



# Hospital Do-Not-Resuscitate Orders: Why They Have Failed and How to Fix Them

Jacqueline K. Yuen, MD<sup>1</sup>, M. Carrington Reid, MD, PhD<sup>1</sup>, and Michael D. Fetters, MD, MPH, MA<sup>2</sup>

<sup>1</sup>Division of Geriatrics and Gerontology, Weill Medical College, Cornell University, New York, NY, USA; <sup>2</sup>Department of Family Medicine, University of Michigan, Ann Arbor, MI, USA.

Do-not-resuscitate (DNR) orders have been in use in hospitals nationwide for over 20 years. Nonetheless, as currently implemented, they fail to adequately fulfill their two intended purposes—to support patient autonomy and to prevent non-beneficial interventions. These failures lead to serious consequences. Patients are deprived of the opportunity to make informed decisions regarding resuscitation, and CPR is performed on patients who would have wanted it withheld or are harmed by the procedure. This article highlights the persistent problems with today's use of inpatient DNR orders, i.e., DNR discussions do not occur frequently enough and occur too late in the course of patients' illnesses to allow their participation in resuscitation decisions. Furthermore, many physicians fail to provide adequate information to allow patients or surrogates to make informed decisions and inappropriately extrapolate DNR orders to limit other treatments. Because these failings are primarily due to systemic factors that result in deficient physician behaviors, we propose strategies to target these factors including changing the hospital culture, reforming hospital policies on DNR discussions, mandating provider communication skills training, and using financial incentives. These strategies could help overcome existing barriers to proper DNR discussions and align the use of DNR orders closer to their intended purposes of supporting patient self-determination and avoiding non-beneficial interventions at the end of life.

**KEY WORDS:** do-not-resuscitate orders; informed consent; end-of-life care.

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## INTRODUCTION

In 1960, Kouwenhoven and colleagues first introduced closed-chest cardiac massage as an effective means of resuscitating victims of cardiac arrest.<sup>1</sup> Soon after, the practice known as cardiopulmonary resuscitation (CPR) became a routine emer-

gency procedure performed by any trained provider with a presumption of patient consent to the procedure. Beginning in the 1980s, however, studies showed that the average survival rate to hospital discharge for all patients undergoing CPR in the US was only 10–15%.<sup>2–4</sup> This rate has not measurably improved over the last 20 years.<sup>5–9</sup> For patients with certain diagnoses (e.g., metastatic cancers), survival rates are even lower.<sup>2,4,7,10,11</sup> Furthermore, patients who were successfully resuscitated often undergo aggressive treatment in the intensive care unit and suffer complications including rib fractures, permanent neurological deficits, and impaired functional status.<sup>4,12,13</sup> Even without physical injury, CPR can lead to psychological harm that lowers survivors' quality of life.

Starting in the mid 1970s, hospitals began to implement policies on DNR orders due to concerns that universal CPR could cause more harm than benefit for some patients. These policies served to establish procedures for writing DNR orders, but differed widely across hospitals.<sup>14</sup> In 1983, The President's Commission for the Study of Ethical Problems in Medicine supported DNR order protocols based on three value considerations: self-determination, well-being, and equity.<sup>15</sup> First, the decision for a DNR order should be based foremost on a competent patient's preference or the previously stated advance directive of a patient who became incompetent. Second, under the principle of well-being, the decision to withhold CPR can be justified when the intervention will not benefit the patient. The Commission acknowledged that the question of "benefit" is a value-laden one. It involves weighing both the physician's medical assessment of the chance of success and the patient's values and goals of care in order to make an adequate determination of benefit. Finally, the Commission believes that resuscitation is a component of care to which all patients should have equitable access and that decisions should not be guided by the concern that the costs incurred could outweigh the potential benefits for some patients.

