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A Vital Decision about Life – Doctors' and Nurses' Attitudes to Current Procedures for DNR-orders at Swedish University Hospital

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Abstract Objective: Hospital physicians in Sweden most often decide do-not-resuscitate orders (DNR) without collaboration. Systematic pre-arrest indicators of cardiopulmonary resuscitation (CPR) do not exist. Therefore, new, and for the first time, national ethical guidelines on CPR have recently been published in Sweden. We aimed primarily to investigate if doctors and nurses knew about the guidelines and thereafter to gauge their attitudes concerning DNR. Methods: An anonymous questionnaire was conducted of 48 doctors and 45 nurses (n=93) at surgical, medical and geriatric clinics at Örebro University Hospital, Sweden. A response rate of 62% was achieved. The questionnaire contained 17 questions; four about background information and 13 questions about procedures concerning DNR-orders where responses "yes, always", "normally", "seldom", "no, never" and "don't know" were most often available. Respondents were also invited to leave explanatory remarks. Results: Eighty percent of doctors knew about the new ethical guidelines, in contrast to 42% of nurses. Twenty-seven percent of doctors discussed with patients DNR-orders "normally", though 31% did it "seldom". Whereas nurses did this either "seldom" (40%) or "never" (58%). Ninety-one percent of nurses were in favour of patient involvement in decision-making concerning DNR-orders. Conclusion: While a moderate level of knowledge of the ethical guidelines existed, especially in doctors, the present study highlights a possible discrepancy between the awareness of the guidelines with the prevailing hospital praxis and the general attitudes of respondents. The study questions to what extent the guidelines are in fact implemented. Greater involvement of nurses, other paramedic staff and patients may lead to improve in-hospital patient care. Further descriptive and qualitative studies would be useful to explore these issues.

Keywords Do Not Resuscitate Order (DNR), DNR Guidelines, Ethics, Physicians, Nurses

1. Introduction

Sweden has one of the oldest populations in the world and as this population grows ever older and larger, the latter years of life are characterised by increased morbidity and complex medical conditions. This results in an increased burden upon medical expertise and in many cases difficult ethical deliberations. A clear example of ethical deliberations from "everyday hospital work" is the decision whether to resuscitate a patient if the patient suddenly experiences asystole, a decision termed "Do Not Resuscitate" or a "DNR-order" [1].

Since its introduction in the 1960's, cardiopulmonary resuscitation (CPR), initially intended only for patients suffering asystole peroperatively, has become the standard treatment internationally for all patients experiencing cardiac arrest [2]. In later years, the treatment has been called into question as to its beneficence for all patient groups, though definitive criteria for exclusion from CPR treatment have been difficult to specify. Nevertheless, factors such as age of 75 years or more, metastatic malignancy and patients with a high level of functional dependency seem to have a high predicative value of CPR failure [3]. As yet, no patient in Sweden over the age of 90 years has been registered to have survived CPR [4].

Relating the present evidence about CPR to the patient is both a pedagogical and ethical challenge in particular when the risks of treatment seem considerable. New guidelines have therefore been published by the Swedish Medical Society in collaboration with the Swedish Resuscitation Council and the Swedish Society of Nursing, stipulating tenable ethical principles for not initiating CPR [5]. Currently in Sweden, and in most European countries, the application of DNR-orders is not regulated by law, as is the case in for example North America [2,6]. Until now, doctors have largely decided DNR-orders independently of, and without consideration to, the views of other registered staff members, such as nurses and physiotherapists, or indeed

without discussing the issue with the patient or the patient's relatives in order to obtain their views [6-9]. Nurses have in many cases a closer relationship with the patient in their daily care, where existential questions not uncommonly arise. There are, however, a limited number of studies exploring the actual role of nurses in establishing DNR-orders [10-12].

