Impediments to Writing Do-Not-Resuscitate Orders

COL Arn H. Eliasson, MD; LTC Joseph M. Parker, MD; CPT Andrew F. Shorr, MD; LTC Katherine A. Babb, RN; LTC Roy Harris, RN; MAJ Barry A. Aaronson, MD; COL Margretta Diemer, MD

Background: Physicians are frequently unaware of their patients’ desires regarding end-of-life care. Consequently, opportunities to implement do-not-resuscitate (DNR) orders are often missed.

Objective: To determine the reasons attending physicians do not write DNR orders when patients face increased mortality.

Methods: Over 4 months, the medical records of all inpatients on the General Medicine Service were reviewed at the time of discharge to identify patients with conditions predicting increased mortality. These cases were presented to a 5-member panel who decided if a DNR order was indicated. Reasons for missing DNR orders were discussed with the attending physicians.

Results: Of 613 consecutive admissions, the panel identified 149 patients (24%) for whom DNR orders were indicated. In 88 (59%) of these, DNR orders were absent. The lack of a DNR order did not correlate with age ($P = .95$), sex ($P = .61$), or race ($P = .80$). The attending physicians’ explanations for not writing DNR orders in these 88 cases included the belief that the patient was not in imminent danger of death (n = 49 [56%]), the belief that the primary physician should discuss DNR issues (n = 43 [49%]), and the lack of an appropriate opportunity to discuss end-of-life issues (n = 38 [43%]). In 11 (12%) of the 88 cases, patients or their families did not accept the recommendation for a DNR order. No physicians expressed concerns regarding the morality of DNR orders, discomfort discussing end-of-life issues, or the threat of litigation as reasons for not writing a DNR order.

Conclusions: Limitations in the extent and depth of the physician-patient relationship appear to be the most frequent impediments to writing DNR orders in our institution.

Arch Intern Med. 1999;159:2213-2218

Since the 1960s, American hospitals have had standing orders for medical personnel to initiate cardiopulmonary resuscitation (CPR) and call for emergency resuscitation upon the discovery of a patient who is pulseless or apneic. This requirement made no exceptions for the patient’s underlying disease process or prognosis. During the 1970s, hospital regulations evolved to incorporate the moral principle of patient autonomy. Patients could request that CPR and other aggressive medical modalities not be initiated. Physicians would implement such a patient request by writing an order not to resuscitate the patient (a do-not-resuscitate [DNR] order). Furthermore, physicians have been exhorted to educate patients about the realities of their illnesses and to encourage acceptance of the physician’s recommendation to forego aggressive medical interventions at the end of life. These changes in practice appeal to common sense and are widely accepted. These principles have been clearly supported by consensus statements from major medical societies and other organizations and have been codified in the Patient Self-determination Act of 1990.

Despite increased attention to end-of-life issues in lay and medical publications, many patients undergo CPR even when it is unlikely to be successful. Physicians are often unaware of their patients’ desires concerning end-of-life care. The Study to Understand Prognoses and Preferences for Outcomes and Risks of Treatment (SUPPORT) showed that a minority (47%) of physicians knew their patients’ preferences regarding CPR. Furthermore, in the intervention phase of SUPPORT, when a specially trained nurse worked to elicit patient preferences and facilitate advance care planning and patient-physician communication, no improvement was seen in the physicians’ knowledge...
METHODS

All inpatient medical records at our tertiary care, university-affiliated hospital were reviewed by study investigators at the time of discharge from the general medicine wards. Demographic data were collected, including patient age, sex, race, and admitting diagnosis. The records were evaluated for diagnoses meriting DNR consideration using a predefined list of criteria (Table 1). The screening criteria were chosen in order to identify patients with increased likelihood of mortality and for whom end-of-life issues were therefore more likely to be important. If a patient’s medical record showed evidence of any of the conditions listed in Table 1, the case was classified as “DNR possibly warranted” or “screen positive.” All other cases were classified as “DNR not warranted” or “screen negative” and were not considered further.