Although intended to promote patient self-determination and prevent non-beneficial interventions, DNR orders often fail to do so. This is because the necessary discussions between physicians and patients or surrogates are often inadequate or absent. In 1991, the passage of the Patient Self-Determination Act (PSDA) required all health care institutions to inform patients about their right to complete an advance directive, including their right to refuse life-sustaining interventions such as CPR.<sup>16</sup> In the years following the PSDA, however, patients were still not significantly involved in decisions regarding resuscitation. The SUPPORT Investigators found that among seriously ill hospitalized patients who wanted CPR to be withheld, half did not have a written DNR order.<sup>17</sup> Furthermore, the patterns of DNR orders suggested that physi-

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cian- and institution-related biases had a stronger influence on the timing and selection of patients for DNR orders than patient-related factors such as the presence of advance directives.<sup>18,19</sup>

Although problems with DNR orders have been discussed for decades, substantial efforts at reform proved inadequate. Fortunately, the recent health care reform has created a national impetus to promote safe, high quality care and eliminate costly, ineffective treatments.<sup>20,21</sup> Now is the opportune time to tackle the problems with DNR orders and push for quality DNR discussions that promote patient-centered care and prevent harmful interventions. In this article, we describe the persistent problems with hospital DNR orders in practice today. We also provide reasons why physicians frequently fail to conduct informed DNR discussions. Finally, we offer a set of strategies to implement on the national, institutional, and physician level that could help to improve conversations regarding resuscitation decisions.

## PROBLEMS WITH DNR ORDERS IN PRACTICE

Four ways in which DNR orders remain problematic today include:

- DNR discussions occur too infrequently and patients' preferences regarding resuscitation are neglected.
- DNR discussions are delayed until it is too late for the patients to participate in decisions regarding resuscitation.
- Physicians do not provide adequate information to allow patients to make informed decisions.
- Physicians inappropriately extrapolate DNR orders to limit other treatments.

**DNR discussions: too little and too late.** Among hospitalized patients, patient-physician communication about preferences for CPR is inadequate. Many seriously ill patients did not have an opportunity to discuss resuscitation preferences with their physicians, including half of those who wanted resuscitation to be withheld.<sup>22,23</sup> Physicians were able to successfully predict the resuscitation preferences of patients who wanted a DNR order less than half the time.<sup>24,25</sup> Thus, many patients are at risk of being resuscitated against their wishes.

When DNR order discussions do occur, they frequently occur too late.<sup>26,27</sup> A study of 500 patients who suffered from a cardiac arrest showed that 76% of these patients with DNR orders were incapacitated to make decisions at the time a DNR order was discussed.<sup>28</sup> However, only 11% were impaired at the time of admission. Only 22% of patients participated in the decision about their DNR order. The majority of DNR orders were written within 2 to 3 days before death.<sup>29,30</sup> The burden of decision-making was transferred to surrogates, often family members.<sup>28</sup> This is problematic because family members are frequently unfamiliar with the procedures involved in CPR, lack accurate information about patients' prognoses, and routinely overestimate patients' preferences for CPR and other life-sustaining treatments.<sup>31,32</sup>

**DNR discussions fail to satisfy criteria for informed consent.** DNR discussions often omit essential information to allow patients or surrogates to make informed decisions. Tulskey and colleagues' analysis of tape-recorded DNR discus-

sions led by medical residents found that only 4% of residents discussed the chances of survival after CPR, and only in vague, qualitative terms.<sup>33</sup> Discussions about the risks of CPR were rare. Only two residents mentioned natural death and comfort care measures as alternatives to choosing a resuscitation attempt. Providing education about the risks and success rates of CPR is especially critical since the majority of the general population have unrealistically high expectations of successful recovery after CPR due, in part, to its inaccurate portrayal in the mass media.<sup>34-36</sup> In one study, more than 80% of respondents over the age of 70 believed that the survival rate to hospital discharge after CPR was at least 50%.<sup>37</sup> Furthermore, residents often discuss CPR as a hypothetical standard topic and focus on listing the procedures involved in a scripted, depersonalized manner.<sup>38</sup> They neglect to elicit the patient's treatment values and goals, and fail to provide a recommendation based on these goals. Patients or surrogates are thus often left to make decisions that are poorly informed.