Surveys of physicians have demonstrated that they believe patients are not interested in discussing the possible necessity of CPR, though other studies clearly show that the majority – though not all – are willing to do so [7]. Cultural aspects preside as well; Swedish doctors are more conservative regarding CPR than their German or Russian counterparts [7,9,13,14]. Isolated decisions have contributed to a situation where women, elderly patients and patients with cognitive dysfunction more readily receive a DNR-order [1,6].

The new Swedish guidelines encourage the doctor in charge to base decisions on individualised assessments, while carefully considering the patient's current life situation, medical condition and prognosis. Decisions should be made in partnership with paramedical staff, the patient and the patient's relatives. The guidelines specify that there are three main reasons for refraining from CPR, namely:

1. The patient does not want CPR to be performed;
2. CPR is likely not to succeed because of the patient's medical condition;
3. CPR would not on the whole benefit the patient.

The aim of the study was to investigate if doctors and nurses were aware of the new ethical DNR guidelines and also in general to explore their attitudes concerning how these decisions are or indeed should be made.

2. Methods

An anonymous questionnaire was sent out to the departments of surgery, internal medicine and geriatrics at the University Hospital Örebro after the publication of the newly proposed DNR ethical guidelines for Sweden. The questionnaire was distributed either via respondents' pigeonholes or at departmental meetings during a period of a week. The response rate was 62% (93/150). Reasons for non-response revealed that a number of doctors were either on leave of absence or holiday, and "pressures of work" was also reported. The questionnaire contained 17 questions; four about background information and 12 questions about procedures concerning DNR-orders where responses "yes, always", "normally", "seldom", "no, never" and "don't know", or variants thereof, were available. A representative presentation of five of these questions is given in Table 2. In one additional question, respondents were asked why they did not discuss DNR-orders with patients; several alternatives were possible to choose and respondents were even free to write explanatory comments. In the survey, respondents are equally represented with 48 physicians and 45 nurses participating. Table 1 shows an overview of the characteristics of the respondents. Results are presented as frequencies and percentages.

Table 1. Characteristics of respondents participating in the survey.

		No. of participants (n=93)	Percentage
Gender	Female	59/93	63%
	Male	34/93	37%
Profession	Doctor	48	52%
	Female	21	23%
	Male	27	29%
	Nurse	45	48%
	Female	38	41%
	Male	7	7%
Age (yrs)	Doctors		
	21-40	25	27%
	41-65	23	25%
	Nurses		
	21-40	29	31%
	41-65	16	17%
Area of work*	Doctors		
	Internal medicine/Geriatrics	32	34%
	Surgery	13	14%
	Nurses		
	Internal medicine/Geriatrics	30	32%
	Surgery	13	14%

*Five respondents omitted to declare area of work.

Table 2. Praxis concerning DNR-orders by doctors and nurses with patients and relatives.

		Yes, always	Normally	Seldom	No, never	Don't know	No answer
Do you normally discuss the DNR order with the patient?	Doctor	1	13	31	3	0	0
	Nurse	0	0	18	26	0	1
Do you feel confident in this discussion with the patient?	Doctor	3	33	8	3	0	1
	Nurse	3	10	7	10	0	15
Do you normally discuss the DNR-order with the patient's relatives?	Doctor	5	18	25	0	0	0
	Nurse	0	4	27	13	0	1
Do you feel confident in this discussion with the patient's relatives?	Doctor	7	36	5	0	0	0
	Nurse	3	17	10	6	0	9
When DNR-order is decided, are the views of the whole medical team considered?	Doctor	5	27	9	4	3	0
	Nurse	0	20	13	6	3	3

3. Results

Most doctors knew about the new ethical guidelines (80%) as opposed to less than half of the nurses (42%). Asked if they followed the guidelines, more than half the doctors indicated that they did either to a high degree (19%; 9% of nurses) or at least partly (46%; 20% of nurses); the majority of nurses (60%) omitted to answer this question, which reciprocally matches the number of nurses that did not know about the guidelines. As Table 2 indicates, discussions with patients concerning DNR decisions on the whole seldom take place, with 13 doctors (27%) discussing it "normally" though 31 doctors (65%) discuss it "seldom"; nurses discussed the issue either "seldom" (40%) or "never" (58%). In comparison to nurses, a larger number of doctors felt comfortable in discussing the issue with patients "most often", though more nurses felt securer in discussing the issue with the patients' relatives.