Each screen-positive chart was reviewed by a study investigator for the collection of detailed information. A case synopsis was outlined, including history of present illness, medical history, therapeutic options, functional status, and presence of a living will or other advance directive.

The information from screen-positive charts was given to members of a multidisciplinary panel consisting of 3 members: 2 board-certified general internists, 2 experienced medical-surgical registered nurses, and 1 internal medicine house officer. Panel members were instructed to decide individually, blinded from each other’s opinions, if they believed a DNR order should be considered. Members were not allowed to abstain from giving an opinion, and a majority opinion determined whether or not a DNR order was reasonable to consider for each case. Panel members did not participate in the screening process. Cases found by the panel to have adequate justification for a DNR order were evaluated for a written DNR order. If no DNR order was written, the attending physician was interviewed to determine the factors that interfered with the writing of a DNR order. Figure 1 provides a diagram that outlines the methods.

In order to minimize the confounding effects of study interventions, attending physicians were interviewed at the end of their medicine ward rotations. All attending physicians were interviewed within 1 week of completing their responsibilities on the general medicine service. Each attending physician was given the case summaries that had been provided to the multidisciplinary panel. Physicians were asked to recall the reasons that a DNR order was not written for those patients for whom the panel felt a DNR order was appropriate. Physicians were provided a list of 10 possible reasons that a DNR order was not written. An 11th alternative was listed as “Other,” with room for elaboration. The physicians were asked to specify the rank of importance when more than 1 impediment was identified in a particular case. The 11 possible reasons are delineated in the “Results” section (Figure 2).

For the patients who were identified by the multidisciplinary panel as being likely to warrant a DNR order, statistical comparisons were made between 2 groups (summarized in Table 2). One group consisted of those patients for whom a DNR order was written (screen positive, DNR order written), and the second group consisted of those patients for whom a DNR order was not written (screen positive, no DNR order). Age was compared by t test, sex by Fisher exact test, and race by χ2 analysis. This study was reviewed and approved by the institution’s investigational review board.
to understand the impediments experienced by inpatient attending physicians will become more urgent with the increasing use of hospitalists.

**RESULTS**

Over a 4-month study period, 613 consecutive patient records were evaluated using the DNR screening tool. Mean age was 57 years and approximately 60% were men. Demographic data are presented in Table 2. The screening tool identified 184 (30%) of the 613 patients as possibly warranting a DNR order. Upon panel review, 149 cases (24% of total patients) were thought to be deserving of a DNR order. Medical record review showed that only 61 (41%) of the 149 cases had DNR orders written. Absence of a DNR order did not correlate with patient age ($P = .95$), sex ($P = .61$), or race ($P = .80$). A flow diagram depicting these results is presented in Figure 1.

During interviews, the attending physicians indicated which impediments hindered them from writing a DNR order. No attending physicians refused to participate in this study. The reasons given by attending physicians as impediments to writing DNR orders are expressed in Figure 2, which provides the rank order of the various impediments to writing DNR orders.

The 3 most common impediments to writing DNR orders were (1) the belief by the attending physician that the patient was unlikely to die during this hospital stay (49 [56%] of 88), (2) the belief that the primary physician should discuss DNR issues (43 [49%]), and (3) the lack of an appropriate opportunity to discuss end-of-life issues (38 [43%]). In 11 (12%) of the 88 cases, patients or their families did not accept the recommendation for a DNR order.

Three potential impediments were never cited by attending physicians: moral objections to DNR orders, discomfort discussing end-of-life issues, and medicolegal considerations. Seven (4%) of the 184 patients who were identified by the screening tool as having conditions potentially meriting a DNR order died during the hospital stay. Two of these patients did not receive a majority decision by the panel for a DNR order. Three patients were selected by the panel as meriting DNR orders, and their chart reviews confirmed that DNR orders were written. In only 2 instances of death, patients were selected by the panel for DNR orders, but no DNR orders were written.