**Health care professionals inappropriately extrapolate DNR orders to other treatment decisions.** A DNR order only applies to the decision to withhold CPR in the event of a cardiopulmonary arrest and should not impact other aspects of care. However, many providers inappropriately alter treatment plans for patients with a DNR order without discussion with the patient or surrogate.<sup>39</sup> In one survey of 155 medicine and surgery residents, 43% would withhold blood products and 32% would not give antibiotics to a patient with a DNR order.<sup>40</sup> Some believe that diagnostic tests should not be ordered when a patient is "DNR." This may be due to misunderstanding the scope of DNR orders by some providers. Still, other providers intentionally apply DNR orders broadly because they either assume that patients with DNR orders would also prefer to abstain from other life-sustaining treatments or believe that other treatments would not be medically beneficial.<sup>39</sup> They make assumptions to avoid a discussion with patients about end-of-life preferences because of the lack of time or discomfort with having the conversation.<sup>41</sup> While these providers may believe their decisions are made in the patient's best interest, their judgment is subjected to personal biases and their assumptions can be faulty.

## REASONS FOR INADEQUATE DNR DISCUSSIONS AND RECOMMENDED STRATEGIES FOR CHANGE

The problems with DNR orders described above are derived from deficient physician behaviors. Past efforts to improve implementation of DNR orders, such as revising DNR consent forms, have had limited success because they failed to change physician behavior.<sup>42</sup> One poignant example is the \$29 million SUPPORT intervention that aimed to improve communication and shared end-of-life decision-making between seriously ill patients and their physicians.<sup>24</sup> The results showed that providing information on patients' preferences and prognosis to physicians, as well as access to trained nurses to facilitate communication, did not improve physician-patient communication. The intervention neither improved the incidence or timing of DNR orders nor physicians' knowledge of patients' preferences to withhold CPR.<sup>24</sup> This intervention failed be-

cause it did not target systemic factors that affect physician behavior.<sup>43</sup> Systems-based approaches have been found to be instrumental in changing health care workers' performance, such as hand hygiene practices.<sup>44</sup> Likewise, tackling entrenched institutional and professional practices surrounding DNR discussions requires a multifaceted approach that creates incentives and tools to promote physician communication with patients and families. We identify four systemic issues that contribute to deficient physician behaviors surrounding DNR discussions and offer strategies to address each (See Text Box 1).

**Medical culture that values the technological imperative.**

DNR order patterns reveal that physicians in procedure-oriented specialties and institutions that offer cutting-edge medical care are associated with lower rates of DNR orders. For example, surgeons write fewer DNR orders and write them later in the hospital course compared with internists.<sup>17,18,25</sup> Larger institutions, academic centers, and hospitals in urban areas have lower rates of DNR orders compared with smaller, nonacademic, and rural hospitals.<sup>45</sup> While the lower rates of DNR orders may reflect the preferences of self-selected patients to a certain extent, another likely contributing factor is the providers' bias towards proceeding with treatments rather than engaging in discussions about goals of care and setting limits to further interventions.

Kaufman found that the decision for using life-extending interventions such as implantable ICDs and dialysis in the elderly population is largely driven by an institution's practice patterns, the technological imperative, and the growing normalization of these treatments.<sup>46</sup> Providers may not be conscious that they are imparting their views in framing options and recommendations to patients. For example, in an analysis of discussions about dialysis, physicians frame the subject as a matter of "when you will need to start dialysis" and not "if." Patients at times were not aware that they could opt out of an intervention. Changing the culture of practices at these institutions is a necessary step towards more open communication with patients about their prognosis, goals, and options.

Promoting high-quality end-of-life care that is patient-centered will bring about the culture change that leads to improved communication about goals of care and code status decisions. This was demonstrated by an intervention to integrate palliative care into the multidisciplinary team of a trauma-surgical ICU at

a tertiary care medical center.<sup>47</sup> Upon patient admission to the ICU, the provider determined the patient's prognosis, preferences, and advance directives, and a family meeting was held within 3 days to discuss outcomes, treatment options, and goals of care. During bedside rounds, the focus was broadened to encompass pain and symptom management as well as goals of care. They found that implementation of DNR orders and withdrawal of care decisions happened earlier. For deceased patients, the total ICU length of stay was shortened. By setting improving end-of-life care as a goal, the ICU team successfully altered established practices by integrating enhanced communication between physicians, nurses, and families as a part of the new ICU care bundle.