Respondents were encouraged to choose from a variety of possibilities in order to illustrate reasons why they did not discuss the DNR-order with the patient. A congruence between doctors and nurses existed here, where both groups answered that "current medical condition" or "cognitive dysfunction" influenced their actions. A majority of nurses (58%) answered that discussing the DNR decision with patients is strictly a task for the doctor in charge. Doctors' comments highlighted the difficulties in communicating the content of the decision and their desire not to harm or cause unwarranted anxiety in the patient. Asked if an information brochure would be helpful in aiding discussions with patients and patient family members concerning DNR, 20 (42%) doctors answered "yes" while 25 (52%) answered "no". The majority of nurses (71%) were in agreement that brochures would be helpful, while 27% answered "no".

As Table 2 illustrates, doctors and nurses are divided in their perception of whose views are currently considered when DNR-orders are decided. Sixty-seven percent of doctors answered either that the views of the whole medical team were considered *always* alternatively *normally*, while 44% of nurses thought this to be the case and a remaining 42% of nurses answered that the views of the whole medical team were either regarded *seldom* or *never*. However, only a quarter of doctors (27%) thought this to be true. Figure 1 illustrates the respondents' views about who they think should be involved in deciding possible DNR-orders. All respondents, bar one doctor, were in agreement that a doctor should participate in the decision process. In addition, more nurses than doctors answered that the patient, and the patient's family, should also be involved (Figure 1).

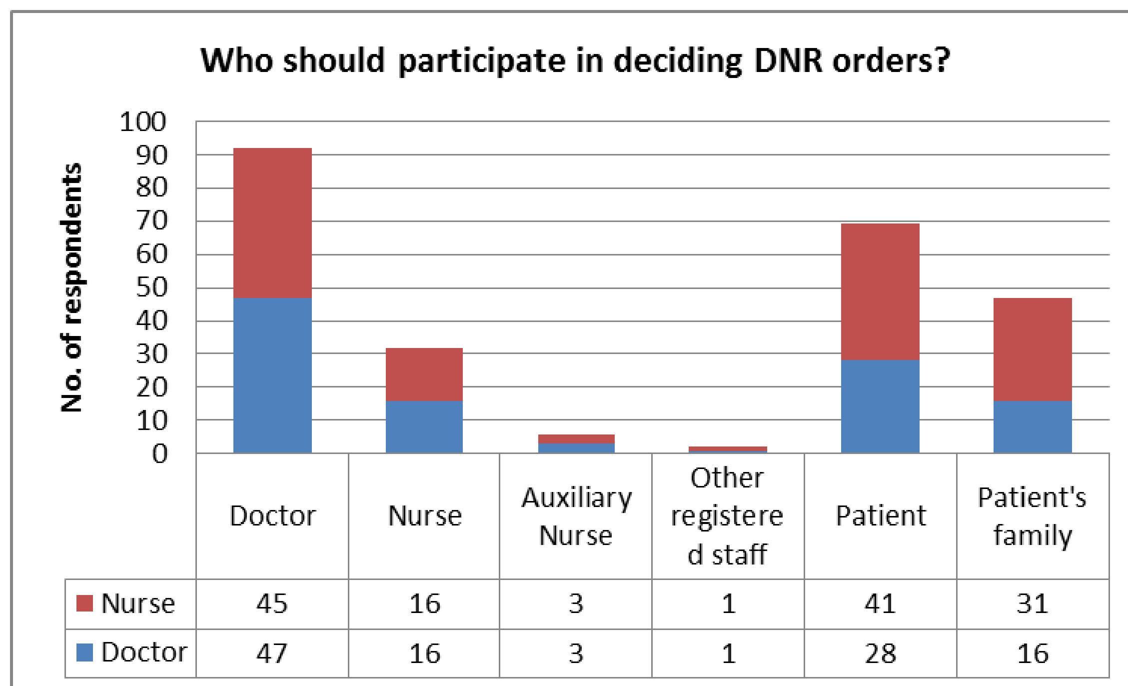

Figure 1. The personal views of the respondents concerning who they think should participate in the deciding of possible DNR orders. More than one alternative was possible.

