach it from the perspective of patients, families, or caregivers [6]. A comprehensive review in the National

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Health Service (NHS) revealed deficiencies in the consideration, discussion, and implementation of DNACPR decisions, as well as adverse consequences. The effects on patients and clinicians can be divided into three broad domains: futile or inappropriate attempts at CPR, delayed and difficult discussions regarding DNACPR decisions, and inappropriate withholding of other treatments [4].

An ethical challenge arises from the uncertainty about the potential benefits or harms that may arise in an individual case, particularly in situations where patients cannot communicate and their views on the potential benefits/harms of interventions are unknown. In the context of CPR, these ethically difficult decisions occur when considering the initiation of CPR measures, discontinuation of CPR, and limitations on life-sustaining treatment (LST) after the return of spontaneous circulation (ROSC) [1]. There are many reasons why patients, families, and caregivers may find it difficult to talk about death and dying, such as fear of loss, their mortality, burdening or upsetting friends and family, and denial. Secondly, there is documentation that healthcare professionals find initiating discussions with patients about DNACPR decisions complicated due to fears of causing discomfort, time constraints, and fears of complaints [6]. This should not prevent discussion and involve patients in shared decision-making or, as circumstances allow, providing information to the patient about the decision made and the reasons for it. The assumption of benefits in patient involvement in decision-making is very important. The mere discussion of dying and CPR should not be avoided with the thought that this way the patient will be spared suffering unless there is good reason to believe that such distress would harm them. Adults considered capable of decision-making have the right to refuse CPR, with or without stating the reasons for their decision. Additionally, decisions regarding CPR can be made after discussing with the patient the benefits and burdens that decision entails. In other cases, the decision not to initiate resuscitation measures is considered a decision made by the healthcare team. If the healthcare team has good reason to believe that the patient is dying due to advanced, irreversible disease or catastrophic event and that CPR will not restore heart and breathing function for a longer period, that is, if there are no realistic prospects for a successful outcome, CPR will not be offered or attempted [7].

The DNAR order has been scrutinized for decades and is comprehensively used in some societies; however, confronted with controversies, there are many differences among various societies regarding the impact, morality, legality, and proper medical guidelines of DNAR. Medical personnel consider a range of factors in making end-of-life decisions, such as: the probability of survival, patient desires, previous quality of life, and expected quality of life afterward. Religion is one of the most important factors influencing the decision-making process for DNAR orders. Many Muslims choose CPR without considering the poor prognosis of the illness in the hope that God will ultimately heal the patient. Religious and moral beliefs are the main reasons for the illegitimacy of DNAR orders in Middle Eastern countries [2].

Standardization in resuscitation presents a challenge regarding the objectivity and ethical integrity of the criteria applied to DNACPR/LST decisions. Utilitarian allocation of limited resources may be based on futility and/or differences in prognosis/costs of LST. Futility is defined as “the use of significant resources without reasonable hope that the patient will recover, i.e., enter a state of relative uncertainty or be interactive with their environment.” However, without quantifying significant, reasonable, relative uncertainty and interactive, beneficial treatment could be arbitrarily/unethically denied to vulnerable subgroups of the population, such as the elderly, individuals with disabilities, or those with chronic, hereditary diseases or genetic anomalies. Cultural, religious, legal, and socio-economic barriers would need to be overcome to implement harmonized policies that support approaches requiring resources to effectively protect patient autonomy [1].

According to the guidelines from the Indian Council of Medical Research (ICMR):

- DNAR should be applied to patients with progressive debilitating/unhealed/terminal illness, where CPR would be inappropriate, unfavorable, and, in the physician's best judgment, would likely extend patient suffering. In applying this principle, empathy is an integral part of the overall goals of medical treatment.
- DNAR differs from withdrawing or withholding other life-sustaining treatments and advanced directives that are outside the scope of this document.

Additionally, according to ICMR, physicians should initiate discussions with the patient/surrogate and thoroughly explain the patient's illness and prognosis, as well as the benefits and harms that CPR may cause in given circumstances, should a cardiac arrest or respiratory failure occur [3].

Patients, families, and caregivers prefer the discussion to be initiated by someone they trust, and desires for family involvement vary depending on the context. The timing of discussions should be individualized, although discussions during illness are often preferred. Research indicates that discussions held in acute settings are suboptimal. Furthermore, decisions about CPR should be part of a broader discussion about future care, and appropriate training of healthcare professionals in communication skills is considered highly important [6].

