

Trends from the United States with end of life decisions in the intensive care unit

D. Teres

Department of Medicine and Surgery, Critical Care Division, Baystate Medical Center, Springfield, Massachusetts, and Tufts University School of Medicine, Boston, Massachusetts, USA

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Abstract. *Objective:* To describe the changes that have occurred in the United States since medicine has moved away from a paternalistic model to one that promotes patient autonomy and self-determination. To discuss the implications for cardiopulmonary resuscitation (CPR) and the increasing use of when not to perform CPR and other life-sustaining therapies. To describe the various interpretations of the ritual term Do-Not-Resuscitate (DNR) and to introduce the concept of futility in the context of non-beneficial over-treatment and discriminatory under-treatment.

Setting: Selected clinical, philosophical and public policy literature and two illustrative case examples.

Results: 1. There is no longer a mandate to perform CPR on all dying patients, even though the Council on Ethical and Judicial Affairs of the American Medical Association in 1991 said that the only restrictions should be in patients with an irreversible terminal condition or when the physician writes the order, DNR. 2. The DNR order usually requires the informed refusal of CPR by the patient or family. There is only minimal support for a unilateral decision even for patients with far advanced disease. 3. DNR is often the first step in the negotiated process of forgoing care in the ICU. There are multiple interpretations of DNR both in and outside of the ICU. 4. Health Proxy is the latest attempt to have a person clarify his/her wishes and preferences by naming a decision maker, if the individual loses mental capacity. 5. Although ethical principles seem well established, there are inconsistent interpretations and practices at the bedside in the United States in part due to the restructuring of the relationship between physicians and patients, providers and consumers/clients. 6. Objective severity scores such as Apache III, SAPS II, MPM II are generally not applicable for individual patient end-of-life decisions.

Conclusions: Although Health Proxy in its current formulation has been disappointing, there is a clear trend for wider application of DNR and for more active discussions about withholding or forgoing other life-sustaining therapies. DNR has a different interpretation late into the ICU course (> 72 h) than when applied at or shortly after ICU admission. Late in the ICU course, it has been decided by the medical team and family or surrogate decision maker/Health Proxy that the patient has failed or is in the process of failing aggressive ICU therapy. Early use of DNR may be related to limitations based on pre-existing chronic or subacute disease burden or an unwillingness to proceed with a full ICU course of therapy. It is unclear how Ethics Committees, risk management and hospital administrators, national practice guidelines, governmental sponsored health care reform will interface with the highly complex individual patient – physician – family – Health Proxy interface as practiced in the United States. Dialogue between the Society of Critical Care Medicine and the European Society of Critical Care Medicine and among interested physicians could provide a format for a multi-cultural context to discuss end of life issues in the ICU setting.

Key words: Cardiopulmonary resuscitation – Do-not-resuscitate – Intensive care units – Futility – Severity of illness measures – Health proxy – Death and dying

For physicians who have not practiced in the United States, the discussions, the extensive literature, the rapidly changing trends toward the use of life sustaining therapies with end of life decisions must seem truly amazing and astounding. American society strongly supports individual action and the rights of every citizen. There is great faith in the role of technology, not only to support a critically injured patient but also to bring about a miraculous cure. Life support is death-defying.

There is also tremendous pressure on physicians to utilize the ICU technology because of fear of malpractice

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litigation and from the oversight of numerous quality-of-care regulatory agencies. There has also been a fee-for-service incentive to use procedures while cognitive activity is reimbursed at a much lower rate.

However, there has been ambivalence about the role of technology and its possible overuse. While ethical principles seem well established, there is evidence for inconsistent application at the bedside. How much of this pattern is related to the increasing importance (if not dominance) of the patient in clinical decision making is unclear. The role of the physician in the doctor-patient relationship is undergoing dramatic change even when a doctor-patient relationship exists. More often there is no established “contract” and in the “open” ICU environment, there are multiple physicians and consultants involved and multiple opinions are presented to the family.

Within the context of the United States culture, the author will discuss the ritual term Do-Not-Resuscitate (DNR) in the use and abuse of cardiopulmonary resuscitation (CPR), the various interpretations of DNR, and the evolving concept of futility. There will also be commentary on the ongoing restructuring of the physician-patient relationship as it applies to end of life decisions in the ICU regarding patient autonomy and the illusion of patient consent. There will also be a discussion of current objective severity of illness measures which may reduce medical and prognostic uncertainty. Their proposed direct patient applications in these complex decisions will be described.

