

DNR declaration – emergency medical system nurses' opinions

Research Article

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Abstract: Advance directive and other declarations of will made by patients in a case of mental illness still raise ethical and legal issues. In Poland there is no legal regulation, neither research about code of conduct in situation of do not attempt resuscitation. There are also not enough studies regarding Healthcare workers' opinion about DNAR declaration (Do Not Attempt Resuscitation). The study is aimed at finding out emergency medical system nurses opinion on the subject of enforcing do not attempt resuscitation in situation of circulatory and respiratory arrest. **Methods:** The research was conducted by means of the diagnostic survey method applying a self – constructed questionnaire. The study was carried out among 82 (100%) nurses, from September to December 2011. Obtained information were analyzed statistically, Chi-square of independence with assumed $p \leq 0.05$. level of significance was used for statistical analysis. **Results:** The study of the respondents' opinion shows that 67% Healthcare employees think that DNAR declaration should be obligatory in Poland. Contrary opinion has 7.3% of respondents. In their opinion the decision to refrain from resuscitating should be made by attending physician – 46.3% and medical board – 29.3%. Information enclosed within DNAR declaration, in most of respondents' opinion – 59.5%, should be only passed on in written form. **Conclusions:** Majority of respondents agree that patients have a right to refrain from resuscitating as a self – determination act. Respondents concur the introduction of DNAR declaration in Polish Healthcare system. In respondents' opinion that decision should be required in written form and an attending physician should decide about its implementation, what violates the existing rule. The execution of living will declaration raises ethical issues. Additionally, it also appears as public/social problem. The last stage of incurable disease is given as justifiable circumstances of DNAR.

Keywords: *Ethics of resuscitation • Withdrawing and withholding life-sustaining therapy • DNR declaration • Nurses*

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1. Introduction

In Europe, inhabited by approximately 730 million people, the incidence of cardiac arrest is estimated between 350 and 700 thousand of cases per year [1]. Due to cardiopulmonary resuscitation it is possible to restore life function of many patients. As history of medicine shows, various resuscitation techniques were discovered, forgotten and then again invoked in the medical practice. It turned out that resuscitation is an irreplaceable life-saving method; although in some cases it may end unsuccessfully [2]. The ethical dilemma concerned car-

diopulmonary resuscitation is the conflict between the principle of autonomy and the principle of beneficence. The legal aspect of this problem is the inconsistency between the patients' rights to decide for themselves and undertaking life-saving actions in case of the lack of patients' consent. The solution of this problem in the legal aspect, however not in the ethical one, may be the dissemination of patient's will during his lifetime, the so-called living will, which can include the patient's declaration concerning abandoning attempts of resuscitation (Do Not Resuscitate Declaration - DNR). However, the following issues such as the scope of the declaration,

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the period in which such a declaration would be valid (e.g. is a declaration made 15 years ago still valid?), the difficulties of predicting future circumstances that the statement relates to, and the clarity and intelligibility of the terms used, should be discussed. A patient's written declaration, apart from numerous flaws, has also many advantages. Firstly, it is a sign of respect for the patient autonomy, secondly it removes the responsibility from health care workers (doctors, nurses, paramedics) in controversial situations, thirdly it allows for rescue operations consistent with the patient's worldview regardless of their religion and fourthly, the existence of such a declaration amplifies the need for understanding modern medicine [3,4].

The aim of the research was to study the opinions of emergency medical system nurses on abandoning resuscitation in case of cardiac or respiratory arrest; the so-called DNR declaration.

2. Materials and methods

The study was conducted on 82 emergency medical system nurses working in outpatient and inpatient departments on the premises of Lublin city between September and December 2011. Emergency medical system has been operating in Poland since the 1st of January 2007. Its mission is to provide assistance to any person at risk of sudden health or life-threatening event. Respondents were matched on purpose. The criterion for selection was employment in an emergency medical system, the emergency department. The study was conducted via a diagnostic survey, using an author made questionnaire, which construction was preceded by the analysis of literature on the subject. The survey included two groups of questions. The first study group allowed to characterize demographics, and the second to receive feedback from nurses on the declaration of DNAR. The survey was anonymous.

