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Review Article

Ethical issues of do not resuscitate in cancer patients: A narrative review from a nursing perspective

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Abstract

This systematic review aims to examine the ethical issues of do not resuscitate order (DNR) in cancer patients from a nursing perspective. Keywords were obtained based on Medical Subject Headings with titles related to the topic of the article. The data was obtained by searching English keywords (cardiopulmonary resuscitation, cancer, dilemma, oncology) in the title and abstract of the PubMed, Scopus, and Web of Science databases without time limits to access published foreign studies. Also, to access published Persian studies, Iranian websites, including Scientific Information Database, Magiran, and Iranmedex scientific databases, were searched with equivalent Persian keywords. Also, based on the determined keywords, a free search was also conducted in the Google Scholar search engine. The study on the implementation of DNR orders by healthcare providers has been of interest to medical staff, patients, and their families in the past. The issue of choosing between life and death to reduce pain and suffering and the lack of facilities to treat patients in the last stages of the disease is one of the main reasons for making a DNR order, especially in cancer patients who are going through the last stages of their lives. In various studies, various aspects of the treatment staff's and patients' attitudes were examined, but the most attention is paid to factors such as the doctor's moral competence, the patient's independence, the quality of life, and adopting the right time for this order. In these studies, it has been shown that the DNR order is widely used in patients with advanced cancers. Therefore, managers and policymakers in the health field should provide a platform for training the medical care team, especially nurses, in the field of various aspects of the ethical competence of DNR and interaction with these patients and their families.

Keywords: Ethics, Nursing, Oncology Nursing, Cardiopulmonary Resuscitation, Review.

1 | Introduction

Cardiopulmonary resuscitation (CPR) was introduced in 1960 as the default treatment for patients with cardiac arrest, regardless of their injury or underlying disease [1]. Since then, it has been found that CPR is not necessarily beneficial for all patients, and even in some cases, it can increase the duration of illness, discomfort, and consumption of medical resources [2-5]. Considering that the success rate of CPR is usually low, it can be concluded that resuscitation is not useful for all patients and only prolongs the process of death in many patients [6].

Do not resuscitate order (DNR) means a joint and informed decision by the patient or the doctor about how to perform CPR [7]. This order was published for the first time in 1976 as the first order prohibiting treatment during cardio-respiratory arrest [8]. The DNR order includes avoiding basic CPR, chest compressions, with or without simultaneous ventilation, and advanced CPR, which includes (the use of shock devices and drugs) [9, 10]. The purpose of the DNR order for dying patients is actually to provide conditions for a comfortable death and avoid unnecessary care measures [11].

In cancer patients, the rate of survival and discharge from the hospital after CPR is low [12]. The quality of life at the discharge of patients who survive CPR is often reduced, and a significant percentage of them survive only a short time after discharge [13]. DNR decisions are made when the patient's resuscitation has a poor prognosis or the patient does not have a favorable quality of

life after CPR [14]. DNR, especially in oncology cases, always faces medical and ethical dilemmas. These ethical challenges include the lack of an official directive related to DNR, receiving non-standard care, participation or non-participation of the patient in decision-making, the right to self-determination and autonomy of patients, and determining the appropriate time to give this directive [6, 15, 16]. In addition, the lack of communication skills, fear of meeting the patient and family, lack of time, and fear of destroying the hope of patients by doctors, among the moral problems of this order have been reported [17, 18].

Nurses and doctors working in oncology departments are also facing many ethical challenges when facing the DNR decision. Other examples of ethical dilemmas in DNR decisions in the care of oncology patients are the following: 1- Disagreement within the treatment team about whether the patient should have a DNR order or not, 2- When the patient and family disagree about DNR, 3- Choosing between the autonomy and independence of the patient and the prognosis of the disease when implementing the DNR order, 4- When the patient and the patient's family do not know about the doctor's DNR decision and ask the nurse about how to make the decision [19]. A study showed that more than 60% of cancer patients with advanced stages or the final stage of the disease signed a DNR order [20]. Another study showed that less than 50% of cancer patients signed the DNR document and consented to this order [21].