“Americans will do the right thing only after they have exhausted all other options” – Winston Churchill

Use and abuse of CPR and DNR

CPR

Cardiopulmonary resuscitation (CPR) has been widely applied since the development of closed chest cardiac compression and electrical defibrillation [1]. It has been recognized that the overall success rates are low, particularly in patients with underlying acute and chronic diseases, such as pneumonia, sepsis and metastatic cancer [2]. Poor results are also expected in elderly patients and those who have chronic diseases, especially with functional disabilities in both out-of-hospital as well as on general medical wards [3]. The results are better in younger patients, those patients with airway obstruction and patients who have a cardiac arrest in a coronary care unit or intensive care unit.

When to withhold CPR

Although CPR should have been restricted to patients with an acute sudden unexpected death (presumed to be cardiac arrhythmia) or to patients having an acute emergency, such as airway obstruction, trauma, or near drowning, initially in the United States CPR became a mandate for all patients who were dying [4, 5]. Even in the most recent pronouncement of the Council on Ethical and Judicial Affairs of the American Medical Association (1991), it states that CPR “potentially can be used

on every individual prior to death” [6]. The only restrictions should be limited to patients with an irreversible terminal condition or when the physician writes the order “Do Not Resuscitate (DNR). Despite multiple reasons why CPR was overapplied including fee-for-service, malpractice concerns, the DNR order is increasingly being used in the ICU setting [7, 8].

The predicament of excess application of CPR was well recognized by physicians and nurses in the United States and was characterized by medical “humor” in which CPR was listed as the “last rights” and a code blue became “code gray”, the “coffee code”, or the “slow code”. In the 1980s, there was open discussion questioning the rationale for performing CPR on patients with a poor prognosis before the inevitable cardiac arrest. With increasing acceptance of the principle of patient autonomy, physicians became more comfortable in discussing the wishes of the hospitalized patient regarding preferences for possibly refusing CPR therapy [9]. The courts also issued rulings that provided a basis for physicians and the patient (or family) to withhold CPR well before the patient had an obvious irreversible terminal condition [10]. As a result, the DNR order is commonly used on general wards [11, 12].

What does DNR mean?

In the formal or technical sense, the Do-Not-Resuscitate order should strictly relate to the neutral term “no cardiopulmonary resuscitation.” However, it is recognized that DNR generally carries a much wider and broader definition, relating to the initial process of the negotiations relating to withdrawal or withholding of life sustaining therapies. In the study by Smedira et al. where the DNR order was studied in two intensive care units, the order was applied to 45% of all patients who died in the ICU setting [13]. The clinical decision was made on teaching rounds that the patient had a poor prognosis. After teaching rounds, there was a discussion with the family and a recommendation was made for DNR as well as for withdrawal of mechanical ventilation or “terminal wean from the ventilator.” In this scenario, there was a linking together of the Do-Not-Resuscitate order and the withdrawal or forgoing of life sustaining therapy.

It is now recognized in the ICU setting that DNR is applied to patients who begin to fail aggressive ICU therapy and have not yet reached the stage where the clinical physicians have determined that the patient has failed aggressive ICU therapy [14]. In these circumstances, the patient or family member would consider limiting therapy further if an additional complication occurred or if the patient does not improve after an additional specified time period.

In these cases it would be expected that some patients with DNR late into the ICU might survive. In addition, there are selected patients who are admitted to the ICU with a DNR order because the patient or family would still want to consider the option of intubation, mechanical ventilation or other selected life sustaining therapies but would not want CPR if the patient developed a cardiac arrest while undergoing aggressive ICU care [15].

In other cases, the patient might be admitted to the ICU with an acute catastrophe but then the family might decide not to go ahead with a full course of therapy. This patient would also be DNR but would have a different profile than patients made DNR late in the ICU, after 72 hours. A high proportion of these patients would survive and may have long hospital stays after leaving ICU. Early DNR patients who die would more likely die outside the ICU [15].

Table 1 lists the various interpretations associated with DNR order for patients in an ICU setting as well as for patients not in the ICU setting.

In the recent survey of 2876 US intensive care units by the Society of Critical Care Medicine Task Force for Distribution of ICU Resources, the prevalence of DNR orders for patients in the ICU during the survey day was 6%. For "pure" medical and combined medical-surgical ICUs, the prevalence was 9 and 8% respectively. What was interesting is that in "pure" surgical ICUs the prevalence was only 3.5% [16]. Surgery and anesthesia intensivists may be less willing to admit that a patient has failed therapy, may be less willing to spend the time. There may also be a selection bias in that certain post-op surgical patients with numerous medical complications may be transferred to "pure" medical ICUs.