**COMMENT**

Our study demonstrates that attending physicians at our institution reported a number of different impediments to implementing DNR orders even when such orders were deemed appropriate by our review system. The most commonly described impediment was that attending physicians felt it was unlikely that the patient would die during that hospital stay. At first glance, one could criticize the physicians for missing an opportunity to discuss important end-of-life issues, including patient values, patient preferences, and advance directives, as well as education of family members. However, practitioners who regularly counsel patients about terminal illness, its prognosis, and the relationship between the patients’ values and goals recognize that this endeavor requires a significant investment of time. “Doing advance directives is not so simple,” writes Emanuel.28 Academic attending physicians have many competing demands for their time and may conclude that concerns about efficiency militate against devoting the time required for end-of-life counseling if cardiopulmonary arrest is unlikely to occur. Our physicians seemed able to determine when to avoid this time investment. Of 613 consecutive patients, there were only 2 instances in which patients with conditions warranting a DNR order actually died without a DNR order written. Similarly, Layson et al2 summed up this reasoning for the End of Life Study Group by saying that healthier patients require no actual medical decisions to be made about life-sustaining treatments. On the other hand, when a patient is ill, discussions about life-support issues facilitate real and immediate medical deci-

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**Table 1. Medical Record Do-Not-Resuscitate (DNR) Screening Tool**

<table>
<thead>
<tr>
<th>Impediment</th>
<th>Number of Cases (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiac disease</td>
<td>33 [39%]</td>
</tr>
<tr>
<td>Pulmonary disease</td>
<td>72 [83%]</td>
</tr>
<tr>
<td>Oncology</td>
<td>13 [15%]</td>
</tr>
<tr>
<td>Neurology</td>
<td>30 [35%]</td>
</tr>
<tr>
<td>Gastrointestinal disease</td>
<td>28 [32%]</td>
</tr>
<tr>
<td>Oncology</td>
<td>13 [15%]</td>
</tr>
<tr>
<td>Rheumatology</td>
<td>28 [32%]</td>
</tr>
<tr>
<td>Infectious disease</td>
<td>12 [14%]</td>
</tr>
<tr>
<td>Diabetes End stage</td>
<td>24 [28%]</td>
</tr>
<tr>
<td>Amyloidosis</td>
<td>19 [22%]</td>
</tr>
<tr>
<td>Extreme old age (&gt;85 y)</td>
<td>58 [67%]</td>
</tr>
<tr>
<td>Expressed desires of patient (living will)</td>
<td>88 [100%]</td>
</tr>
</tbody>
</table>

*NYHA indicates New York Heart Association; COPD, chronic obstructive pulmonary disease; FEV<sub>1</sub>, forced expiratory volume in 1 second; IPF, idiopathic pulmonary fibrosis; ILD, interstitial lung disease; AIDS, acquired immune deficiency syndrome; ALS, amyotrophic lateral sclerosis; MS, multiple sclerosis; CVA, cerebrovascular accident; SLE, systemic lupus erythematosus; MCTD, mixed connective tissue disease; and PAN, polyarteritis nodosa.
ments. They write that “Most physicians are trained to make actual treatment decisions and not to discuss, in advance, the values, attitudes and wishes of patients for hypothetical treatments.”

The avoidance of time investment is perhaps more understandable in view of an existing long-term relationship between the patient and another practitioner, such as the primary care provider or a subspecialist who has been treating the patient. Physicians respect the prior relationship between patients and their other care providers, especially when it involves care for problems out of their area of expertise. It is proper for the inpatient attending physician to defer discussions about DNR orders to the physician identified by the patient as the main provider.