Already, a number of institutions have developed palliative care improvement initiatives that resulted in improved communication between providers and patients.<sup>48,49</sup> Elements that contribute to successful organizational change include strong leadership support and sponsorship, development of a consistent organizational model, networking and information sharing among providers, engagement of the staff to collaborate in teamwork to test initiatives, and availability of performance data that feed back to organizational leaders to sustain changes.<sup>50,51</sup>

**Inadequate hospital policies on DNR discussion standards.**

The Joint Commission (JC) requirements on hospital DNR policy do not currently provide specific guidelines for DNR discussions. Their standards state that hospital DNR policies ought to 1) provide mechanisms for reaching decisions and resolving conflicts, 2) describe the role of physicians, other staff and family members in the decision, as well as 3) require the DNR order to be written by the attending physician.<sup>52</sup> There is no requirement to ensure that a qualified provider leads the DNR discussion and that the content of the discussion fulfills criteria for informed consent.

While many states have enacted legislation on DNR orders, the extent to which they explicitly set standards for DNR discussions vary state by state. New York's DNR law, the first in the nation, stipulates that attending physicians be responsible for leading discussions that provide informed consent with patients or surrogates.<sup>53</sup> However, the legislation does not require hospitals to establish mechanisms to enforce the integrity of the informed consent process and hold attending

**Text Box 1. Reasons for inadequate DNR discussions and strategies for addressing them**

Reasons for inadequate DNR discussions	Proposed strategies
<ul style="list-style-type: none"> <li>• Medical culture that favors technological interventions.</li> </ul>	<ul style="list-style-type: none"> <li>• Promote culture change to improve patient-centered end-of-life care.</li> </ul>
<ul style="list-style-type: none"> <li>• Inadequate hospital policies that do not set standards for DNR discussions.</li> </ul>	<ul style="list-style-type: none"> <li>• New Joint Commission standards for DNR discussions.</li> </ul>
<ul style="list-style-type: none"> <li>• Insufficient training of physicians to discuss resuscitation preferences with patients.</li> </ul>	<ul style="list-style-type: none"> <li>• Establish formal communication skills training programs in goals of care and DNR discussions.</li> </ul>
<ul style="list-style-type: none"> <li>• Payment system that rewards volume and intensity of care.</li> </ul>	<ul style="list-style-type: none"> <li>• Financial incentives that use patient satisfaction and/or the quality of DNR discussions as performance measures.</li> </ul>

physicians accountable for leading discussions. They also do not specify sanctions for noncompliant individuals. Not surprisingly, the law failed to increase patient or family involvement in informed decisions to withhold CPR,<sup>54,55</sup> and house officers continued to be significantly involved in leading discussions.<sup>54</sup>

Due to the lack of clear regulatory requirements and enforceable statutes, hospital policy on DNR protocols vary widely across institutions and some hospital policies have been shown to be confused about the scope of a DNR order.<sup>39</sup> In some hospitals, it is mandatory to elicit the resuscitation preferences of all patients who are admitted. Rather than viewing discussions about DNR orders as an opportunity to open dialogue with patients about their goals of treatment, many physicians feel forced to discuss code status by institutional policy or fear of malpractice lawsuits.<sup>56,57</sup> In teaching hospitals, this task is often relegated to house officers or medical students, those who are lowest in the medical hierarchy and are least experienced with DNR discussions.<sup>56,58</sup>

We advocate for the Joint Commission (JC) to set specific standards for DNR discussions and require institutions to demonstrate compliance with these standards to be accredited. The JC can bring about rapid changes to hospital practices across the nation and ensure compliance by conducting periodic institution site visits. The Commission's positive impact on hospitals' pain assessment and management practices when new guidelines were instituted in 2001 is illustrative. Health care institutions responded quickly by implementing policies and practices to adhere to the standards.<sup>59</sup> Many institutions went beyond the requirements to create new pain management programs that provide novel multidisciplinary approaches to pain control.<sup>60</sup> Within 4 years of adoption, improved patient satisfaction with pain control across 240 hospitals was demonstrated.<sup>61</sup>

