

## Fair Allocation of Intensive Care Unit Resources

THIS OFFICIAL STATEMENT OF THE AMERICAN THORACIC SOCIETY WAS ADOPTED BY THE ATS BOARD OF DIRECTORS, MARCH 1997.

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### SUMMARY

American Thoracic Society (ATS) members, as health care practitioners caring for critically ill patients in intensive care units (ICUs) or as ICU directors, commonly must make decisions that allocate ICU resources. Some decisions necessitate prioritization of ICU beds while others limit access to particular scarce resources. Although these decisions arise when providing medical care for ICU patients, they occur in a larger context that includes ethical, economic, social, and legal considerations. In this context health care systems in the United States and in other countries face the consequences of increasing demand for expensive health care services in times of limited financial resources and competing societal needs. If one accepts the premise that demand for health care resources will inevitably outstrip financial constraints, one then must face the basic question of how to allocate those resources fairly.

How health care organizations will meet increasing demand for services within financial constraints raises specific questions relating to the fair allocation of ICU resources:

1. What criteria should be used to select patients for ICU admission and discharge?
2. How will health care institutions deal with the non-reimbursed costs of treating uninsured patients in an ICU?
3. How should a health care system decide to allocate its resources for ICUs?

4. Critical care physicians and ICU directors may find themselves with personal economic incentives to limit costs by restricting access to ICU resources. How should they deal with this potential conflict of interest?

#### Purpose and Specific Aims

In recognition of the growing importance and complexity of these questions, the ATS formed a multidisciplinary Bioethics Task Force to develop an ATS statement regarding the fair allocation of ICU resources. The purpose of this statement is educational and advisory. Its goal is to define the ethics of professional behavior in this regard. The underlying thesis is that having competence in applied ethics is equally important to the practice of critical care medicine as competence in traditional disciplines, e.g., pathophysiology or medical therapeutics. The intended audience includes ICU practitioners and directors, administrators of health care institutions, and other health care professionals and their professional organizations concerned with the fair allocation of health care resources.

The specific aims of the statement are:

1. To establish an ethical framework for sound decision making in ICU resource allocation.
2. To provide a comprehensive source of information beneficial to ICU practitioners and their health care institutions in dealing with ICU allocation issues.
3. To provide guidelines defining ethically appropriate and inappropriate criteria for admitting and discharging ICU patients and for the use of scarce resources in the ICU.
4. To promote the development of policies and practices by health care providers and their institutions which enhance justice and fairness in allocation of ICU resources.

This statement is not viewed as the final answer to all of the difficult questions arising from trying to make fair ICU al-

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location decisions. Rather it is intended to promote further discussion among health care providers, their organizations, and other members of society. Its ultimate goal is the development of a societal consensus on how to fairly allocate ICU and other medical resources when it becomes widely accepted that limiting access for potentially beneficial care is necessary.

#### Mission of the ICU

The mission of the ICU encompasses three goals. The primary goal is to preserve meaningful human life by protecting and sustaining patients in a caring manner when they are threatened by an acute critical illness or injury or as a consequence of medical or surgical therapy. In this regard, meaningful life refers to a quality of life personally valued and appreciated by the patient. A second goal is to provide specialized rehabilitative care to ICU patients as they start to recover from their critical illness or injury. As a third goal, for those patients previously admitted for full ICU care but with illnesses that prove to be overwhelming, or for whom it is decided not to continue life support, the ICU is to provide compassionate and attentive care to the dying and their families and to ensure that patient suffering during their final hours is alleviated.

#### Principles and Specific Positions

A set of guiding principles (Table 1), together with the mission of the ICU, serves as the ethical foundation for the statement's specific positions (Table 2). Discussion of the principles and their derivation and significance is presented in the APPENDIX.

Although this statement applies these principles to ICU resource allocation issues, they have a broader relevance as a moral framework to define fairness when allocating limited health care resources in other contexts as well.

Table 2 presents brief summaries of the specific positions to introduce the scope and nature of issues addressed. The main body of the statement provides a much more complete description of each position, followed by discussion of its application with examples of practical relevance to ICU providers.

#### Recommendations and Conclusion

If one accepts that limitations on access to marginally beneficial health care services, including ICU care, are necessary, then one must face the challenge of how to establish such limitations in a fair manner. The principles in this statement provide an ethical framework for that decision-making process by policy makers at the level of health care organizations and by individual practitioners at the bedside. The statement's positions provide a detailed guide for both to apply to specific allocation issues involving ICUs. These principles and positions are intended to stimulate continuing professional and public discussion regarding issues of fairness in allocation of ICU and other health care resources.

This statement identifies important needs to address major current deficiencies related to ICU care: (1) the need for changes in behavior of health care providers to affirm more strongly the rights of patients to forgo life support and to receive ICU care only when it is truly desired; (2) the need for increased public education about the realistic benefits and burdens of ICU care and the limitations of invasive interventions, such as intensive care, in treating the terminally ill; and (3) the need for additional ICU outcomes research funded, in part, by health care insurers and other payers and organized through a publicly sponsored peer review process. This research should aim to provide vital information for counseling patients and their families regarding ICU care and for developing fair and rational policies regarding limits on ICU utilization.

In conclusion, the leadership of ICU health care providers and their professional organizations, as well as broad community involvement, is essential to guide these discussions and decisions. The ultimate goal of these efforts should be to ensure that the difficult decisions to allocate ICU resources will be made fairly and in accord with the traditional values of the health care professions and with deeply held societal values that respect basic human rights.

## INTRODUCTION

American Thoracic Society (ATS) members, caring for critically ill patients in intensive care units (ICUs) or as ICU directors, commonly must make decisions that allocate ICU resources. Some of these prioritize use of ICU beds while others limit access to specific resources of ICU care. Although these decisions arise when providing medical care, they occur in a broader context that includes ethical, economic, and legal considerations. This context relates to a basic question that society and the health care professions must face: if limitations on access to intensive care and other health care services are inevitable, how can they be applied fairly?

Many hold the opinion that limitations on access to health care are inevitable (1–13). Several trends support this opinion: (1) an increasing demand for health care services, including intensive care; (2) increasing costs for providing those services (14–18); (3) the evolution of many health care systems in the United States and other countries into financially closed systems, i.e., having global budgets or otherwise assuming all financial risk for health care expenses of their users (19); and (4) the increasing prevalence and power of mechanisms to constrain those expenses, such as intensified utilization review and managed care (15, 20, 21).

