

**Original Article**

# Regulatory and Educational Initiatives Fail to Promote Discussions Regarding End-of-Life Care

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**Abstract**

*We conducted an observational cohort study to determine if hospital-based, reinforcing regulatory and educational interventions could encourage physicians to discuss end-of-life (EOL) care with their patients. Specifically, we measured the effect of (1) administrative prompts to encourage discussions about EOL care and (2) a mandatory educational seminar focusing on EOL issues. Study subjects were patients consecutively admitted to the medicine service who faced an anticipated 3-year mortality rate of at least 50%. The main study endpoint was the frequency of documented EOL discussions between physicians and patients. In the inception cohort of 184 patients, physicians discussed EOL care with 64 patients (34.8%), and in the follow-up cohort of 121 patients, 41 individuals (33.9%) had documented discussions regarding EOL issues ( $P = 0.90$ ). Actual "Do Not Resuscitate" (DNR) orders were written for 53 patients (28.8%) in the inception cohort and for 33 persons (27.3%) in the follow-up cohort ( $P = 0.71$ ). We conclude that enhanced, mutually reinforcing regulatory and educational efforts focusing on EOL care proved ineffectual at promoting either discussions about EOL issues or the use of DNR orders. J Pain Symptom Manage 2000;19:168–173 © U.S. Cancer Pain Relief Committee, 2000.*

**Key Words**

*Do not resuscitate orders, end-of-life care, education, Patient Self Determination Act*

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**Introduction**

It is now recognized that outcomes from cardiopulmonary resuscitation (CPR) are poor.

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Fewer than 50% of patients who undergo CPR for an in-hospital arrest survive attempts at resuscitation.<sup>1,2</sup> Less than 10% of patients who undergo in-hospital CPR and survive are discharged neurologically intact.<sup>1,2</sup> Such poor outcomes have prompted physicians to reevaluate their use of CPR and have fostered interest in the use of "Do Not Resuscitate" (DNR) orders.

Recognition of the limited efficacy of CPR has coincided with an evolution in ethical thought focusing on patient autonomy. The belief that patients must be involved in decisions regarding

the application of life-sustaining therapies and end-of-life (EOL) care is now widely accepted in both the lay and professional communities.<sup>3,4</sup> This principle was formally codified by the U.S. Supreme Court in its 1990 *Cruzan* decision.

Decisions regarding EOL issues, generally, and DNR orders, specifically, are complex. Factors affecting these decisions include patient and physician preferences and depend in part on patient prognosis. Conversations about EOL issues also reflect the integrity of the physician-patient relationship. More importantly, patients are often unaware of their own desires regarding CPR.<sup>5</sup> Patients who do have strong preferences frequently do not discuss them with either their spouses or their physicians.<sup>6,7</sup> This situation prompted passage in 1990 of the Patient Self Determination Act (PSDA). This law, which generated excitement in policy and ethical circles, requires that patients be given formal notice of their rights to make medical decisions, and of the legally binding instruments (e.g., advance directives) which exist to enforce their preferences. Some have advocated further regulatory intervention in the physician-patient relationship by mandating the use of advance directives for Medicare patients.<sup>8</sup>

In addition to regulatory interventions, educational initiatives have been central to efforts to encourage patients and physicians to discuss life-sustaining interventions. Some have argued for greater attempts at physician education as a means for promoting discussions regarding EOL issues. In response, most medical schools now require course work in medical ethics that often centers on EOL issues, and at several institutions, house officers must take seminars regarding EOL care.<sup>9</sup> The American Board of Internal Medicine (ABIM) has launched an initiative to improve EOL care. The Board Certification Examination in Internal Medicine contains questions regarding the ethics of decision making at the EOL. The Residency Review Committee for internal medicine now requires that residency programs include topics on palliative care and EOL care in their curricula. The implicit belief underlying these efforts is that by raising consciousness among health care providers and by sensitizing them to issues of death and dying, they will be more likely to address these topics with their patients.<sup>10</sup>

Despite interest in regulatory and educational efforts, the results from the Study to Un-

derstand Prognoses and Preferences for Outcomes and Risk of Treatment (SUPPORT) demonstrate that complex interventions may not promote conversations about EOL and palliative care.<sup>11</sup> SUPPORT employed specially trained nurses to promote discussions regarding EOL care. These nurses provided physicians with information regarding patient prognosis and preferences and facilitated meetings between patients, their families, and their physicians. This endeavor, however, failed to increase the use of DNR orders. More specifically, more than 40% of physicians in the SUPPORT study did not know their patients' preferences regarding CPR and more than 30% of patients died having spent at least 10 days in an intensive care unit (ICU).