The DNR discussion standards that we propose for adoption by the JC are shown in Text Box 2. These standards include identifying appropriate patients for DNR discussions, designat-

ing the attending physician to lead the discussions, defining the timing for the discussions, ensuring that the decision-maker is provided adequate information to make an informed decision, and documenting the content of discussions and rationale for the patient's decision. Hospitals should be required to establish mechanisms to enforce adherence, such as conducting chart reviews of documented discussions. Electronic medical records (EMRs) can increase the ease to document and monitor compliance. For example, a mandatory field in EMRs could prompt physicians to document within a set timeframe whether or not the DNR discussion has occurred and require inclusion of the discussion's content or the reason for deferring the discussion. Lastly, hospitals should develop mandatory educational programs to teach the scope of DNR orders and train physicians to lead proper DNR discussions.

#### **Insufficient training of physicians in communication skills.**

Accrediting bodies for medical schools and residency programs do not require formal training in communication and decision-making about DNR orders.<sup>62,63</sup> By default, most house officers learn to lead DNR discussions informally through a "see one, do one, teach one" approach whereby misconceptions about DNR orders and inappropriate approaches can be perpetuated.<sup>64,65</sup> Physicians-in-training often cite the paucity of role models as a reason for their lack of competence in conducting DNR discussions.<sup>33,66,67</sup> Unfortunately, the hidden curriculum in medical education devalues end-of-life communication and conveys a sense that caring for the dying is dissatisfying or uninteresting.<sup>68,69</sup> However, as the health care reform movement engenders growing interest in improving the quality of end-of-life care nationally, there will be increasing demands on educators to teach end-of-life issues and communication with patients about goals of care and preferences regarding resuscitation. The revolution and new advocates in the field of palliative care can provide leadership in communication about and goal setting for end-of-life care.

#### **Text Box 2. Proposed Joint Commission standards for DNR discussions**

1. Attending physicians are responsible for leading informed DNR discussions with appropriate patients or their surrogates.
2. Appropriate patients are defined as follows: 1) Patients with a terminal illness, 2) Patients with poor functional status due to an illness or disabling condition that is severe and irreversible (e.g., Class IV congestive heart failure, advanced COPD, advanced dementia, 3) Patients who suffered an irreversible loss of consciousness, 4) Patients with a low likelihood of surviving resuscitation, 5) Patients who are at increased risk for cardiac or respiratory arrest.\*
3. Process should include: 1) Determining the patient's goals of care 2) Educating the decision-maker of the patient's disease course, prognosis, potential benefits and burdens of CPR and alternative to CPR 3) Providing a recommendation (unless the patient or surrogate objects) for or against resuscitation based on a medical assessment of the likelihood that CPR will succeed and its benefits or lack thereof to the patient given the patient's goals.
4. Discussions should be conducted within 72 hours of hospitalization and revisited when the patient's clinical condition changes.
5. The content of discussion and rationale for the decision regarding resuscitation should be documented in the patient's medical record and the practitioners and staff involved in the patient's care should be made aware of the decision.

\*Adapted and modified from The Hastings Center's *Guidelines on the Termination of Life-Sustaining Treatment and the Care of the Dying*, 1987.

An important distinction between DNR discussions and other informed consent conversations about therapeutic treatments is that the former is the only discussion to withhold a potentially unwanted or non-beneficial intervention. Therefore, physicians should be taught to identify appropriate patients with whom to have the conversation, such as those with a serious illness for whom CPR may not prolong survival or serve the patients' goals. They should also learn to frame the discussion by conveying the goal of avoiding harm and provide a recommendation that is based on an assessment of benefit versus harm given the patient's values and goals and the probability of successful resuscitation.