Factors driving up demand and costs include: (1) increased access to health care in the United States since the 1960s through Medicaid and Medicare; (2) increased number and improved survival of patients with disproportionately high medical needs, e.g., the elderly and the chronically ill; (3) in-

TABLE 1  
PRINCIPLES FOR FAIR ALLOCATION OF ICU RESOURCES

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Principle 1: Each individual's life is valuable and equally so.
Principle 2: Respect for patient autonomy, as represented by informed consent, is a central tenet for providing health care, including ICU care.
Principle 3: Enhancement of the patient's welfare, by providing resources that meet an individual's medical needs and that the patient regards as beneficial, is the primary duty of healthy care providers.
Principle 4: ICU care, when medically appropriate, is an essential component of a basic package of health care services that should be available for all.
Principle 5: The duty of health care providers to benefit an individual patient has limits when doing so unfairly compromises the availability of resources needed by others.

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TABLE 2  
SUMMARY OF POSITIONS FOR FAIR ALLOCATION OF ICU RESOURCES

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Position 1: Access to ICU care requires that patients have sufficient medical need.

Position 2: ICU care should provide the patient a certain degree of potential benefit. On grounds of insufficient benefit to the patient, those who are permanently unconscious or who suffer from severe irreversible lack of cognitive function should generally be excluded from intensive care.

Position 3: Whenever feasible, patients should give their informed consent for initiation and continuation of ICU care.

Position 4: Patients should have equal access to ICU care regardless of their personal and behavioral characteristics.

Position 5: ICU care should be equally available regardless of a patient's ability to pay.

Position 6: When demand for ICU beds exceeds supply, medically appropriate patients should be admitted on a first-come, first-served basis. Because comparing degrees of benefit or need between patients competing for ICU care is morally problematic, as long as patients meet thresholds for medical need and benefit, they should be treated the same.

Position 7: Access for marginally beneficial ICU care (i.e., care providing only minimal or a small incremental benefit) may be restricted on the basis of its limited benefit relative to cost. Decisions to restrict care on this basis should be made covertly by individual health care providers.

Position 8: Prior to health care institutions limiting access to ICU care on the basis of limited benefit relative to cost, prerequisites for efficient use of health care resources, fair redistribution of savings, and public disclosure must be fulfilled.

Position 9: Health care institutions and their providers should ensure availability of ICU beds by matching supply to medical need. Institutions should not initiate new programs that would increase demand for ICU care unless they provide additional ICU capacity and funding.

Position 10: Once admitted to an ICU, qualified patients should generally receive all resources appropriate to meet their medical needs. Exceptions include if the scarce resource they need is already in use or if their consumption of a resource is so disproportionately great that its availability for others is endangered.

Position 11: Health care institutions and their providers should limit access to ICU resources by means of explicit policies that are made known to patients and the public.

Position 12: Patients and the public should be informed of financial incentives for limiting ICU care by physicians or health care institutions.

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creased use of new and expensive diagnostic and therapeutic modalities; and (4) widespread faith by patients, health care professionals, and government in the power of scientific medicine, the value of medical research, and desirability of technological advancements.

Against this background of increasing demand and finite resources, issues related to allocating ICU resources are notable for several reasons: (1) ICU costs are substantial; for example, they have been estimated to comprise 15–20% of U.S. hospital costs, which in turn comprise 38% of the total U.S. health care costs (14, 15) and can be expected to increase in the future; (2) ICUs are highly visible to health care professionals, patients, their families, and society as symbols of the success of modern high-technology medicine; (3) ICUs are responsible, in large measure, for the survival and successful recovery of an increasingly large number of severely ill patients; and (4) ICU care is highly valued by ICU survivors and their families and even by families of nonsurvivors (22).

How health care organizations will meet increasing demand despite financial constraints raises specific questions:

1. Given the need to limit access to marginally beneficial services, including ICU care, what criteria should be used to fairly select patients for ICU admission and discharge?
2. In the face of financial pressures, how will health care institutions deal with the problem of treating uninsured patients? Should they be permitted to restrict access to their ICUs for uninsured patients who are in need of such care?
3. In a financially closed system, if more resources are devoted to ICU services, fewer resources are available for other services and vice versa. In view of this competition and the high cost of providing intensive care, on what bases should a health care system allocate its resources for ICUs?
4. In some health care systems, primary care physicians act as gatekeepers, with personal economic incentives to limit costs by restricting access to specialists or expensive diagnostic tests. Critical care physicians and ICU directors may find themselves facing similar financial consequences for not controlling ICU expenses. How should they deal with this potential conflict of interest?

In recognition of the growing importance and complexity of these questions, the ATS formed a multidisciplinary Bio-

ethics Task Force to develop an ATS statement regarding the fair allocation of ICU resources. The purpose of this statement is both educational and advisory, i.e., defining the ethics of professional behavior in this regard. Its underlying thesis is that having competence in applied ethical principles is just as important to the practice of critical care medicine as is competence in other traditional disciplines, e.g., pathophysiology or medical therapeutics. The intended audience includes ICU practitioners and directors, administrators of health care institutions, and other health care professionals and professional organizations concerned with allocation of ICU resources.

The specific aims of the statement are:

1. To establish an ethical framework for sound decision making in ICU resource allocation.
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3. To provide guidelines defining ethically appropriate and inappropriate criteria for admitting and discharging ICU patients and for the use of scarce resources in the ICU.
4. To promote the development of policies and practices by health care providers and institutions which enhance justice and fairness in allocation of ICU resources.

This statement is not viewed as the final answer to all the difficult questions arising from trying to define fairness in making ICU allocation decisions. Rather it is intended to provide initial responses to major issues and promote further discussion among health care providers, their organizations, and other members of society. Its ultimate goal is the development of a societal consensus on how to fairly allocate ICU and other medical resources when it becomes widely accepted that limiting access to potentially beneficial care is necessary.

#### ALLOCATION DECISIONS AND SCARCITY

This statement uses the term *allocation* to refer to the distribution of limited resources among individuals or groups (23–29). When applied to limited health care resources, it encompasses the meanings of triage (25, 30–36), rationing (2–4, 7, 9, 10, 37–39), and prioritizing (12, 40–42). Common to all is the need to decide who should receive which health care resources when

not enough are available for all. These types of decisions are traditionally divided into two distinct categories. *Macro-allocation* decisions occur at the level of public policy and have a broad geographic or societal scope, e.g., government funded health systems. *Micro-allocation* decisions occur at the level of individual patients, e.g., competition between patients for a single ICU bed. However, this distinction has become blurred as the power of managed care organizations and health care insurers has grown. Many allocation decisions now occur in-between macro- and micro-levels, e.g., regional insurers limiting access to services by not covering them in their health care benefits.