One conflict surrounding the DNR order has to do with the personnel working in the ICU. Among physicians in training and critical care nurses, DNR is often the first written order during intense negotiations with family about a patient who is failing aggressive ICU care. However, the DNR order by itself has little meaning in a patient who is on a mechanical ventilator, may be on antiarrhythmic drugs, be receiving transfusions, vasoactive drugs, dialysis, and hyperalimentation. In common usage, the DNR order is usually accompanied by the understanding that additional invasive procedures or operations would not be performed but that other therapies would be continued until the patient has deteriorated during an additional time period or has developed new complications. To the critical care nurse, if the patient has multi-organ failure and is considered terminal, the DNR order by itself does not change the heavy work load in caring for such a patient. The next step of forgoing care may take days or weeks. At this point, the nurse would refer to the ritual term as "full DNR" when active therapy is *finally* being withdrawn or terminated.

Table 1. Definitions of "do not resuscitate"

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1. No CPR
 2. "All but CPR"
 3. Patient not in ICU
 - Do not institute heroic therapy
 - Do not intubate
 - No ICU
 - No transfusions
 - No antibiotics
 4. Patient in ICU, has been receiving ICU therapy
 - Do not add new therapy
 - Withdraw life sustaining therapy
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Outside the ICU setting, the DNR term may also incorporate other limitations such as "do not intubate," "do not admit to the ICU." Some physicians are reluctant to issue the DNR order because they fear that routine care may be slowed down. There was a brief period when a substitute term was used "do everything except CPR" to emphasize that routine or standard care should be continued, short of CPR. However, this substituted phrase has not been widely accepted.

Restructuring of the doctor/patient relationship

Principle of patient autonomy

Autonomy is now the guiding principle in the United States medicine and is highly valued because its exercise is a reaffirmation of the worth of each individual. Each person has the right to make decisions with respect to which treatments will be accepted or rejected. It is the basis of informed consent based on patients' values and wishes and incorporates confidentiality and privacy. For elective procedures, this principle may work very adequately. In 1983, a national commission issued its findings related to forgoing life sustaining therapy [17]. Patient autonomy or self-determination was the cornerstone of the report of President's Commission. This principle requires that a physician knows his or her patient's condition and discusses the diagnostic and treatment options (risks and benefits) and in the context of the patient's values and preferences estimates the prognosis and makes a recommendation for a treatment plan of action. Autonomy can work well if the patient is willing to express his or her wishes, has a primary care physician who presents options and alternatives, and has a supportive family. But these necessary conditions are not regularly present.

The principle of autonomy is particularly difficult to implement in emergency situations, when the patient loses mental capacity to make decisions and to express wishes and preferences. The decision is then transferred to the family or other surrogate decision makers. Also, many patients today do not have a primary care physician who knows them well including their wishes and preferences, and it is well recognized that families may be fragmented and may not know the patient's wishes.

Health proxy

There have been two approaches which were designed to help a person state his/her wishes, Living Will or Durable Power of Attorney for Health Care (Table 2). However, these have not been widely accepted by patients or physicians and are not considered "legal" in many states [18, 19]. In the Nancy Cruzan case (a patient with long-estab-

Table 2. Advanced directives

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1. Living will
 2. Durable power of attorney for health care
 3. Health proxy
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lished, persistent vegetative state following an auto accident), the Missouri Supreme Court supported the concept of patient autonomy (even to remove artificial nutrition and hydration) if there was “clear and convincing” evidence of the patient’s wishes [20]. This single case added impetus for a third approach, Health Proxy, to help interpret a patient’s wishes and preferences. It is designed as a simple, non-legal document in which a person names another individual to make medical decisions as the patient “would have made.” The health proxy is widely supported by physicians, lawyers, religious leaders, and the healthy elderly. It is now federal law that all patients be asked if they have a Health Proxy when they enter a hospital [21]. The advantage of Health Proxy is that the individual so-named can make decisions in the dynamic process of changing conditions. The other advantage is that a named proxy will avoid conflicts in families when multiple members have different perspectives. It is hoped that application of Health Proxy or its next derivative would lead to easier and/or greater use of DNR, more clear directions on when to limit other life-sustaining therapies. It is generally felt that most patients would not opt for prolonged ICU and hospital stays (non-beneficial over treatment).