Given the failure of the SUPPORT intervention, attention has refocused on simpler education and regulatory efforts. Such attempts, including mandatory educational seminars for physicians and enhanced implementation of the PSDA, are not without cost. It is also unclear if such projects will have an impact on the degree to which physicians specifically address EOL care with their patients. To test the hypothesis that such measures would not affect the frequency with which physicians addressed EOL care, we conducted an observational study prior to and after several institutional initiatives designed to enhance communication between physicians and patients about EOL care.

## Methods

### *Study Population and Endpoints*

We examined two cohorts of consecutively admitted patients to the general medicine service of our hospital, a tertiary care, university-affiliated institution. The first cohort included patients admitted between February and May, 1995 while the second cohort comprised patients admitted between April and July, 1997.

To identify patients for whom EOL care was likely to be an issue, we concurrently screened the charts of all patients admitted during the study periods to identify those who faced at least a 50% 3-year mortality. Table 1 lists the screening criteria we employed. The screening tool was applied to information contained only in the history and physical examination section of the patient's hospital chart. The use of simi-

lar screening criteria has been previously validated by the SUPPORT investigators.<sup>11</sup>

The study's endpoints were: (1) documentation of a discussion between any physician member of the healthcare team (e.g., intern, resident, attending physician) and the patient about EOL care; and (2) the completion of a DNR order entered into the patient's medical record. EOL care was broadly defined and included but was not limited to: wishes regarding CPR, preferences about limitations of care (e.g., no transfer to an ICU, no endotracheal intubation), goals of palliative therapy, previously completed advance directives, and the role for hospice care. For patients who met one of our screening criteria, we reviewed the chart at time of discharge to determine if either endpoint was reached. Our study population included all patients admitted to the medicine service irrespective of source of admission.

*Table 1*  
**Screening Criteria**

Cardiac disease
Congestive heart failure: New York Heart Association (NYHA) Class III or IV
Valvular heart disease: NYHA Class III or IV and not an operative candidate
Pulmonary disease
Chronic obstructive pulmonary disease: Cor pulmonale, O <sub>2</sub> requiring, or forced expiratory volume in 1 second of less than 35% predicted
Interstitial lung disease: End-stage and not transplant candidate
Pulmonary hypertension: Unresponsive to treatment
Gastrointestinal disease
Cirrhosis: Child's Class III or IV
Infectious disease
Acquired immunodeficiency syndrome with poor performance status
Renal disease
Chronic renal failure: Not a candidate for further therapy
Oncologic disease
Cancer: Tumor unresponsive to therapy and patient with poor performance status
Hematologic: Myelo- or lymphoproliferative disorder no longer responsive to therapy
Neurologic disease
Dementia: Any cause, not capable of self-care
Progressive degenerative disease (e.g., multiple sclerosis): End-stage
Rheumatologic disease
Any disorder in terminal stage
Other disorders
Diabetes with advanced, multisystem complications
Extremely old age
Age > 85
Expressed desire of patient
Patient/surrogate brought wishes to physician's attention at time of admission

In addition to data regarding admitting diagnosis, DNR status, and discussions regarding EOL care, we also recorded demographic information such as patient age, gender, and race.

### *Interventions*

Data collection for the first cohort was done as a quality assurance project evaluating the use of DNR orders. Following completion, several institutional efforts were undertaken to promote communication between physicians and patients about EOL care. Our hospital organized a committee of physicians, nurses, lawyers, and administrators to develop a policy to promote discussions about EOL care. The goal of this group was to develop interventions that went beyond the simple requirements of the PSDA and the Joint Commission for the Accreditation of Healthcare Organizations.

As a result of the committee's recommendations, all patients admitted to our hospital after January 1996 have been presented with a form by an admissions clerk asking them to state if they have advance directives, and if not, asking if they would like information regarding the completion of advance directives. This form is prominently displayed in the patient's hospital record and is available for the physician and nursing staff to review. Additionally, the resident physician has been required to complete a database form on admission that focuses on admitting diagnosis, expected length of stay, and whether the patient had completed advance directives. If there are no completed advance directives, the form prompts the resident to determine whether he/she thought a DNR order was appropriate and whether he/she had discussed this topic with the patient. In short, a physician cannot admit a patient to the hospital without being reminded several times to address EOL care.