Even more important than this blurring is the fundamental link between allocation decisions made at a higher level and those at a micro-level. The former, also designated as first-order decisions, dictate how much of a resource will be available while the latter, designated as second-order decisions, determine who will get how much of what is made available (43). First-order decisions basically establish the level of scarcity at the micro-level and, hence, dictate the difficulty of the second-order choices. For example, the first-order decision to fund chronic dialysis for all patients with end-stage renal disease (ESRD) in the United States by Medicare in 1972 transformed what had been an exceedingly difficult second-order decision, i.e., deciding which few of the many patients with ESRD would receive dialysis, into an easy one (44, 45). Because they ultimately select who will live and die, decisions allocating life-sustaining resources have been called "tragic choices" (43). Deciding to fully fund chronic dialysis for all those in need, while eliminating tragic choices for patients with ESRD, merely shifted the issue of making tragic choices onto patients with other diseases, such as severe chronic lung disease or cancer, whose treatment was not fully covered by Medicare.

When applied to the ICU, if decisions are made at the level of a hospital or integrated health system to allocate more resources for ICU care, there will be fewer ICU bed shortages when demand peaks. Similarly, there will be less need to make decisions to limit access to ICU care. Conversely, if fewer resources are allocated for ICU care or if new non-ICU programs are initiated that require additional ICU resources, e.g., liver transplantation, without adding more ICU resources, the need to make choices among patients in need of ICU care will increase. Because of this connection between traditional macro- and micro-level decisions, this statement includes aspects of both relevant to its specific aims. However, it does not address conditions of very severe scarcity, i.e., mass casualties or the extremely limited health care resources in nonindustrialized countries. Similarly, because availability of ICU resources are affected by non-ICU health care programs, a complete discussion of how much of their resources a hospital or network of hospitals should devote to ICU care is beyond the scope of this statement. However, the statement holds that health care institutions should ensure availability of ICU care for medically appropriate patients presenting to the ICU with emergency conditions or as a consequence of other institutional programs.

Although this statement accepts the premise that limits in access to *marginally* beneficial health care services, i.e., care that provides a minimal or small incremental benefit, or to extraordinarily expensive care are inevitable, it does not assume that the scarcity of resources will be so severe that medically appropriate patients will be denied clearly beneficial, inexpensive care. An example of the latter is treating pneumococcal pneumonia with antibiotics.

Denying other than marginally beneficial care can hope-

fully be avoided by several approaches. The first is by intensified efforts to identify and respect the preferences of those who want to forgo life support and other costly interventions, such as ICU care, when they are seriously ill. The second is by enhanced public education about the limitations of the ICU and other high-technology, invasive approaches in treating patients with underlying terminal conditions. A third is by the widespread application of outcomes research to ICU and other types of clinical practice to utilize resources efficiently and to identify nonbeneficial or marginally beneficial ICU services. The last is by developing a societal consensus to restrict access to those marginally beneficial health care services that are judged to lack sufficient value for their cost (46–48).

## ICU RESOURCES AND MISSION OF THE ICU

*ICU resources* are those resources that provide intensive care to critically ill, injured, physiologically unstable, or potentially unstable patients. Although referred to as ICU beds, they include not only the beds but also the full complement of professional staff and capacities for physiological monitoring and invasive diagnostic and therapeutic interventions. Although critical care medicine can be delivered in a number of settings (49, 50), this statement uses the terms *intensive care* or *ICU care* to solely designate critical care provided in an ICU. Furthermore, intensive care does not solely equate to the provision of life support since stable, ventilated patients can be safely managed in non-ICU settings (51). Intensive care is distinguished from nonintensive care by several major characteristics: (1) caring for patients with a high severity of illness that acutely or potentially threatens their life, bodily integrity, or other vital functions; (2) having a multidisciplinary health care team respond to that threat in a well-organized and sustained manner; and (3) providing this care in a geographically defined location, the ICU. Although this statement focuses on the ICU, its principles and positions can be applied to other locations where life support is provided and resources limited.

Although the scope of specialized services provided by an individual ICU should be defined within the context of its parent institution and associated health care system or the regional distribution of health care institutions and their ICUs, the mission of all ICUs should be the same. This statement affirms that the mission of the ICU encompasses the following three goals. Its primary goal is to preserve meaningful human life by protecting and sustaining patients in a caring manner when they are threatened by an acute critical illness or injury or as a consequence of medical or surgical therapy. In this context, meaningful life refers to a quality of life personally valued and appreciated by the patient. Second, the ICU should provide specialized rehabilitative care to ICU patients as they start to recover from their critical illness or injury. Finally, for patients previously admitted for full ICU care but whose disorders prove to be overwhelming or for whom it is decided not to continue life support, the ICU should provide compassionate and attentive care to the dying and their families and to ensure that patient suffering during their final hours is alleviated.

In contrast to the first ICU goal with which ICUs have been traditionally associated (50), the second and third goals deserve explanation. Starting immediate rehabilitation in the ICU is appropriate because it benefits patients by facilitating their recovery from critical illness or injury. Furthermore, by giving caregivers the opportunity to participate in furthering the successful outcomes of their patients during their initial recovery phase, it gives them enhanced professional satisfaction. Finally, it may also speed the recovery process and promote

the efficient use of health care resources because it provides continuity of care.

Caring for ICU patients dying from effects of their critical illness or injury, when there is no hope of recovery, is appropriate because intensive efforts are often needed to ensure that suffering is well controlled during and after removal from assisted ventilation and other life support. Continuing ICU care during a patient's final hours also emphasizes the therapeutic relationship among the patient, family, and health care providers. By this, it endorses integrating a humane model of ICU care into the traditional technical model of ICU care while recognizing that alternative units specifically devoted to palliative care may be able to offer similar care for dying ICU patients (52).