A DNR order may mean that the patient does not want to be resuscitated, even if the physician's decision to perform CPR is justified [22]. However, in Asian cultures, family-oriented (and not patient-oriented) decisions prevail, so sometimes it limits the patient's autonomy [15]. Different cultures and religions have different views about death, which affects their attitude on this issue [23-25]. In the ideology of Islam, life is a sacred gift from God, and without a doubt, death happens by God's will [26]. However, in Islamic countries, legally, there is more emphasis on continuing advanced treatments, (27, 28) except in cases where three experienced doctors consider the patient's death to be unavoidable [24, 27-30]. Due to the importance of the issue and the existence of few studies in this regard, a review study was conducted to investigate the ethical issues of DNR in cancer patients from a nursing perspective.

2 | Methods

2.1 | Study registration and reporting

Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) criteria were used to perform this review [31]. It should be noted that the international prospective register of systematic reviews (PROSPERO) database does not yet list this study.

2.2 | Search strategy

This research is a narrative review. Keywords were obtained based on Medical Subject Headings with titles related to the topic of the article. The data was obtained by searching English keywords (cardiopulmonary resuscitation, cancer, dilemma, oncology) in the title and abstract of the PubMed, Scopus, and Web of Science databases without time limits to access published foreign studies. Also, to access published Persian studies, Iranian websites, including Scientific Information Database, Magiran, and Iranmedex scientific databases, were searched with equivalent Persian keywords. Also, based on the determined keywords, a free search was also conducted in the Google Scholar search engine.

2.3 | Inclusion and exclusion criteria

This narrative review looked at cross-sectional studies on the ethical issues of DNR in cancer patients from a nursing perspective that were written in both English and Persian and published in both languages. Case studies, conference proceedings, letters to the editor, experimental studies, and research with qualitative designs were not included.

2.4 | Study selection

766 articles related to the subject were found in databases, and 753 articles were removed by reading the entire article. Finally, 13 articles were studied and reviewed based on the inclusion criteria with the priority of clinical trials. Also, the findings were examined separately by two expert researchers in this field.

2.5 | Data extraction and quality assessment

The criteria for entering the study include descriptive-analytical studies, systematic review interventions, and meta-analysis, which deals with the ethical dilemmas of DNR in oncology patients from the beginning of the establishment of databases until the end of 2020 in both Farsi and English languages. Also, after review, studies with conditions such as non-Farsi and English language articles and articles where the full Persian or English text is not available will be excluded from the study. In this study, descriptive-analytical articles, systematic review interventions, and meta-analyses were examined.

3 | Results

As shown in Table 1, in this study, the ethical dilemmas of DNR orders in cancer patients have been investigated. The study on the implementation of DNR orders by healthcare providers has been of interest to medical staff, patients, and their families in the past. The issue of choosing between life and death to reduce pain and suffering and the lack of facilities to treat patients in the last stages of the disease is one of the main reasons for making a DNR order, especially in cancer patients who are going through the last stages of their lives. In various studies, various aspects of the treatment staff's and patients' attitudes were examined, but the most attention is paid to factors such as the doctor's moral competence, the patient's independence, the quality of life, and adopting the right time for this order.

Table 1. Basic characteristics of the included studies in this narrative review.

First Author/ year	Title	Aims of study	Type of study, research group, number of samples, and number of groups	Findings	Conclusion
Eliott & Olver, 2011 [34]	Dying cancer patients talk about physician and patient roles in DNR decision making	The aim is to analyze cancer patients in the weeks before death regarding the decision not to perform CPR and the role of the patient and physician regarding this decision.	In this study, structured interviews were conducted with 28 dying cancer patients, who were referred to the palliative or oncology clinics of a teaching hospital in Australia, and the data were analyzed.	The role in decision-making about CPR is a personal or medical matter, where the patient and the doctor, respectively, were identified as the appropriate people to make the decision.	Conflicts may arise when patients' and physicians' perceptions of the best decision differ.
Trivedi, 2013 [32]	Physician Perspectives on resuscitation status and DNR Order in elderly cancer patients	Evaluation of the DNR order registration process in elderly cancer patients and analysis of physicians' views on this issue.	Various articles and texts were reviewed to find relevant works that would help clinicians and especially young healthcare workers in dealing with the complexities of this topic.	Active training and information for young employees will help them better deal with the stress involved in this matter.	For better acceptance, DNR needs more communication and information.
Ahmed *et al.*, 2015 [35]	Perceptions and Preferences of Patients with terminal lung cancer and family caregivers about DNR	Patients with terminal lung cancer and their families are challenged and stressed by end-of-life discussions. DNR orders are an important part of such discussions.	Qualitative methods included content analysis and constant comparison techniques to identify, code, and categorize primary themes that emerged from the "aloud" responses.	Most patients were uncertain about identifying the most appropriate health care provider (HCP) to discuss DNR. While participants found the discussion of DNR distressing, patients were hopeful when faced with accepting the final diagnosis.	Most participants were open about their experiences with psychosocial support and emotional responses and offered suggestions for improving DNR discussions with HCPs.
Huang *et al.*, 2018 [33]	The disparity of end-of-life care in cancer patients with and without schizophrenia: a nationwide population-based cohort study	Estimation of DNR registration status before patient death in a cancer center of a large teaching hospital in China.	This study was a retrospective analysis. The analysis included a total of 365 patients.	DNR implementation rate was 80%. Only 2 patients signed DNR orders, while most DNR orders were signed by the patients' surrogates. The average time of signing the DNR order was 1 day before the patients died. Most DNR decisions are made in the last 3 days before death. When DNR orders are signed is related to the severity of the disease and how quickly the disease progresses.	The implementation of DNR orders for terminally ill cancer patients has become common in China in recent years. The decision to order a DNR is usually made by the patient's family when patients are critically ill.
Pettersson, Hedström, *et al.*, 2018 [36]	Ethical competence in DNR decisions–a	The purpose of this study was to define the concept of ethical competence to create or	Individual interviews were conducted with fifteen nurses and sixteen doctors.	To make correct ethical DNR decisions in oncology and hematology care, physicians and nurses	Physicians and nurses in this study demonstrated their ethical competence in DNR