There are studies demonstrating that these communication skills can be taught and result in improved competence. Effective strategies to teach communication skills in goals of care and DNR discussions involve experiential learning. These include direct observation and feedback of residents by palliative care clinicians during real-life code status discussions,<sup>70</sup> using of audio-visual triggers and role plays,<sup>71,72</sup> and standardized patient exercises.<sup>73,74</sup> Additionally, teaching skills in breaking bad news and managing family conflicts are also important to prepare future providers to assist patients and families navigate through the complex and difficult decisions surrounding resuscitation decisions.

#### **Payment system that rewards volume and intensity of care.**

The existing "fee-for-service" reimbursement system in the United States leads to overtreatment of those with serious, life-limiting conditions and often does not improve patient outcomes. Under this payment model, it is not surprising that for-profit hospitals that are associated with more costly and greater intensity of care also have lower rates of early DNR orders.<sup>45</sup> To change institutional practices to increase the incidence and improve the timeliness of code status discussions, the incentives system will need to be better aligned to motivate hospitals and providers to provide care that is patient-centered.

Pay for performance initiatives have shown that establishing quality measures for care practices coupled with rewards have changed physician practices and improved outcomes.<sup>75</sup> In the ambulatory care setting, financial incentives that promote patient care experiences measured by patient satisfaction (CAHPS) survey data have led to meaningful improvement in physician-patient communication.<sup>76</sup> Currently, the Veterans Affairs (VA) system is using family satisfaction surveys to identify performance measures of quality end-of-life care.<sup>77</sup> They found that families of patients who received a palliative care consultation and of patients who had a DNR order before death reported substantially higher satisfaction with care. These findings suggest that timely and informed DNR discussions with seriously ill patients or their families contribute to higher quality of care.

Rewarding hospitals that promote care that is patient-centered and respects patient preferences at the end-of-life will in turn exert pressure on providers to conduct more goals of care and DNR discussions. The quality of DNR discussions can be used as a performance measure of patient-centered care, such as by scoring their timeliness to allow patients to participate in the decision-making, whether or not the patient's values and goals of care were determined, and whether the decision reached was consistent with the patient's goals. Hospitals can motivate physicians via nonfinancial means such as through public reporting of patient satisfaction with provider communication and recognition awards for physicians who demonstrate exemplary patient-centered care.

The notion of providing payment for conversations with patients and families about preferences for end-of-life treatments may encounter resistance from those who opposed the proposed advance care planning legislation in the recent health care reform. The opponents accused the bill as the government's ploy to ration health care for the elderly, using the catchphrase "death panels" to incite fear among the public.<sup>78</sup> In doing so, the legislation was reframed not in the terms of promoting patient choice as it was intended, but in taking away choice. In reality, conversations about patients' goals and preferences for resuscitation are meant to promote patient autonomy and to achieve outcomes that are consistent with patients' preferences. The National Priorities Partnership has identified achieving patient-centered care and improving end-of-life care as two of the six national priorities that have the potential to rapidly and substantially improve health care quality.<sup>20</sup> To be effective, the resulting debates and policies must be framed to encourage conversations that inform patients and families about the potential for life-sustaining treatments to do both good and harm to patients at the end of life.

## CONCLUSION

Fifteen years have passed since the SUPPORT trial, the last large-scale effort to improve communication between physicians and patients about end-of-life decisions. Since that time, there has been increasing focus on promoting quality of care for the dying, as exemplified by the improvement in pain management and explosion of hospital-based palliative care programs across the country.<sup>79</sup> However, the persistent problems with DNR orders suggest that physician behaviors toward communication with patients about goals of care and resuscitation decisions have not measurably changed in the past 20 years. Given the pressures brought on by the health care reform to improve the quality of care and to eliminate ineffective care, it is timely to reexamine the underlying reasons that hinder physician behavior change. We believe that our health care infrastructure today is primed to overcome the current challenges. Such changes are imperative for enhancing communication with patients and families about their goals and involving them in informed decisions about resuscitation preferences.

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**Corresponding Author:** M. Carrington Reid, MD, PhD: Division of Geriatrics and Gerontology, Weill Medical College, Cornell University, 525 E 68th Street, Box 39, New York, NY 10065, USA (e-mail: mcr2004@med.cornell.edu).

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