Inconsistent bedside practices in forgoing care

Ethicists and legal experts have reached consensus about key principles that can help physicians choose treatments for critically ill and dying patients. These principles include the following: (1) there is no ethical difference between not starting a life support measure and stopping it once it has started, (2) principle of decisions about forgoing artificial nutrition and intravenous nutrition and hydration should be handled in the same way as forgoing other life sustaining interventions; (3) decisions about treatment should not hinge on such words as “ordinary” or “extraordinary” nor on technologic complexity but on potential benefits and burdens to the patient as perceived by the patient or surrogate and (4) relief of pain and suffering is mandatory even if doing so may hasten a patient’s death [22–27].

There are now several studies utilizing questionnaires or chart reviews of the management of terminal care that suggest that the bedside action and decisions by physicians are not always in keeping with the ethical principles established [27]. In the study by Faber-Langendoen, all deaths in a hospital were reviewed during a two-month time period [28]. Among the 70 deaths, 74% had some intervention withheld. There were inconsistent practices in several of the charts that were reviewed such as increasing doses of vasopressor drugs when all other life sustaining treatments were being withdrawn, and “terminal wean” from a ventilator while continuing other treatments. In 15 patients described as receiving comfort care, some of the patients had vasoactive drugs continued, others had antibiotics started and laboratory tests continued to be measured.

In one survey, only 34% of physicians agreed that “there is no ethical difference between forgoing, i.e. not starting a life support measure, and stopping it once it

has started.” [29]. Ethicists do not see a rationale for even the term “terminal wean from a ventilator”; patient should simply be extubated. However, to argue for a rationale that a terminal wean may be for the psychological comfort of the caregiver or to prevent air hunger or stridor in the patient may be unfair. Clinicians might argue that a small number of patients might breathe spontaneously and might even stabilize during a process of terminal wean when medications such as sedative or respiratory depressant medications have been stopped. There may be technical problems with the tracheal tube and the settings of the ventilator that create respiratory system fatigue and may contribute to respiratory failure [30, 31].

Jonsen and Siegler have proposed a sequence be followed when forgoing life sustaining treatment [32]. These guidelines are listed on Table 3. However, in the conflict between professionalism (paternalism) and patient autonomy, there may be poor communication or intense negotiations without necessarily reaching what are presumed to be the above well agreed upon principles. In a revealing article in *Annals of Internal Medicine*, an expert who did not practice at the bedside described his experience as a ethics consultant in the practical initiation of termination of ventilation [33]. He described his own anxiety in performing and assisting in this procedure. Instead of gradually reducing the ventilator settings, the patient was given a large dose of a sedative and the ventilator was stopped.

Illusion of patient consent

While there is acceptance of the principle of patient autonomy, there appears to be strong evidence that physician values may play a more decisive role than patient values in many of these life sustaining decisions [34]. In the more common end-stage situation, the ICU team has made the decision that the patient will no longer recover, has failed ICU therapy, is unduly suffering, or may recover but have very poor quality of life. In conflicts with the family over these decisions, there may be predominance of physician values, but these DNR and terminal care decisions are still done after intense and prolonged negotiations with family or surrogate decision makers.

There may be a variety of other reasons why physician values predominate. These may include a professional resistance to the concept of patient autonomy. The family may ask the physician or medical team, “What would you do if you were in this circumstance?” The specialist may just be starting to present treatment options, establishing a relationship and may want to emphasize hope, to build

Table 3. Proposed sequence in forgoing therapy

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1. Withdraw experimental interventions
 2. No CPR (DNR)
 3. Withdraw ventilator
 4. Withdraw pressors
 5. Forgo antibiotics
 6. Forgo artificial nutrition
 7. Decrease IV fluids
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trust and to delay restriction of care options. The physician may feel that the situation is “futile,” that the situation may be too complex for the family members to understand, and that the negotiating process may be too time consuming. With physicians and surgeons who have an established relationship with the patient, the patient’s values may be shaped by the physicians preferences regarding the overall treatment plan and options. The ICU complications may be part of the “contract” that the physician would support the patient through treatment and “any” complications. Patients may simply prefer to have their physicians make complex decisions, and there may be physicians who simply override patients’ wishes and concerns. For all of these reasons a unilateral DNR decision is rarely employed and discouraged by Ethics Committees and by Risk Management.