4. Discussion

Our study shows that the majority of doctors are familiar with the newly published Swedish DNR ethical guidelines, though fewer than half of the participating nurses were aware of the guidelines, but this is to some degree correlated to age and thereby possibly experience (Table 1). As the survey shows, DNR-orders are decided solely by doctors without, to any great extent, consulting other members of the medical team or indeed the patient, which is why the present study questions to what extent the ethical guidelines are followed.

The present study has limitations. Though the response rate (62%) is on a par with other surveys, the limited number of respondents can make it difficult to make generalisations for other university hospitals in Sweden or indeed other contexts such as municipal nursing homes. In addition, questionnaires may not always contribute to a better understanding of how respondents think or how institutions actually function, though several respondents did leave written comments voluntarily trying to explicate their viewpoints.

In this study, the frequency of discussions with patients about DNR-orders is low, also recognised in other studies [16]. The reasons for this may be multiple. Firstly, Vandrevala et al. [1], among others, have illustrated the dilemmatic nature of decision-making about DNR-orders [3,16]. Secondly, reliable models for predicting CPR outcome do not exist, though a number of pre-arrest predictors have been identified [3]. In addition, success rates of CPR are generally low, influenced by a number of factors such as comorbidity, and even if the procedure is successful, the retention of current quality of life cannot be guaranteed [1,3-4]. It is incumbent upon the doctor to convey this precarious medical reasoning in the clinical situation which can be regarded as problematic [14].

Not wanting to cause unwarranted harm to the patient was a reason given by two doctors for not initiating a discussion about DNR. Löfmark and Nilstun [7,8] however have shown quite clearly that in-hospital patients in general, even the seriously ill, are interested in talking about these matters, a point highlighted in the guidelines [5]. Furthermore, if the doctor is to estimate whether potential CPR would be of benefit to the patient, it necessitates a reasonable knowledge of the patient, which includes his or her medical history, present life situation and attitudes [1,7-9]. Such discussions also enforce the governing ethical principle of patient autonomy [1,9]. A limited number of studies about patient attitudes about CPR and DNR-orders have been conducted and more studies would be useful, particularly in the elderly and the chronically ill.

According to this study, nurses on the whole do not engage in discussions with patients concerning DNR-orders. They even indicate less confidence in such discussions (Table 2). The results may illustrate that the nurses' positive attitude to the possibility of have written material about DNR-orders as a desire to improve their care and advocacy of the patient. Previous studies have drawn attention to that better patient care can be achieved if nurses are involved in discussions about DNR-orders [10-12]. Indeed, an ethical model of shared decision making among doctors and nurses and other paramedical staff, patients and even relatives to patients, could well lead to significant improvements of medical care of in-hospital patients [15]. More in-depth studies of these issues would be useful.

5. Conclusions

The results of this study suggest that a moderate level of awareness exists among medical staff, particularly doctors, regarding the current Swedish ethical guidelines about DNR-orders at Örebro University Hospital. The findings also underline discrepancies in the extent to which the guidelines currently are implemented in hospital praxis. We suggest that, in order to achieve improved medical care for a growing and complex aging population, it is increasingly important that discussions concerning DNR-orders are held both with in-hospital patients and paramedical staff, and possibly even with relatives.

Abbreviations

DNR: Do Not Resuscitate
CPR: Cardiopulmonary Resuscitation

Conflict of Interest

The authors have no conflicting commercial interests or financial relationships to disclose.

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