## PRINCIPLES UNDERLYING FAIR ALLOCATION OF ICU RESOURCES

In order to be acceptable, decisions to limit access to health care resources have to be viewed as fair by health care providers, patients, the local community, and the community at large, i.e., a nation or other large political or cultural unit. To accomplish this, the following principles are endorsed as the ethical basis for the statement's specific positions. Although this statement applies them to allocation of ICU resources, they have a broader relevance and can serve as a moral framework to define fairness in decisions to allocate other health care resources. Discussion of the principles, including their derivation and significance, is presented in the APPENDIX.

### POSITIONS ON SPECIFIC ICU ALLOCATION ISSUES

The following positions result from applying the principles in Table 1 and the mission of the ICU, as stated above, together with considerations of fundamental goals of medicine (53-56) to specific issues involving allocation of ICU resources. In these circumstances, the principles provide the ethical criteria by which determination of fairness have been made.

**Position 1:** Access to ICU care requires that patients have sufficient medical need.

As a first and necessary condition for admission to an ICU, the patient must meet a threshold for medical need. Meeting this threshold means that the patient would be placed at significantly increased risk of death or disability without ICU care. ICU physicians should define this threshold according to their professional judgment and standards of sound medical practice.

Although uncertainties preclude setting a rigid threshold in many clinical circumstances, if a patient *clearly* lacks sufficient medical need for ICU care, he or she should not be admitted. Likewise, if it becomes clear that an ICU patient no longer has sufficient medical need, he or she should be discharged. Under these circumstances, denial of ICU admission or discharge from the ICU should occur even if ICU beds are available and the patient, family, or patient's private physician requests otherwise.

**Position 2:** ICU care should provide patients with sufficient potential benefit.

As a second necessary condition for admission to an ICU, the patient must meet a threshold for potential benefit. Meeting the "benefit" threshold requires a reasonable expectation that the patient will benefit from the ICU care. What is beneficial for an individual should be decided jointly whenever possible by the patient (or patient's surrogate) and provider by consid-

ering the benefits and burdens of ICU care in relation to the patient's values and life goals.

If ICU care *clearly* lacks sufficient benefit for a patient, he or she should not be admitted. Likewise, if it becomes clear that an ICU patient will no longer receive sufficient benefit from continued ICU care, he or she should be discharged. Under these circumstances, denial of ICU admission or discharge from the ICU should occur even if ICU beds are available and the patient, family, or patient's private physician requests otherwise.

It is generally recommended that patients who are permanently unconscious or suffer from severe irreversible lack of cognitive function be excluded from intensive care on grounds of insufficient benefit to the patient. If patients develop these clinical conditions while in the ICU, subsequent ICU care, if provided at all, should generally be limited to a brief period of palliative care. A patient who is pronounced dead by neurological criteria can derive no benefit from ICU care. In this case, the body should be removed from the ICU unless maintenance of organ function is needed for their subsequent donation.

**Position 3:** Whenever feasible, patients should give informed consent for initiation and continuation of ICU care.

If a patient clearly meets the thresholds for medical need and benefit (or if the potential benefit is uncertain without a therapeutic trial), ICU admission should be recommended. Under urgent circumstances, when obtaining informed consent from the patient (or surrogate decision maker) is not feasible prior to ICU admission, the patient's consent should be assumed. All such patients should be admitted to receive ICU care, but the assumption of consent should be verified with the patient or surrogate as soon as feasible.

In general, ICU care should be discontinued if an informed ICU patient with decision-making capacity or an informed, ethically appropriate health care proxy or surrogate decides to forgo it. Under these circumstances, initiation of life support alone does not justify its continuation. Under less urgent conditions, the purposes, benefits, and burdens of intensive care and of alternative therapies should be explained and informed consent obtained before ICU admission.

### Discussion

ICU care lies at the far end of the spectrum of resource utilization and cost among health care services (14, 29). It is expensive because of the need for a large number of skilled health care practitioners to care for each patient and because of its use of technologically advanced monitoring systems and other costly interventions. Because of these high costs and personnel needs, only a limited number of ICU beds are available in a given hospital. As a consequence, demand for them may at times exceed supply (57, 58). Because of these considerations, ICU utilization can be justifiably restricted by health care institutions to those patients who have sufficient medical need and potential benefit. Institutional policies should provide for mechanisms to resolve conflicts between patients and physicians or between physicians over allocation decisions.

Setting the threshold for medical need for ICU admission or for continued ICU care depends on medical knowledge and professional judgment. Ideally, these judgments should be based on well-designed studies of outcomes comparing subsets of patients with differing degrees of medical need treated in ICUs compared with being treated in monitored non-ICU units. Unfortunately, such studies are uncommon and variations in clinical presentations and comorbidities among pa-

tients make comparisons of survival and other important outcomes difficult.

Setting the threshold for benefit is even more complex than establishing the threshold for medical need since patients differ widely in what they might view as a benefit or as a reasonable chance to achieve that benefit. For this reason, these questions cannot be answered by medical judgments alone and must take into account the patient's values and goals. Defining and using a threshold for benefit as a requirement for ICU care is consistent with recommendations by the ATS on limiting life-sustaining care on the basis of medical futility (59). If continued ICU care is judged to be medically futile as defined by being highly unlikely to result in a survival that has meaning and value for the patient, there is no ethical obligation to continue providing it (59). However, use of the term, futility, remains controversial because of lack of consensus about its definition, arguments over its ethical basis in making medical decisions, and inconsistency in how it is interpreted by clinicians (60–64). If an institution allows it to be used to deny ICU care, its policy on medical futility should be explicit and its use subject to institutional review for accuracy and consistency (65). Patients and their surrogates should be made aware of the policy and be given the option of possible transfer to another institution.

The need for informed consent for ICU care should be self-evident because of the physical and emotional burdens that ICU care imposes on patients and the uncertainties of their outcome. Although the vast majority of ICU patients recover and value their ICU care, a significant minority do not survive to hospital discharge (66–69). Furthermore, some survivors will remain chronically ill or die at home within a few months of discharge. Not uncommonly, there is a heavy financial burden (70). Because weighing the potential benefits of ICU care, i.e., a chance for continued survival, against its burdens is a personal decision, it is highly desirable for the patient (or surrogate decision maker) to give informed consent to receive intensive care prior to ICU admission. Ideally, a patient's advance directive should note a patient's preference for or against intensive care. More realistically, preference related to intensive care to treat possible complications can be addressed as part of the informed consent before major elective interventions. If informed consent for ICU care has not been obtained, then these discussions should occur as soon after ICU admission as feasible. Capable patients who have clearly communicated that they do not want ICU care should not be admitted even if their family requests otherwise, e.g., after the patient has lost decision-making capacity. The same holds if the one seeking ICU care on behalf of such a patient is the patient's personal physician.