Case report 1

A prototypical case was recently presented at an Ethics Conference held in western Massachusetts. The patient was under treatment for leukemia and had stated that “under no circumstances” did he want to be put on a machine. During his course of treatment for the leukemia, he developed bone marrow suppression and a complication of pneumonia with respiratory failure. He was no longer able to communicate and the discussion was continued with his wife. The recommendation from the physicians was to put him on a ventilator to “get him over the hill” since it was felt that the pneumonia would resolve once his bone marrow recovered. The wife, being mindful of his specific request, initially said “No.” The physicians persisted and said that the pneumonia was most likely reversible. The wife was asked what her husband really meant by “under no circumstances” and she interpreted his statement as understanding that ventilator care was always painful and terminal. During this negotiating process and with further discussion, the wife supported placing her husband on a mechanical ventilator. The patient did recover after a short ICU stay.

A similar negotiating process would take place if the wife was the formal Health Proxy. If there was also a written living will with the phrase “under no circumstances”, there would be less flexibility. If he had understood the options and still clearly did not want mechanical ventilation, *under no circumstances*, than his wishes should have been followed. If the physicians had simply overridden his wishes, what would be the interpretation? Would this be an example of physicians disregarding the principle of patient autonomy? Should the physicians unduly pressure the wife into going ahead with life support therapy for an acute pneumonia? How important is the probability of likelihood of success (in treating pneumonia and respiratory failure) in the argument? Is this a case of the physicians demanding what might be regarded as “non-beneficial over-treatment” (adding adult leukemia into the equation)? With a written statement of “under no circumstances”, ICU treatment would be assault and battery, a felony.

Who should define futility? Is there a possibility in the United States for a physician to unilaterally make a judgment that cardiopulmonary resuscitation should not be performed? If the patient has multi-organ system failure, prolonged respiratory failure, widely metastatic cancer, uncontrollable infection with prolonged sepsis, there would not be much chance of recovery should the patient

develop a cardiac arrest. In these circumstances, would it be feasible for a physician to write a unilateral Do-Not-Resuscitate Order [35]? There have been multiple arguments raised against physicians making unilateral decisions, without obtaining consent from the family or surrogate decision maker. Futility is defined as a zero probability; however, even if the chances are only 1 in 10000, there would always be that one case [36]. Futility also involves value judgments by the physician which may not be shared by the patient, the family or surrogate decision maker. In a pluralistic society such as the United States, there is also the concern that physician’s judgement may include “discriminatory under-treatment” of people without ability to pay or persons of minority background. What if there is no family and no identified friend willing to participate? In this situation, a unilateral DNR decision may be allowed, with a second opinion from another physician and/or and Ethics Committee consultation. In the more usual situation there should be a retrospective review by Ethics Committee [25].

Case report 2

A recent case presented to a Hospital Ethics Committee will highlight these issues. The patient was a 45-year-old patient of Hispanic background. He had a history of cirrhosis with ascites, intravenous drug use, and arrived in the emergency room with shortness of breath. He sustained a cardiac arrest for which he was resuscitated and admitted to the intensive care unit. He was diagnosed as having acute bacterial endocarditis, bacterial peritonitis with infected ascites, prolonged respiratory failure and jaundice with hepatic failure. After one week, he did not improve on antibiotics, mechanical ventilation, had received blood products and vasoactive drugs. He had continued coagulopathy from his liver failure and decerebrate posturing from his anoxic and hepatic encephalopathy. The family members did not want to have a DNR order placed on the chart and did not want him removed from mechanical ventilation. They wanted him evaluated for liver transplantation and aortic valve replacement!

There was no unified family: multiple factions were in conflict. The estranged wife and children had had minimal contact with him. There was no formal advance directive or any minimal statement of the patient’s wishes. From the anti-futility or pro-autonomy argument, it would have been necessary to fully evaluate the patient for aortic valve replacement and liver transplant and then to discuss the options, opinions, risks and benefits (excluding cost and ability to pay) with the family [36–38]. According to evaluation of risks and benefits, non-beneficial over-treatment, wasteful use of “scarce” resources, the medical team should have made the patient DNR on the grounds of medical or physiologic “futility”, terminal illness, hopeless case or clinically non-salvageable conditions and proceeded to write a unilateral Do-Not-Resuscitate order [39–41]. In a pluralistic society such as the United States, a unilateral decision could (or would) also be described as “discriminatory under-treatment”! After intense negotiations with multiple family factions, it was agreed to wait an additional 48 hours to see if the patient showed any improvement. After this time period, the patient’s mother accepted the physician’s proposed plan that artificial measures be withdrawn, except for the mechanical ventilator. The estranged wife

and daughters would not directly attend these conferences. A rational sequence for withholding or forgoing life support could not be followed, but neither could unilateral physician action. Non-participation by the medical team would have worsened the situation. How would hospital administration, ethics committee, or risk management participate or contribute?