The collected data were statistically analyzed using STATISTICA v 7.1. The dependency between variables was analyzed through the Chi-square test. Statistically significant result was $p \leq 0.05$.

The conducted study does not exhaust the issue of the DNR declaration and is treated as a pilot study.

3. Results

Comparison of respondents by gender, age, place of residence and length of service are presented in Table 1. Trying to determine the respondents' opinion on the subject of abandoning resuscitation in case of respiratory or

Table 1. Characteristics of the research group.

Sociodemographic data		N	%
Gender	Female	75	91.5
	Male	7	8.5
Age	from 24 to 34 years	35	42.7
	35 – 45	40	48.8
	above 46	7	8.5
Place of residence	Village	32	39
	city to 200.000	30	36.6
	city with more than 200.000	20	24.4
Work seniority	from 0 – 5 years	15	18.3
	6 – 10	22	26.8
	11 – 20	29	35.4
	21 – 30	15	18.3
	above 30	1	1.2

cardiac arrest, their knowledge on DNR declaration was also tested. It should be emphasized that only 9.8% of the respondents met with a case of DNR declaration possession in their medical experience. It was only among patients who were not Polish citizens. By analyzing data it turned out that 80.5% of the respondents knew what the abbreviation DNR stands for; however 75.6% of them did not know when DNR order should be used. In order to verify the knowledge of the respondents on the DNR declaration, a question concerning specific actions that should not be undertaken towards the patient who possess such a declaration was asked. As it turned out only one in four respondents knew the correct proceedings in the case when a patient possesses a valid DNR declaration. Most frequently, the respondents believed that a valid DNR declaration suggests withdrawal from all necessary medical rescue treatments (Table 2).

Table 2. Activities, which in the respondents opinion should not be taken in case of having possession of the DNAR declaration.

Activities:	N	%
Any medical interventions should not be taken	48	58.5
Only cardiopulmonary resuscitation should not be taken	21	25.6
All medical interventions with the exception of defibrillation should be taken	9	11
All medical interventions with the exception of pharmacological treatment should be taken	4	4.9

In reality, the decision of abandoning resuscitation means that in case of cardiac or respiratory arrest, according to the patients wish cardiopulmonary resuscitation should not be done. However, other forms of treatment such as ventilation, oxygen therapy, antibiotic therapy, fluid therapy, pharmacotherapy and especially analgesic and sedative treatment should be undertaken in accordance with contemporary medical standards [4].

Most of respondents 67% believes that the DNR declaration should also be in force in Poland, 7.3% of respondents believe otherwise and a considerable percentage of respondents (25.6%) have no opinion on the subject. At the same time, the majority of the respondents 69.5% believe that a physician has an obligation to undertake treatment even if it proved futile.

According to 78% of the respondents, the patient has the right to decide on withholding resuscitation in case of cardiac or respiratory arrest. Simultaneously, nearly 70% of respondents believe that residents of nursing homes and terminally ill patients should have the possibility of expressing their will in the form of the DNR declaration. 15.8% of the respondents are of a different view and 14.6% have no opinion on the subject. Information on the DNR declaration, according to majority of the respondents 59.5%, should be made in writing, while 20.7% of the respondents allow for both written and oral form (in fact both of the forms of transferring information are equally important and in force) [4]. When the respondents were asked about who should make the decision of withholding resuscitation of a patient with a signed DNR declaration they answered accordingly: the attending physician – 46.3%; medical referee – 29.3%; the physician with the longest work seniority – 19.5%. It should be noted that the respondents did not enumerate other members of the therapeutic team such as paramedics or nurses, who according to them could not on par with the physician decide on abandoning life saving actions in case of a valid DNR declaration.

In the study, the authors touched upon the issues associated with ethical, social, and medical concerns in case of withholding and withdrawing life-saving actions. For majority of the respondents this situation created mostly ethical problems – 76.8%. Social and medical problems were noticed by only 26.8% of the respondents (respondents could select more than one answer). Statistical analysis of the obtained data showed that withholding resuscitation is more frequently considered a social problem by men than by women ($p \leq 0.05$). Ethical and medical issues are not a statistically significant

matter for neither men nor women (Table 3). In addition, analyzing the age, seniority and place of residence of the respondents, no significant dependence was stated with any of the following problems placed in the questionnaire: ethical, social or medical.