Evidence-based emergency medical standards and their related ethical considerations should be developed simultaneously to ensure high-quality care. However, as already mentioned, the interpretation of ethical principles in the context of resuscitation/end-of-life decision-making can vary across different countries and cultures for various reasons. Some of the relevant ethical principles include:

- **Autonomy:** respect for the right to self-determination;
- **Honesty:** accurate and transparent communication with the patient/family about the best evidence from research and clinical judgment, including uncertainties;
- **Beneficence:** choosing beneficial interventions for the patient after assessing the risk-benefit ratio;
- **Non-maleficence:** avoiding harm or doing the least possible harm while achieving beneficial outcomes;
- **Dignity:** including “being human,” “having control,” “relationship and belonging,” and “maintaining individual self”; in regard to resuscitation and post-resuscitation care, dignity means avoiding disproportionate interventions and “end-of-life” situations that are contrary to patient preferences;
- **Justice:** means fair and equal distribution of benefits, risks, and costs; it relates to equality of rights to healthcare and the legal obligation of healthcare professionals to adhere to appropriate care, burden sharing, and benefits [1].

The European Resuscitation Council (ERC) has given 5 key ethical messages regarding resuscitation in the guideline for 2021. (Figure 1) [5].

**ETHICS GL 2021**  
**5 TOP MESSAGES**

**1. ADVANCE CARE PLANS**

- Help patients and families achieve the outcomes which are important for them
- Allow clinicians and patients to participate in shared decision making
- Should integrate DNACPR decisions with emergency care treatment plans

**2. EDUCATE PATIENTS AND THE PUBLIC**

- What resuscitation involves and outcomes following resuscitation
- About their role in helping clinicians know about the outcomes which are important to them

**3. EDUCATE HEALTHCARE PROFESSIONALS**

- About the importance of advanced care planning
- What shared decision making involves
- How to communicate effectively with patients and their relatives when discussing advanced care plans

**4. WHEN TO START AND STOP RESUSCITATION**

- Use pre-defined criteria for withholding or terminating CPR
- Do not base decisions on isolated clinical signs or markers of poor prognosis
- Document reasons for resuscitation decisions

**5. RESEARCH**

- Involve patients and public during the design, conduct and interpretation of research
- Respect the dignity and privacy of research participants
- Follow national guidelines for conducting research in an emergency where the person lacks capacity

*Figure 1- Key ethical messages for resuscitation according to ERC guideline 2021.*

The education of healthcare professionals is a crucial factor in how DNACPR orders are perceived and used. Education about DNACPR orders influences medical students' attitudes towards DNACPR, while palliative care training can improve doctors' ability to discuss limited treatment options with patients (8). However, a literature review indicates that medical students' knowledge level is unsatisfactory, with a lack of specific courses in the curriculum being a potential main cause (9). In a study by Aggarwal and Khan (2018) conducted in two medical schools, DNACPR decision education in one school was integrated into ethics classes, primarily in theory, while the other school did not provide any education on this topic. They also report that neither school included a discussion of DNACPR in communication skills classes (10). Bastos TD et al (2024) similarly report in their research that participants reported education was only through theoretical instruction (11). Given the importance of this topic, medical schools should place greater curricular emphasis on educating students on how to deal with patient death. The education should be appropriate for the development and knowledge of students at different stages of their education. This will prevent potential violations of patient rights by students during their studies, and subsequently prepare future doctors to better discuss end-of-life issues with patients suffering from serious illnesses, including informing them about the end-of-life process, and discussing the patient's death with the family. This can improve patient-centered care (9,12,13).

### 3. CONCLUSION

Decision-making and implementation of DNACPR can be challenging because they depend on culture, context, politics, people and resources. Resuscitation decisions affect not only patients and their families but also healthcare professionals and organizations, triggering a barrage of emotions and consequences. Healthcare professionals and institutions must be aware of this problem when assessing and making decisions and policies that fall within the broader goals of patient care. Therefore, it is very important to follow the latest guidelines, acquire knowledge, and apply its implications in practice in order to provide qualitatively and quantitatively better care for the patient.

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