Can objective severity measures resolve conflicts at end of life decisions?

Medical prognosis is a crucial component in end of life decisions in the ICU setting. It is theoretically possible that an objective severity measure would be useful in the complex negotiations between medical team and patient, family, surrogate decision maker. The most common phrase in the Living Will and Health Proxy statements is that the person (or client or consumer) would want to continue therapy "as long as there is a reasonable prospect for meaningful recovery".

Unfortunately, the validated time periods for a physiology score and the mathematical link to estimating hospital mortality is 24 h after ICU admission [42, 43]. This is true for the Apache II–III system and the Simplified Acute Physiology Score (SAPS II) [44]. The Mortality Probability Model (MPM II) is validated at admission and 24 hours [45]. Dynamic modeling, or change in probability over time, is not yet mature enough for clinical decision making nor validated. In the study by Smedira, at the time when physicians recommended a DNR order and terminal wean from the ventilator, based on poor prognosis, the Apache scores were not markedly elevated [13]. The reasons for this are multiple. For one, the decision can usually be made by clinical criteria including prolonged sepsis and metastatic cancer and clinical judgment. Part of the medical evaluation of poor prognosis is to rule out or correct any reversible abnormalities. These evaluations and treatment would tend to stabilize or lower the physiology score. It would be an unusual patient who has a continued rising physiology score associated with respiratory and hemodynamic instability. This would be a true example of physiologic futility. The standard end point of prognostic models currently is hospital mortality. Functional outcome, long term survival and adjusted quality life years are not yet incorporated into useful models. Estimates of functional outcome and quality of life are important components of these end of life decisions.

Apache III developers do propose *direct individual patient* application of their system for determining when to withdraw life sustaining therapy [46]. Such an application should be viewed with skepticism [47]. Another proposed use is to determine when patients with prolonged chronic or acute respiratory failure are stable enough (low daily physiology scores) for transfer out of ICU to an alternative lower cost treatment setting [46].

Conclusion

1. There is increasing application of the Do-Not-Resuscitate Order in intensive care units throughout the United

States. DNR is being utilized not only when the patient has failed aggressive ICU therapy but also at the beginning of ICU care when a patient or family is deciding whether to embark on a full ICU course of therapy. Certain patients with established DNR orders may also be admitted to ICU for selected, defined treatment plans.

2. Basic principles of medical ethics seem well established regarding the principle of patient autonomy, relieving pain and suffering at end of life, treating artificial nutrition and hydration as simply one other life sustaining therapy, stressing that there may be no ethical difference between starting a mechanical ventilator and stopping its use and basing decisions on potential benefits and burdens to the patient *as perceived by the patient or surrogate*.

3. However, there is still widely disparate applications of these principles in forgoing or withholding life sustaining therapy in the ICU. Physicians may want to respect patient autonomy but are reluctant to spend the intense time separating out objective medical options from their own personal opinions and prejudices. The multiple consultants, housestaff, and bedside nurses also interact with the family and may lead to considerable confusion. There is concern about discriminatory under-treatment as well as non-beneficial over-treatment.

4. Health Proxy in its current formulation does not seem to be sufficient to counter-balance the physician's presumed predominance in the negotiations between physician and surrogate decision maker.

5. Objective severity measures are not validated for the important later time periods in the ICU. The hospital mortality end point may not be sufficient in terms of the key end points often utilized in the negotiations between physician and surrogate decision maker, i.e., functional recovery and quality of life. It would be difficult enough for a family member to interpret a probability of ICU or hospital mortality let alone comprehending what is meant by "adjusted quality life years".

6. Perhaps a dialogue between the Society of Critical Care Medicine and the European Critical Care Society could provide a format to discuss the complex medical, ethical and multi-cultural aspects associated with end of life decisions in the Intensive Care Unit. Constructive commentary by European physicians would be welcomed regarding DNR, futility, patient autonomy, ambivalence toward the use of technology to defy death, and inconsistent bedside practices when life sustaining therapy should be withdrawn.

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Dr. D. Teres
 Department of Medicine and Surgery
 Critical Care Division
 Baystate Medical Center
 Springfield, MA 01199
 USA