Informatics and Technology in Clinical Care and Public Health
J. Mantas et al. (Eds.)

doi:10.3233/SHTI210865

Healthcare Professionals' Perceptions and Opinions on "Do not Attempt Resuscitation" (DNAR) Order and Documentation

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Abstract. Insights on end-of-life care decisions, such as do not attempt resuscitation (DNAR), vary between institutions and individual health care professionals. At the era of electronic patient records (EPR), the information of DNAR order may still be recorded in multiple locations making it difficult to find and interpret. A link to a structured web-based questionnaire was sent to all physicians and nurses working in Tampere University Hospital special responsibility area covering a catchment area of 900 000 Finns. Perceptions on DNAR order and documentation was surveyed. In total 934 subjects responded, of which 727 (77%) were nurses and 219 (23%) physicians covering all specialties. We found substantial variation in DNAR order interpretation and documentation among all health care professionals possibly causing information breakdown and compromised end-of-life care.

Keywords. End-of-life decisions, DNAR documentation, electronic patient records

1. Introduction

A "do not attempt resuscitation" (DNAR) order means a process for deciding to withhold cardiopulmonary resuscitation (CPR). The main grounds for the decision are refusal of CPR by the patient with capacity, or known advance decision to refuse treatment, or when the burdens of CPR attempt are thought to outweigh the benefits [1]. Health-care professionals perceive challenges in DNAR order making and understanding DNAR policies [2]. Both nurses and physicians may interpret a DNAR order to mean that in addition to CPR, also other care, such as antibiotics or iv. fluids should be withheld [3-5]. Furthermore, physicians consider that they have lack of knowledge when to issue DNAR order and how patients and their relatives should be involved in the decision process [6]. Disagreement on codification and registration has also been reported [7,8]. Electronic patient records (EPR) have improved the quality of documentation and information management in general [9]. However, it still is possible to document orders, such as DNAR in various locations, increasing the risk of information break down. Here we present the data on how healthcare professionals document, find and interpret the

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DNAR order and what types of information management difficulties there may be in the DNAR process.

2. Methods

A link to a structured web-based questionnaire (webropol) was sent to all physicians and nurses working in Tampere University Hospital special responsibility area, which includes Pirkanmaa, Southern Ostbothnia and Kanta-Häme hospital districts covering a catchment area of ca. 900 000 inhabitants, which represents 16% of Finland's population. The survey included five background questions, 11 multiple-choice questions on DNAR order process and a possibility to give free comments. The results of the multiple choice questions are presented as percentages. Deductive content analysis was used to classify the comments on documentation of a DNAR order.

3. Results

A total of 952 health care professionals covering all medical specialties participated, of which 727 (77%) were nurses and 219 (23%) physicians. Sixty-seven percent were over 45 years of age and majority (87%) worked in shifts or on call. A marked proportion of the respondents considered that documentation (59%) and interpretation (57%) of DNAR order is problematic. Furthermore, 65% of the respondents felt that DNAR order making is far too often dismissed during office hours and left to the doctor on call. The results to the questions: Who can give the DNAR order, where DNAR order should be documented and what does DNAR exclude are presented in tables 1,2, and 3.

Table 1. who can give the DNAR order?

	N	%
Specialist alone without including patient or family in the decision making	188	19,81%
Specialist together with the patient and family	596	62,8%
Doctor in training without consulting a specialist	88	9,27%
Patient alone without consulting a doctor	11	1,16%
Cannot say/ don`t know	66	6,96%

Table 2. Where should DNAR order be documented

	N	%
In "risk information"	846	89,43%
Page of specialty where the patient is being treated	44	4,65%
Anesthesiology page	2	0,21%
In "orders"	19	2,01%
Somewhere else	35	3,7%

Table 3. What does DNAR order exclude?

	N	%
All resuscitation procedures	693	73,18%
Cardio-pulmonary resuscitation (CPR) only	316	33,37%
Treatment and follow up in intensive care unit (ICU)	433	45,72%
Treatment and follow up in STROKE-unit	97	10,24%
Treatment and follow up in cardiac care unit (CCU)	97	10,24%
Administration of intravenous (iv) fluids	14	1,48%
Administration of antibiotic treatments	14	1,48%
All active treatment	72	7,6%
All diagnostic electronic procedures	45	4,75%
Cannot say/ don`t know	26	2,75%

Health care professionals' feedback (n=465) focused on the difficulties in finding the DNAR order (65%), content variation of the DNAR order and lack of responsibility in documenting the order (28%). Respondents (5%) were also concerned about the information given to patients and next of kin**.**

4. Discussion

The European guidelines for resuscitation state that great differences between European countries exist regarding the practice and attitudes towards CPR [10]. According to our study there seems to be major variation also among Finnish health care professionals in understanding the content of DNAR order as well as who can make the order as well as should the patient and the family be included in the process. In Finland, there is no legislation concerning DNAR order, but according to law, all care related decisions such as DNAR order should be discussed with the patient or when the patient is incompetent, with the relatives. The national agency responsible for the supervision of the social and health care (Valvira), states that the DNAR order is a medical decision made by the physician responsible for the care of the patient. Furthermore, similarly as in Sweden, a patient cannot demand CPR if the physician considers it to be against patients benefit [6]. Despite this guidance, in our survey up to 63% of the health care professionals thought that the decision process of the DNAR order should involve the patient and/or relatives and only 20% that the decision should be made by a senior physician only. This was supported by the comments given by the respondents. In a Swedish study almost half of the nurses and physicians considered that patients would not be involved in the DNAR order decision [11].

According to Finnish National institute for Health, a DNAR order should be recorded in the "risk information" part of the EPR by a doctor. Majority (89.4%) of the respondents However, ten percent felt that the order should be recorded somewhere else, such as in "orders" or in, knew this multiple places. According to the comments given, the most frequent information breakdown problem was a missing DNAR order in "risk information".

Only one third of the respondents in our study correctly recognized that the DNAR order excludes CPR only. According to almost half of the respondents, care in the ICU

would be excluded as well. Similar confusion on the meaning of the DNAR order has been previously reported [3-5].

Despite current European and national guidelines, health care professionals consider making and documenting the DNAR order as problematic. Major opinion differences still include variation in the interpretation of the scope of the order and who should be included in the decision-making. Current EPRs allow variation in DNAR documentation process which may lead to uncertainty at the time when this critical information is needed. More precise guidelines as well as systematic education of DNAR order making and documentation already at the basic training level of health care professionals are sorely needed. Furthermore, the information technology experts and clinicians should collaborate in aiming to develop EPRs in a way that recording of critical information such as the DNAR order could be made only in a specific place and the information would be clearly visible.

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