Among situations where withholding resuscitation would be considered compatible with ethical standards, most respondents chose the final phase of an incurable illness and the patient's explicit objection (Table 4).

Table 4. Situations in which abandoning resuscitation would be considered compatible with ethical standards.

Situations:	N	%
final phase of an incurable illness	57	69.5
patient's explicit objection	21	25.6
chronic organ failure	13	15.8
patient's advanced age	4	4.9
no circumstances	10	12.2

4. Discussion

In the first half of the eighties of the last century, in the United States, there emerged an idea of withholding and withdrawing lifesaving activities in accordance with the patients' will. Despite criticism, this idea became recognized in the nineties not only by the medical community of the United States but also by that of many European countries [5-7].

The DNR declaration is used in 50-60% of patients dying for reasons other than sudden death caused by cardiac or respiratory arrest. In Italy, the frequency of DNR declarations reaches only 19% in contrast to Sweden (83%) or Switzerland where it reaches 86% [8,9]. In Poland, withholding and withdrawing life saving and life sustaining activities is most often associated with passive euthanasia rather than respecting the patients' autonomy and dignity. What is more, not undertaking resuscitation may lead to legal consequences. An ethical problem of withholding resuscitation is treated quite generally in the Polish Code of Medical Ethics (CME). The term persistent therapy and emergency

Table 3. Activities, which in the respondents opinion should not be taken in case of having possession of the DNAR declaration.

Gender	ETHICAL ISSUES				SOCIAL ISSUES				MEDICAL ISSUES			
	Yes		No		Yes		No		Yes		No	
	N	%	N	%	N	%	N	%	N	%	N	%
Women (N = 75)	58	77.3	17	22.7	18	24	57	76	19	35.3	56	74.7
Men (N = 7)	5	71.4	2	28.6	4	57.1	3	42.9	3	42.9	4	57.1
Statistics	χ^2 : 0.125396 df=1, p=0.72				χ^2 : 3.58244 df=1, p=0.05				χ^2 : 1.52546 df=1, p=0.46			

measures are vague in meaning and their interpretation may sometimes lead to different conclusions. What the health workers need are the precise criteria based on which it would be possible to decide on undertaking or withholding resuscitation [10].

The analysis of results concerning the acceptance of DNR declaration revealed that over 67% of the respondents would like to see such a declaration in force in the Polish health care system. At the same time, nearly 70% of the respondents believe that treatment should be undertaken even if its results turn out to be futile. These discrepancies may be indicative of the existing legal regulations, resulting in keeping safety measures. According to the Polish Criminal Code an offense can be committed both by taking action and by abandoning it. In contemporary times it is much safer for a doctor, nurse or paramedic to try to save the patient's life even if the patient signed a DNR declaration, because the physician can always justify his actions by the legal obligation to protect life and the fear that the patient could have changed his mind as to his own future, but did not manage to pass this information down (these are the same arguments that occur while saving somebody from a suicide attempt) [11].

According to the questioned respondents, the person to waive resuscitation should be the attending physician (46.3%). The opinion of the respondents differs significantly from what should be functioning in practice. In such cases the decision should be made by a committee e.g. the hospital ethical committee. The functioning of such committees is essential for at least two reasons. Firstly, they play an important role in the development of medical standards and regulations, and secondly they reduce the occurrence of errors arising from a subjective assessment of a situation [12]. In many European countries consulting decisions differs significantly mainly in the approach towards the patient. In Italy, DNR decision is consulted with a competent patient in only 10% of the cases. This represents only

a small percentage of cases in comparison with the Netherlands, where 84% of patients make the decision together with their physician [13,14].

The nature of the dilemmas concerning withholding resuscitation seems quite interesting. Most of the respondents believe that the living will of a patient above all entails ethical dilemma (76.8%). For the majority of the respondents (69.5%), the final phase of an incurable disease is a justification for withholding life-saving activities and is considered as consistent with applicable ethical standards. In addition, more often is DNR considered a social problem among men than women. Social studies revealed a heterogeneity of social views on artificial life support of the terminally ill patients, and thus indirectly on persistent therapy. Supporters of the cessation of artificial life support of the terminally ill (44%) only insignificantly outnumber those who believe that the patient's life should be sustained until the very end (39%). There are also many people who do not have a clearly defined point of view on the subject (17%) [15].