In the absence of a clearly expressed preference by the patient or an explicit directive *against* ICU care by his or her surrogate decision maker, a *presumption* should be made in favor of ICU care. Thus, as a general rule, ICU admission should be provided to *all* medically appropriate patients unless known to have been proscribed. Medical appropriateness for ICU care is defined as having sufficient medical need and potential benefit. On the other hand, there should be no presumption for indefinite continuation of ICU care. Initiation of ICU care and life support is not an ethically or legally valid reason alone to justify its continuation (59). Health care providers have a duty to hold discussions with ICU patients or the families of patients as soon as feasible after ICU admission and at regular intervals afterwards to confirm that they continue to desire ICU care and give their informed consent for that course of action.

For certain extreme cases, this statement supports the de-

velopment of national, rather than local, standards for setting the threshold for benefit to the patient. Based on the positions expressed by the ATS, the Society of Critical Care Medicine, and others that ICU care and life support for permanently unconscious patients are inappropriate (35, 50, 59, 71, 72), this statement recommends that such patients generally be excluded from ICU admission or continued ICU care. On the same grounds, i.e., that they lack meaningful survival, it is recommended that access to ICU care generally be denied to patients who suffer from severe, irreversible lack of cognitive function, e.g., those with permanent and severe dementia. Finally, those who meet neurological criteria for death are in a separate category since they are legally dead. By definition, they lack survival *per se* and cannot benefit from intensive care.

This statement recognizes that certain hospitals reflecting sentiments of a local community may establish their own criteria that support continued ICU care for these extreme cases based on their own values. Under these circumstances, public funding should not be provided for these efforts unless there is a societal consensus to do so.

These recommendations are consistent with the traditional ethical principles of medicine to benefit one's patients (beneficence) and to do no harm (nonmaleficence) without their consent or without giving them a chance to receive a benefit that would be valuable to them (53, 55, 56, 73). They are also consistent with one major goal of medicine, which is to serve the best interests of patients by preserving or restoring the individual patient as a sentient and functioning person. Keeping only cells, tissues, of organs or a patient alive and functioning (except when they could benefit others when transplanted) is not an accepted goal of medicine.

**Position 4: Patients should have equal access to ICU care regardless of their personal and behavioral characteristics.**

ICU admission or continued ICU care must *not* be denied to a patient who otherwise meets established thresholds for medical need and benefit solely on the basis of extremes of age, race, ethnic origin, religious belief, sexual or political orientation, perceptions of social worth, how poorly the patient has complied with social norms or with prior medical advice, other self-injurious behavior, or similar personal characteristics or behaviors of the patient's family or friends.

In addition, patients who otherwise meet criteria for ICU care but have "Do Not Resuscitate" or "No Code" orders should not be refused ICU admission solely because of these orders unless they forgo other forms of life support. For patients with these types of orders, health care providers should clarify with the patient and surrogate what forms of ICU care are or are not desired.

**Position 5: ICU care should be available regardless of a patient's ability to pay.**

Patients who cannot pay for their health care must have access to ICU resources equal to those who can. Health care institutions and their health care providers have a moral obligation to provide intensive care to all patients when it is desired and medically appropriate, irrespective of a patient's ability to pay.

#### Discussion

Restricting ICU admission or continued ICU care on the basis of the patient's personal attributes or ability to behave within societal or medically approved norms is not ethically justified. Lack of justification is based on the principle that each individual is equally valuable and that personal characteristics are

not the morally relevant criteria to distinguish among those given access to ICU care or not. Since Aristotle it has been axiomatic in considerations of distributive justice that equals should be treated equally and unequals unequally with regard to *morally pertinent factors* (56). The morally determinative factors in these circumstances are not the patients' personal characteristics but whether they are medically appropriate (whether they meet thresholds for ICU admission based on medical need and benefit) and whether they consent to such care. If so, they should be treated the same and admitted to the ICU.

If a patient has an order that prohibits attempts at resuscitation in the event of a cardiopulmonary arrest, i.e., a Do Not Resuscitate (DNR) or Do Not Attempt Resuscitation order, all other medically appropriate care, including ICU care, should be given. Likewise, if a DNR order has prohibitions against some, but not all, forms of life support, the patient should be admitted to the ICU to receive the nonprohibited interventions when medically appropriate and agreed to by the patient or appropriate surrogate. However, if a non-ICU patient wants to forgo all types of life support or all those unique to an ICU, he or she should not be admitted to the ICU.

If a patient is already in the ICU when the decision to forgo ICU life support is made, when and if to transfer that patient out of the ICU depends on several considerations. The first is how much medical and nursing care will be needed to ensure control of pain or suffering experienced when and after life support is withdrawn. It also depends on how long he or she is expected to survive after withdrawal of life support and how pressing the demand is for an ICU bed. For example, if survival is expected to be a matter of several hours or less and no other patient urgently needs that bed, then the ICU should carry out the terminal withdrawal of life support and ensure that the patient's suffering after removal of life support is controlled. However, if another patient has urgent need for an ICU bed in an otherwise full ICU and no other patient can be discharged safely, the transfer should occur as soon as possible. If no patients are waiting and survival off life support is expected to be longer than several hours, decisions regarding continued ICU care should be made on a patient-by-patient basis, depending on how much attention and effort is needed to ensure adequate control of pain and suffering and anticipated time of death. The possibility of early discharge from the ICU should be discussed in advance with the patient or surrogate.

Providing treatment to patients irrespective of ability to pay or their health insurance status is justified by the life-threatening or otherwise serious conditions that need to be treated in the ICU. Some studies suggest that seriously ill patients who lack financial resources receive fewer services and may have worse outcomes (74). This statement recommends that the same moral obligation that health care institutions have to provide emergency care to all medically appropriate patients be extended to intensive care. Furthermore, it strongly advocates that intensive care, like emergency care, be considered as an integral component of a package of basic health care benefits available to all of a country's residents (12, 47, 75).

**Position 6:** When demand for ICU beds exceeds supply, medically appropriate patients should be admitted on a first-come, first-served basis.