First Author/ year	Title	Aims of study	Type of study, research group, number of samples, and number of groups	Findings	Conclusion
	qualitative study of Swedish physicians and nurses working in hematology and oncology care	participate in DNR and another objective was to examine the role of guides in the development of ethical competence in DNR decisions.		must develop appropriate virtues, and improve their knowledge of relevant clinical and ethical theories.	decisions about what to include and how to develop it.
Pettersson, Höglund, *et al.*, 2018 [14]	Perspectives on the DNR decision process: a survey of nurses and physicians in hematology and oncology	A survey of nurses and physicians on various aspects of the DNR decision-making process, the importance of this order, and how likely it is to occur.	A descriptive study was conducted using an internet search, including 132 nurses and 84 doctors working in hematology and oncology departments.	Almost half of the respondents reported that the patient was not likely to be involved in the DNR decision, and 21% found that informing patients of the DNR decision was unimportant.	Nurses and physicians should be able to openly discuss their different perspectives on DNR decisions so that they can develop a deeper understanding of decisions, especially when they disagree. They should also be aware that what they think is important is not always likely to happen.
Pettersson *et al.*, 2020 [22]	The ethics of DNR-decisions in oncology and hematology care: a qualitative study	Describe and explore what ethical reasoning is applied to DNR decisions in the care of hematology patients by physicians and nurses.	A qualitative, descriptive study based on 287 interviews in a questionnaire answered by 216 doctors and nurses working in 16 oncology and hematology departments in Sweden was used. The opinions of 89 participants were presented.	Participants applied ethical reasoning regarding DNR decisions. Expressions of caring ethics were found in the study. Global rules or guidelines were considered problematic. Regarding the importance of the topic, nurses largely emphasized the importance of discussing DNR situations, while physicians did not discuss DNR decisions too much and it was not an important topic for them.	This study showed that DNR decisions in oncology and hematology care cause ethical considerations. Important ethical values described by participants were avoiding harm and ensuring a peaceful and "natural" death with dignity for their dying patients. A preference for the phrase "allow natural death" to the traditional term "DNR" was found in the material.

4 | Discussion

DNR decisions are made when the patient's resuscitation has a poor prognosis or the patient does not have a favorable quality of life after CPR [14]. DNR, especially in oncology cases, always faces medical and ethical dilemmas. These ethical challenges include the lack of an official directive related to DNR, receiving non-standard care, participation or non-participation of the patient in decision-making, the right to self-determination and autonomy of patients, and determining the appropriate time to give this directive [6, 15]. In a qualitative study by Patterson et al., with the aim of the ethical competence of doctors and nurses working in hematology and oncology departments in DNR decisions. In this study, by interviewing 15 nurses and 16 doctors, some of the ethical problems of this order were discussed. Finally, it was concluded that to have ethical competence, doctors and nurses should improve their knowledge of ethical theories and relevant clinical guidelines. They also described how the workplace needs to create opportunities to interact and discuss ethics in end-of-life care in oncology and hematology to maintain a high level of contextual ethical competence.