5. Conclusions

1. Majority of the surveyed nurses believes that patients have the right to decide on withholding resuscitation as an expression of self-determination, this mainly concerns patients of nursing homes and those terminally ill.
2. Respondents are for introducing the DNR declaration to the Polish health care system.
3. In the respondents' opinion, the decision on withholding resuscitation should be given in writing. And the person who should be responsible for the DNR order should be the attending physician, which is not consistent with the generally applicable rule.
4. Execution of the living will mostly rises ethical dilemmas. Among male respondents it is also a social problem. The most frequently provided circumstances which ethically justify DNR is the final stage of a terminal illness.

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Survey

We kindly ask you to answer the questions contained in the following anonymous survey, through which we want to hear your opinions on the declaration DNAR.

Please read the questions and mark an X selected answer.

1. Do you meet with the patient having a DNAR statements?
☐ yes
☐ no
2. If yes, who was the holder of the DNAR declaration
☐ Polish patient
☐ a foreigner patient
3. Do you know what does the DNAR shortcut means?
☐ yes
☐ no
4. Do you know what does the declaration of DNAR is?
☐ yes
☐ no
5. Having possession the patient's DNAR declaration means that:
☐ Any medical interventions should not be taken
☐ Only cardiopulmonary resuscitation should not be taken.
☐ All medical interventions with the exception of defibrillation should be taken
☐ All medical interventions with the exception of pharmacological treatment should be taken
6. Which form of treatment in the case of cardiac or respiratory arrest should be continued in accordance with the guidelines of the ERC, when patient is DNAR declaration owner?
☐ analgesic and sedative
☐ antibiotic
☐ fluid therapy
☐ oxygen therapy
☐ nutrition
☐ all of the above
☐ none of the above
7. Do you think the doctor is required to start treatment, which would prove to be futile?
☐ yes
☐ no
☐ I don't know
8. Do you think the patient should have the right to decide not to make cardiopulmonary resuscitation in the event of cardiac arrest or breathing?
☐ yes
☐ no
☐ I don't know
9. Do you think that in Poland, all residents of nursing homes for the elderly and the terminally ill should be able to express a declaration of intent?
☐ yes
☐ no
☐ I don't know
10. In what form should be given information about the use of DNAR statements?
☐ oral
☐ written
☐ oral and written
☐ other (specify)
☐ I don't know

11. *Who among hospital staff should decide not to take CPR - breathing?*

- ☐ *doctor with the most seniority,*
- ☐ *attending doctor,*
- ☐ *medical committee,*
- ☐ *other medical staff (paramedic, nurse)*
- ☐ *I don't know*

12. *Do you think that implementation of resuscitation is the problem?*

- ☐ *ethical*
- ☐ *social*
- ☐ *medical*

13. *Under what circumstances do you consider withdrawal from life support to comply with the ethical standards:*

- ☐ *final phase of an incurable illness,*
- ☐ *chronic organ failure,*
- ☐ *patient's advanced age,*
- ☐ *patient's explicit objection,*
- ☐ *no circumstances.*

14. *Do you think that in Poland should be legally valid declaration DNAR?*

- ☐ *yes*
- ☐ *no*
- ☐ *I don't know*

Sociodemographic data

1. *Gender*

- ☐ *Female*
- ☐ *Male*

2. *Age*

- ☐ *24 - 34*
- ☐ *35 - 45*
- ☐ *46 and more*

3. *Place of residence*

- ☐ *country*
- ☐ *City below 50000 inhabitants*
- ☐ *City between 50000 and 200000 inhabitants*
- ☐ *City between 200000 and 500000 inhabitants*
- ☐ *City between 500000 inhabitants*

4. *Work seniority*

- ☐ *below 5 years*
- ☐ *5 – 10 years*
- ☐ *11 – 20 years*
- ☐ *21 – 30 years*
- ☐ *above 30 years*

Thank you for completing the survey.