Based on the principle that every individual's life is equally valuable, patients meeting thresholds for medical need and benefit should be admitted on a first-come, first-served basis. Similarly, patients who continue to meet criteria for medical

need and benefit should continue to receive ICU care. They should not be discharged prematurely with medical care inadequate for their needs in order to make room for a new ICU admission. This is true even if competing patients differ in terms of their needs or potential benefit, including age, expected duration of survival, relative chances of survival, or perceived quality of life pre- or post-ICU, as long as they exceed the ICU thresholds established for need and benefit.

#### Discussion

One problem inherent in the approach of selecting patients for limited ICU resources on the basis of greater benefit lies in the difficulty in defining that benefit without ambiguity, bias, or subjectivity. It is doubtful that any system used to calculate an overall "benefit" in order to compare two specific patients will find widespread acceptance. Because of these difficulties, using such an approach to make potentially life-or-death decisions is morally problematic. Although techniques exist for quantifying health care benefits on a macro-allocation level and even on an individual level for specific interventions (76), no accepted method for making *interpersonal* comparisons of benefit currently exists. Similar ambiguities and problems exist when using differences in medical need as the selection criterion between competing patients.

It has been suggested that if two patients competing for the same ICU bed have different benefits from ICU care, then the one with the greater potential benefit should be given priority (35). This is an extension of the use of triage in battlefield or mass casualty situations. Like those situations, it is a utilitarian-based system where greater potential benefit represents more utility (which should be maximized) (30, 32, 77). This statement's position is fundamentally different. It recommends against making ICU allocation decisions on grounds of relative benefit (or of relative medical need) as long as both patients meet these thresholds. The basis for this recommendation is that in nonmilitary triage situations, the alternative is too morally problematic because of the difficulties inherent in the process of trying to define and rank relative degrees of potential benefit or need. These could lead to patients being unfairly excluded from ICU care.

This statement endorses an alternative approach for routine ICU use: that all patients who clearly exceed the established ICU threshold for minimal benefit and need should be treated the same. As such, they should be allocated ICU resources on a first-come, first-served basis. The use of first-come, first-served resembles a natural lottery—an egalitarian approach for fair ICU resource allocation (30, 56). This system of selection is not strictly egalitarian since it allows some privileged members of society to have easier, i.e., faster, access to the ICU than others. Despite this flaw, it is held that access for ICU care should be analogous to access for emergency medical care, which is also carried out on a first-come, first-served basis subject to urgency of the patient's medical problem.

*Use of ICU prognosis systems in deciding between competing patients.* One approach to address the problem of subjectivity and ambiguity in defining benefit would be to use an objective method that predicts ICU outcomes using one of several ICU prognostic systems. These are statistical models to predict hospital mortality of ICU patients derived from large heterogeneous ICU databases (67, 68, 78).

Because their predictions are drawn from experience with patients actually receiving ICU care, it is an error to use such scores *alone* to deny ICU admission to patients with *low* predicted risks of hospital death, since their good prognoses assume that they would receive ICU care (79–81). Additionally, despite recent interest in trying to identify which ICU patients

would do well in intermediate care units (82–86), there is a need for additional outcome studies to define which categories of patients with low predicted risks of death (if admitted to an ICU) would do as well if admitted to an intermediate care unit or to a standard patient unit with EKG monitoring.

It is also not recommended that patients be excluded from ICU admission *solely* on the basis of a *high* likelihood of death predicted by these systems because of limitations in accuracy due to the statistical nature of their deviation and the heterogeneity of the reference populations (81). Even if more accurate and discriminating prognostic tools become available in the future, a value judgment would be needed to decide what minimal differences in predicted survival rates should be morally compelling. For example, it does not seem medically reasonable to prematurely discharge an ICU patient with a 51% risk of death in order to admit a patient with a 49% risk.

Even marked differences in risk of death between two competing patients could be problematic. For example, in these circumstances some ICU clinicians might give their last ICU bed to the patient with the higher rather than lower mortality risk. They might reason that this patient would face certain death without the ICU care compared with the patient with the lower risk who might be safely accommodated in an intermediate care unit supplemented with some temporary extra resources. Consistent with this approach, studies indicate that the average severity of illness of patients admitted to ICUs during periods of ICU bed shortage increases rather than decreases (57, 58).

These considerations do not mean that predictive models have no value, only that they have limitations and should not be relied upon for individual allocation decisions. They are an important way of systematically combining clinical outcome data in order to inform clinical decisions and will be essential in the future to establishing a stronger scientific basis for defining outcomes in critical care medicine.

*Use of differences in life expectancies in deciding between competing patients.* Another relatively objective way to determine differences in potential benefit among patients competing for ICU beds would be to use differences in life expectancies. If one only considers the life-expectancy approach, it will favor the young over the old on statistical grounds. However, to be comprehensive and meaningful one would need to combine this approach with methods of assessing risk of death from critical illness. As such, it shares the latter's difficulties as discussed above. Furthermore, although the average 20-yr-old man can be expected to live longer than the average 30-yr-old man, life expectancies for specific individuals would have to be adjusted for variables other than age for the sake of accuracy. These are legion and include the presence of chronic disease, risk factors for major causes of mortality, such as heart disease and cancer, socioeconomic class, and more subjective variables, such as depression and health self-perceptions. The need for these adjustments make this criterion by itself ambiguous, since all the adjusting factors are not known accurately for specific individuals.

The use of age as a determinant of relative potential benefit (aside from its known prognostic importance for predicting hospital death from critical illness) would constitute a clear bias against the elderly in making ICU allocation decisions. This is morally problematic in the absence of societal consensus for such a stand. For example, American society has not explicitly agreed to limitations in providing general health care services to the elderly, e.g., Medicare coverage for ESRD or other diseases does not become restricted after a certain age (44).

If it becomes necessary to limit beneficial health care services for certain groups, an ethical argument based on the

principle of fair equality of opportunity could be made to limit such care to the old in order to provide it for the young (6, 87). To do otherwise would effectively deny the young an equal opportunity to reach old age. However, it is not so clear that the choice is, or will ever be, so simple or so restricted. Nor is this ethical argument so straightforward in regards to the current elderly since society did not provide them preferential access to health care services as younger individuals. Furthermore, they might not voluntarily agree to forgo their current health care entitlements.