In another study, Patterson et al. conducted on 132 nurses and 84 doctors in hematology and oncology departments, about different aspects and perspectives of the DNR decision-making process. The problems and obstacles of DNR decisions in this study include the doctor's unwillingness to cause worry and discomfort in the patient, destroying the hope of recovery, the risk of making a wrong decision, and whether the patient and the family should be informed of this decision or not. The findings of the research showed that almost half of the participants agree with patient participation in DNR decision-making, and 21% consider it unimportant to inform the patient. There were differences between the responses of nurses and doctors. Nurses choose the independence

and autonomy of patients in decision-making as the most important value, while doctors consider not harming the patient as more important [14].

Trivedi in 2013 evaluated the process of DNR orders in cancer patients and analyzed the views of doctors regarding this issue. In this research, he found that there is no clear guide for applying DNR orders in cancer patients. On the other hand, the rate of survival and prognosis of the disease may be a subjective finding and vary from doctor to doctor. The timing of a DNR is important because patients and relatives may need time to think and discuss the matter. However, most physicians reported that they do not discuss end-of-life options with patients who are terminally ill and in good general health and wait until treatment is available. When making a DNR decision, new nurses and doctors may be under a lot of stress and may not agree with this decision due to more interaction with the patient. Active justification and training of these people help them cope better with the stress caused by this process [32].

In a 2018 study by Huang et al., analyzing the records of patients who died of cancer, they found that only 2 patients signed the DNR order themselves and most of the orders were signed by the patient's relatives. Most of them do not abandon aggressive treatment until the disease progresses to a critical state and refuse to accept a DNR decision. It was also found that the traditional culture of society and the financial and political problems of governments for palliative care and the lack of specialists in this field are among the obstacles to the implementation of palliative care services. Informing the patient about the condition of the disease, and continuous education to the patient and family about palliative care can facilitate the decision to implement DNR and reduce unnecessary medical care [33].

Another study was conducted by Jacqueline et al. with the aim of the role of doctor and patient in the decision of DNR in dying cancer patients. In this research, an organized interview was conducted with 28 dying cancer patients and the data was analyzed. According to the findings, the DNR has first declared a personal matter and then a medical one. In the sense that CPR is an operation that the patient enjoys if he wishes. On the other hand, most of the patients considered the doctor as a rational, knowledgeable, and compassionate person and left the decision regarding DNR to them. The interaction and flexibility between the doctor and the patient facilitate decision-making about this issue [34].

By reviewing the above texts, it can be seen that there are challenging ethical dilemmas facing doctors and treatment staff in dealing with the DNR decision and its implementation. Also, factors such as training and previous experiences of employees are effective in their attitude towards DNR (31). All people who are in contact with patients with advanced cancers should be adequately trained in the various aspects of the ethical competence of DNR and interaction with these patients and their families, to act in the best way when faced with this order.

4.1 | Limitations

Considering that the available databases supported by the Iran are limited, it was not possible to obtain the full text of all articles. Therefore, in this study, access to articles whose full text was not available was removed.

4.2 | Implications for nursing managers and policymakers

According to the results of this review, nursing managers and policymakers should provide a platform for training the medical care team, especially nurses, in the field of various aspects of the ethical competence of DNR and interaction with these patients and their families.

4.3 | Recommendations for future research

For a more accurate conclusion, it is suggested that future studies look at other variables affecting DNR such as awareness, performance, and role of employees, and pay attention to factors such as society's culture, health policies of each country, religion, quality of life, and economic status.

5 | Conclusions

In these studies, it has been shown that the DNR order is widely used in patients with advanced cancers. Registering the order on time and properly is an important matter in this regard. The different conditions of patients and the subjective thoughts of doctors and nurses about the patient's clinical condition have made DNR a challenging order. On the other hand, in most cases, the DNR order is adopted when patients do not have the appropriate physical and mental conditions to discuss and make decisions about this issue. Considering the importance of this issue, it is necessary to provide a suitable platform for the training of all healthcare providers as well as cancer patients who are in the last stages of the disease, where they can freely talk about their concerns. Two-way interactions between the treatment staff and the patient help to solve these challenges and make the best decision at the best possible time. For a more accurate conclusion, it is necessary to pay attention to other effective variables such as awareness, performance, and role of employees and to pay attention to factors such as society culture, health policies of each country, religion, quality of life, and economic status.

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Authors' contributions

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Availability of data and materials

The datasets used during the current study are available from the corresponding author on request.

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