Concurrent with these changes, the hospital ethics committee began an educational initiative. In 1996, the committee began to offer a day-long seminar on EOL care. The seminar contains both didactic lectures and small group discussions, and is based on the "Decisions Near the End of Life" program developed by the Education Development Center, Inc. and the Hastings Center. The "Decisions Near the End of Life" program has been field tested and used in many hospitals across the country. It has been well received. The curricu-

lum focuses on advance directives, palliative care, withholding and withdrawing care, and means to improve communication between physicians and patients about EOL issues. Role-playing and discussions about actual cases are also employed. Ethics committee members serve as the staff for this course.

During 1996, this course was made a requirement for all members of the Department of Medicine. To ensure compliance, house officers were informed that the course was necessary for graduation from the residency program. During the study period, 115 of 167 physicians (interns, residents, fellows, staff) in the department completed the course. Of the house staff (interns and residents) compliance with the requirement was nearly universal (93%).

### Statistical Analysis

Differences in the use of DNR orders and in the documentation of discussions regarding EOL care between the two cohorts were analyzed using Fisher's exact test (two-tailed). Demographic variables were compared by means of Fisher's exact test, chi-square test, and the two-sample *t*-test. A *P* value < 0.05 was assumed to represent statistical significance. Data analysis was completed using the SPSS for Windows (v. 7.5, Chicago, IL). Ninety-five percent confidence intervals (95% CI) are reported where appropriate.

### Results

From February to May 1995, 613 patients consecutively admitted to the General Medicine service were evaluated using the screening tool and 184 patients were identified as facing an increased 3-year mortality. These patients comprised the inception cohort. The second cohort was derived from 250 consecutive admissions from April to June 1997 and included 121 individuals. Table 2 shows the demographic compositions of the two cohorts. The two cohorts were similar in terms of both demographic variables and admitting diagnoses. In the inception cohort of 184 patients, discussion regarding EOL care occurred in 64 (34.8%, 95% CI: 28.0–42.2%) cases and in the follow-up cohort of 121 patients, 41 (33.9%, 95% CI: 25.7–43.1%) documented discussions about EOL issues transpired. The 0.9% difference in the rate of EOL conversations was not

statistically significant (*P* = 0.90). DNR orders were written for 28.8% (95% CI: 22.5–36.0%) of persons in the inception cohort and for 27.3% (95% CI: 19.8–36.3%) of patients in the follow-up cohort (*P* = 0.71).

### Discussion

In this observational cohort study, combined administrative and educational interventions failed to promote EOL discussions between physicians and patients. These interventions also did not increase the use of DNR orders. Differences in the demographic composition or the clinical characteristics of the two cohorts do not explain the negligible impact of the two interventions. Our findings are particularly concerning because the cohorts comprised patients for whom EOL issues were likely to be of concern. Our screening tool was designed to identify subjects who faced an anticipated 50% 3-year mortality. The difference in the proportion of patients in each cohort who met our screening criteria (30.0% vs. 48.4%) likely reflects the impact of stricter, predetermined admission guidelines and the impact of utilization management in our institution.

Our results confirm the findings of others that the PSDA and regulations like it fail to increase discussions regarding EOL care. Lewis and Sulmasy noted that the implementation of the PSDA had little impact on patients' knowledge of advance directives.<sup>12</sup> Emanuel et al., in an effort to gauge the early impact of the PSDA, observed no increase in the number of patients who discussed EOL issues.<sup>13</sup> Only 13.6% of patients had DNR orders prior to the PSDA, whereas 17.1% of patients had a DNR order written after enactment of the PSDA (*P* = 0.25).<sup>13</sup> Finally, the SUPPORT investigators

Table 2  
Study Population<sup>a</sup>

	Cohort I ( <i>n</i> = 184)	Cohort II ( <i>n</i> = 121)
Age, years (mean ± standard deviation)	68.8 ± 11.9	67.8 ± 12.1
Gender (Female %)	35.9%	39.7%
Caucasian (%)	72.8%	67.8%
African American (%)	24.5%	28.9%
Other race (%)	2.7%	3.3%

<sup>a</sup>No significant difference was found in demographic variables between cohorts.

found that the PSDA did not promote medical record documentation of discussions about CPR, increase the actual use of DNR orders, or affect patient outcomes.<sup>11</sup> In the pre-PSDA arm of SUPPORT, 20% of patients had advance directives, whereas in the post-PSDA arm, 24% completed advance directives.<sup>14</sup> Each of these studies focused specifically on inpatients and was observational in design. In other words, these efforts simply described the impact of the PSDA rather than focusing on a combination of interventions.