*Potential for abuse when using relative potential benefit.* A "slippery slope" argument can be raised against comparing patients competing for ICU beds on the basis of their potential benefit. In the past, certain patients, e.g., the elderly or those with certain chronic diseases, were denied access to life-saving medical care because they were regarded as having less "potential benefit." For example, many individuals were excluded on this basis from chronic hemodialysis in the United States (prior to universal Medicare funding) and in the United Kingdom, where the practice continues (10, 30, 44, 88). If such subjective evaluations of comparative benefit are utilized to govern access to ICU care, they may be abused for fiscal or other purposes as has been already reported (89). For example, if a hospital wanted to expand its cardiac surgery program (involving predominantly insured patients) and give these patients preferential access to its limited ICU beds, they could be deemed to have more "potential medical benefit" (e.g., a lower mortality rate) compared with critically ill (but predominantly uninsured) patients coming from the hospital's emergency department.

Position 7: Access for marginally beneficial ICU care can be restricted on the basis of high cost relative to benefit.

Marginally beneficial ICU care may be justifiably limited on the basis of a societal consensus that its cost is too high relative to the value of its outcome. This can apply to ICU care when it has a low likelihood of success, a short duration of benefit, an extremely high cost, or a poor quality of benefit.

Decisions to limit care on this basis should not be made covertly by individual health care providers but only by explicit institutional policies that reflect a societal consensus in support of the limitation.

The following categories can be considered as candidates for exclusion from ICU care on this basis: patients highly unlikely to survive their acute illness or injury, even with ICU care; those facing imminent death due to a fatal untreatable underlying disease; and those who are permanently unconscious or irreversibly lack all cognitive function.

## Discussion

Although health care practitioners control ICU use and their patients are the beneficiaries of those decisions, health care institutions and their ICUs are ultimately societal resources. Hence, judgments as to how best to utilize these resources lay outside of the sole authority of health care practitioners and beyond the limits of autonomy of patients. It is in the interests of all members of society that health care resources are available when they are needed. If limited resources are expended for the desperately ill, no matter how ineffective or expensive the treatment, it will ultimately reduce the availability of other health care services for all those in need (1). In a system with limited resources, extraordinary expenditures of resources for marginal gains unfairly compromise the availability of a basic minimum level of health care services for all. Under these cir-



cumstances, there is a justifiable limit to the duty of health care providers and institutions to continue treatment.

Because opinions of individual health care providers reflect the values of those individuals rather than those of the community at large, they alone should not make decisions to limit ICU care on the basis of cost to society. For the same reason, this proscription applies to a small group of practitioners, their institutions or "local" communities, i.e., those lacking a broad societal scope. Judgment as to the worthiness of a potential benefit relative to its costs ideally should be decisions that reflect widely-held cultural values. Ethical theories of justice have proven notoriously unhelpful in providing practical answers to many of the most difficult questions that involve imposing limits on beneficial care (90). Often, clinicians and other decision makers are faced with a range of morally permissible alternatives, no one of which is clearly correct. When this occurs, a public approach to reaching a consensus that reflects broad cultural values represents the most promising solution (12, 48, 91, 92).

Examples related to non-ICU care suggest the feasibility of such public-based approaches for other expensive care, including ICU care. One example is the revised Oregon Medicaid Plan that restricts access for certain medical interventions judged by a public body with community input to be marginally beneficial relative to their costs (40–42, 93). Another example includes the limitations in coverage for certain services in the health care programs of the Canadian provinces as dictated by public officials responsible for budgeting their single-payer systems (94). Limitations on highly expensive and selective medical interventions, such as *in vitro* fertilization, are already common and accepted by the public health insurance plans.

If a societal consensus permits access to ICU care to be restricted under certain circumstances due to low marginal outcome and high cost, it could be expressed as a provision in health care insurance such that insurance coverage is not provided for ICU care under those circumstances. If affected patients or their families want to pay the charges for ICU care themselves, public-supported or nonprofit hospitals could justifiably continue to limit their access to ICU care, based on the principle of maintaining equity among patients (treating like patients in the same manner). An additional basis is that ICU "costs" include not only the direct financial costs of ICU care but also the additional costs to society associated with providing the education and professional training for the ICU physicians, nurses, and allied health personnel.

For which patients and under which circumstances ICU care should be denied remains a strongly debated subject. Position 7 suggests several extreme cases for which a public consensus might be achieved in the future. Other have argued that additional criteria, e.g., advanced age, should be considered as well (6, 87). The question remains how to protect vulnerable groups of society from decisions of a potentially tyrannical majority when societal-based limits on beneficial care are considered. Having such decisions subject to public scrutiny and the conscience of the community at large rather than having a small group of physicians covertly making "tragic choices" is a strong safeguard for fairness. Another will be the reluctance of health care providers to restrict potentially beneficial care to their patients based on their roles as patient advocates.

When assessing whether to limit a medical intervention that fits the category of high cost relative to marginal benefit, four different aspects of the treatment should be considered: (1) low likelihood of achieving benefit; (2) short duration of benefit; (3) high cost relative to its benefit; and (4) poor quality of the benefit (77).

*Low likelihood of achieving a benefit.* It is doubtful that us-

ing a low likelihood of achieving a benefit to restrict access to ICU care would be supported by a broad consensus unless the probabilities of survival were extremely low. For example, many patients are routinely admitted to ICUs with predicted mortality rates greater than 50% (66–68). Although the most extreme probability of low likelihood of benefit occurs when survival is unprecedented (95, 96), use of this criterion alone is problematic because no observational method can scientifically prove its validity. Furthermore, using such a criterion may suggest to some that everything should be tried that is not *impossible* regardless of expense. This reflects the so-called Rule of Rescue (97). This rule describes the observation that American society will expend seemingly endless resources to save the life of an identified individual but seems reluctant to spend the same resources to prevent equally certain, but not identifiable, statistical deaths (APPENDIX).

A specific probability cannot be given to the phrase "low likelihood" because of a current lack of consensus in society and in the medical profession. Studies suggest that physicians have reservations about the appropriateness of providing ICU care to patients when the risk of death is about 90%. These were evident with respect to providing ICU care to patients with AIDS in the early 1980s (98, 99) and to elderly ICU patients with three or more organ system failures for three or more days who have a predicted 30-d mortality of 97–100% (i.e., 95% confidence intervals) (100). Similar reservations have been raised regarding patients with bone marrow transplantation admitted to an ICU with acute respiratory failure requiring mechanical ventilation, who have an overall approximate 95% mortality rate upon admission (101, 102). In one series, this increased to 100% mortality (95% confidence intervals of 98–100%) for those with associated hepatic or renal failure or needing vasopressor therapy (96).