In our study, the second most frequently cited impediment to writing a DNR order, and the most frequent first choice of physicians surveyed, was the perception that the primary physician should be responsible for a DNR discussion. In turn, it is perhaps predictable that the third most frequent impediment to writing DNR orders was the attending physicians’ feeling that they did not know the patient well enough and had too little time to get to know the patient to feel comfortable writing a DNR order. Our data support the suggestion that it is time for advance planning discussions to be included in reimbursement systems. If reimbursement were provided for discussions to be included in reimbursement systems, the patient would naturally take on a higher priority than it currently enjoys.

Less frequently cited impediments to writing DNR orders included refusal of the patient or surrogate to accept the medical recommendation for a DNR order (12%, similar to previously reported data), compromise of the patient’s mental competence and the lack of a surrogate decision maker (8%), failure of the attending physician to consider a DNR order (8%), and disagreement with the panel’s decision to pursue a DNR order (6%). The low rate of disagreement between attending physicians and DNR panel decisions highlights the utility of our study’s reference point, the majority opinion of the panel. This model may be a useful tool for future investigations of end-of-life issues.

It is of interest that 3 possible impediments to writing DNR orders were never cited by our attending physicians as reasons for not writing a DNR order: the morality of DNR orders, discomfort discussing end-of-life issues, and the threat of litigation. There are authors who believe that each of these potential barriers plays a significant role as an impediment to writing the DNR order. For example, Hull believes that the statement of the American Thoracic Society Bioethics Task Force on withholding and withdrawing life-sustaining therapy endorses suicide, “as it enjoins physicians to help a patient forego life-support by providing drugs in quantities sufficient to relieve suffering even if they hasten death.” Staff physicians at our medical center are not required to pursue treatment plans that contradict their beliefs, and Hull’s moral stance is not supported by the practices of our attending physicians.

The End of Life Study Group, in a thorough literature review, points to data that suggest that up to 50% of...
physicians may be uncomfortable discussing resuscitation with patients. Our staff physicians were unwilling to admit discomfort with the discussion of DNR issues. However, such discomfort is difficult to measure, and the lack of recognition of this discomfort is understandable considering the broad acceptance or political correctness of the principle of patient autonomy.

The threat of litigation, never cited in our study as an impediment to writing DNR orders, may be factually low in our setting because an individual practitioner in the federal health care system is not personally vulnerable to claims. Nevertheless, lawsuits in the federal health care system are an important professional stigma and are reported to the National Practitioner Data Bank. In addition, lawsuits constitute a significant emotional burden on any conscientious medical practitioner, governmental or otherwise. Our data therefore suggest that legal considerations rarely play a role in failing to write DNR orders. Our findings do not agree with the cautionary note from the End of Life Study Group that points to potential “anxiety, guilt, potential conflict, and the ultimate fear of litigation” as impediments to discussions about life-sustaining treatments.

There are previous studies that evaluate potential impediments to writing DNR orders. Paris et al reported the results of a questionnaire study that listed 18 potential problems in obtaining a DNR order at Mount Sinai Medical Center in New York, NY. Sixty house physicians and 45 attending physicians responded that the major obstacles to obtaining a DNR order were the failure of attending physicians to discuss DNR issues with patients and situations involving surrogate decision makers. These findings are consistent with those of our study.

Morrison et al performed a questionnaire survey to determine the importance of 5 proposed barriers to physician usage of advance directives. They received a 60% response rate to their questionnaire survey of 460 internal medicine residents and attending physicians. In contrast to our findings, they reported that physicians’ lack of knowledge and erroneous beliefs about the appropriateness of DNR orders served as strong barriers to writing DNR orders. The authors go on to say that discomfort of attending physicians to discuss DNR issues with patients and situations involving surrogate decision makers. These findings are consistent with those of our study.

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Accepted for publication February 22, 1999.

The opinions or assertions contained herein are the private views of the authors and are not to be construed as official or as reflecting the views of the Department of the Army or the Department of Defense.

Corresponding author: COL Arn H. Eliasson, MD, Pulmonary and Critical Care Medicine Service, Walter Reed Army Medical Center, Washington, DC 20307-5001.

REFERENCES