In terms of educational efforts to sensitize physicians to EOL issues, our results stand in contrast to several previous studies. Sulmasy et al., in an analysis of patients with DNR orders, found that ethics education had a lasting effect on the way physicians cared for their patients.<sup>15</sup> Markson et al. evaluated the impact of an educational program employing both didactic lectures and role playing with simulated patients on the use of advance directives.<sup>16</sup> They concluded that such efforts can be successful. However, their study was small and the long-term effects of such interventions remain unknown. In distinction to the research cited above, these two studies included both inpatients and outpatients. Additionally, they examined more than just the use of DNR orders. These differences may explain why these two projects found educational initiatives effective whereas our study produced different results.

In another attempt to gauge the effects of educational endeavors, Sulmasy and Mink examined the use of DNR orders both before and after the introduction of a novel computer-based DNR order entry system.<sup>17</sup> During the introduction of this system, house officers were instructed annually about the importance of DNR orders. Although these investigators concluded that the computer, "in conjunction with an appropriate educational program," could facilitate discussions regarding EOL care, the use of DNR orders before and after their intervention failed to change (9.5% vs. 9.7%).<sup>17</sup> This study is more comparable to our efforts in that it focused specifically on EOL issues and DNR orders for hospitalized individuals.

Our study is limited by its observational nature. However a randomized trial directed at measuring the impact of the PSDA would presently be impossible to conduct because federal law requires that all patients be approached re-

garding advance directives. The impact of bias in our study is likely to be small. Our failure to find a significant change occurs in the setting of secular trends that would favor increasing use of advance directives (e.g., increased lay media attention on EOL issues, the publication of guidelines for pain control at EOL). Our concurrent data collection minimizes recall bias.

Other studies document that DNR orders are written rather infrequently in populations of even very seriously ill patients.<sup>11,13,17</sup> Previous reports suggest that the use of DNR orders ranges from 5% to 20% in such settings. In our inception cohort, DNR orders were written in over 25% of the cases examined. This relatively higher baseline usage of DNR orders may have limited our ability to detect a difference despite the institutional changes that transpired. A unique aspect of our study is the fact that we measured the impact of concurrent interventions which should have been mutually reinforcing. Prior studies have only measured the impact of either regulatory or education projects. The failure of our study to find an impact underscores the inadequacy of both of these efforts.

Why were neither administrative nor educational enterprises successful? First, the administrative changes, as implemented, require only minimal intervention on the part of providers. Actual execution of the PSDA at our hospital and at many other medical facilities has been relegated to an admissions clerk. As such, it is not surprising that the administrative efforts under study did not affect the behavior of physicians. Reliance predominantly on a clerk, however, is not the sole issue. For example, our hospital also created an admission process that prompted the resident physician to consider the issue of EOL care. Some institutions, on the other hand, have made nurses responsible for inquiring about advance directives. This approach, though, has also had minimal effect. Silverman et al. reported that reliance on nurses for execution of the PSDA minimally increased the use of advance directives.<sup>18</sup>

The educational seminar examined in the present study also proved ineffectual. Efforts to raise interest in and awareness of EOL care must address the preconceived notions of physicians and must also be followed by some form of reinforcement. An education program with repeated classes may prove to be a more useful tool at pro-

moting discussions about EOL care. Similarly, little is known about barriers physicians perceive to initiating conversations regarding DNR status. An educational intervention might be more effective if it were designed to address the specific concerns and difficulties physicians face when deciding whom to approach and when to approach patients about EOL care. Finally, the focus needs to shift from consciousness raising to teaching the skills physicians require to address EOL issues. Communication about EOL care needs to be seen as a medical skill which must be taught to medical students, house officers, and practicing physicians.

In summary, we found that a heightened institutional focus on EOL care, as demonstrated by the implementation of several administrative interventions and the use of mandatory educational seminars focused on death and dying, failed to increase the rate at which physicians discussed EOL issues with their patients.

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