*Short duration of benefit.* Concerns over short duration of benefit often arise in ICU patients when there are underlying untreatable fatal diseases. Future restrictions could be modeled on how this criterion is already being used to limit ICU care when patients enter hospice programs after being diagnosed as terminally ill (defined as death expected within 6 mo). As a general rule, when such a patient agrees to enter a hospice program, intensive care is not included in the program's covered services (103). Both the patient and family have been informed of this exclusion as a condition of entering the hospice program. Excluding ICU care is consistent with the hospice's goal of enhanced palliation and quality of life rather than prolongation of life *per se*.

A prognosis of less than 6 mo of life expectancy may have too much uncertainty to be acceptable by medical professionals or the public to use as a basis to restrict ICU admissions. For example, Medicare data indicate that, despite a median survival for hospice enrollees of 36 d, approximately 15% survived beyond 6 mo and about 8% lived more than 1 yr (103). If supported by further outcome studies, concerns about uncertainty in prognosis might be addressed by using shorter life expectancies, e.g., 2–3 mo, as the criterion for setting limits on ICU care. This might also address concerns that some might have that 6 mo seems too long a duration of survival to justify limits on ICU or other expensive care. If limits on ICU care are adopted for this category of patients with short duration of survival due to an incurable underlying disease, it is strongly recommended that they are provided full palliative care, including home care hospice and individualized pain management. This will respect the value of the patient's life and minimize suffering.

*High cost of providing the benefit.* An intervention may be restricted on the basis that the cost of providing the benefit is

extremely high. Because new therapies rarely achieve improvements measured in orders of magnitude, the incremental value of the new therapy then becomes the focus of consideration. A classic example is the incremental cost of sixth stool guaiac to detect one new case of colon cancer which, depending on assumptions of sensitivity and disease prevalence, may cost millions of dollars (46). Although it would lead to a definite benefit, i.e., the early detection of additional cases of colon cancer, no doubt the consensus would be that the incremental cost of detecting each new case is excessively high. Although no similar consensus yet exists for expensive interventions in ICU medicine, the costs and limited outcomes of ICU care for many categories of patients deserve further scrutiny. In view of lack of detailed outcome studies at this time, using this criterion of excessive cost may be more acceptable when applied to restricting specific expensive interventions in the ICU, e.g., extracorporeal life support systems or expensive new drugs to treat sepsis (104), rather than when allocating limited ICU beds among patients.

*Poor quality of benefit.* Use of any of the three criteria discussed above raises ethical concerns related to discrimination and nonobjectivity, since the supporting consensus would reflect subjective societal values. Even more problematic in this regard would be limiting ICU care on the basis of poor quality of benefit. Not only are quality-of-life judgments about others subject to inaccuracies and the potential for bias, but individuals with similar disabilities may view their own quality of life differently, reflecting a spectrum of individual values (105). Furthermore, denying ICU care solely on the basis of perceived poor quality of life, e.g., when applied to the handicapped or mentally retarded, may violate antidiscrimination laws (106).

In the face of these concerns, limiting ICU care on this basis would not likely be acceptable to health care professionals and to the community at large if applied to any except the most extreme cases. The latter might include those who are permanently unconscious or who lack all cognitive function, i.e., with permanent and severe dementia. Position 2 recommended institutions generally restrict ICU care for these categories of patients on grounds that they do not meet a reasonable ICU admission threshold for benefit or on the basis that life support could be considered futile in these circumstances. Access to ICU care might also be denied in these cases on the basis of having too high a cost relative to the marginal benefit. If ICU care is denied on any of these bases, these patients should continue to receive supportive or palliative care (as appropriate and desired by their surrogates) out of respect for their human value and dignity.

**Position 8:** Prior to institutions limiting access to ICU care on the basis of high cost relative to benefit, prerequisites for efficient use of health care resources, fair redistribution of savings, and public disclosure must be fulfilled.

Prior to limiting access to ICU care on the basis of high cost and low benefit, health care institutions and their providers should fulfill the following prerequisites:

1. Eliminate wasteful (nonbeneficial) health care services before marginally beneficial care and, in turn, marginally beneficial care prior to clearly beneficial care.
2. Institute services that provide greater benefit at the same cost or equivalent benefit at less cost.
3. Have a closed financial system such that savings from restricting ICU care on this basis will be spent on fulfilling

other health care goals that provide a basic minimum package of health care benefits for all members of society.

4. Provide full disclosure to the public and to those affected of services limited, the appeal processes, and alternative services.

#### Discussion

Limitation of beneficial care, even if only marginally beneficial, should be preceded and accompanied by other measures of cost containment. Prior to limiting clearly beneficial services, access to the following should be highly restricted or made unavailable: (1) services which the patient or surrogate would prefer to forgo; (2) services proven to be medically ineffective or judged to be unnecessary for specific clinical circumstances by a consensus of expert medical opinion; (3) services judged to provide reasonably equivalent benefit but at higher cost or those that provide less benefit for the same cost; and (4) new services whose benefits have not been established or accepted unless for evaluative purposes such as a clinical trial.

These cost-control measures could be incorporated into an ICU by means of practice guidelines or clinical paths to promote efficiency, consistency, and quality (107). These efforts should be closely linked to institutional and community educational programs. This should be focused on the institution's physicians and other health care providers as well as on patients and their families to reduce utilization of minimally or questionably effective procedures and to affirm patients' rights to forgo undesired life-sustaining interventions, such as cardiopulmonary resuscitation and ICU care.

If the money saved from denial of marginally beneficial care were spent on other resources judged even less worthy by members of society, its ethical justification would be questionable. Although it could be argued that these savings could be spent on resources that society also valued other than health care, e.g., education, it would be more straightforward, more accountable, and, likely, more acceptable to patients and the public to keep the savings within the health care system that produced it. This is especially true in the United States where the savings could provide access to a basic minimum level of health care services for all members of society. One concrete example of the concept of how, in a closed financial system, savings from nonfunding of marginally beneficial procedures (albeit not ICU services) could be used for providing improved access to health care services for the previously uninsured is the approach used by the Oregon Medicaid Plan (40, 42, 93, 108).

Public disclosure is needed to ensure that decisions to deny beneficial care are not made by an unaccountable group who do not truly represent the values of the community at large. This would also protect against the tyranny of the majority in making self-serving decisions, e.g., deciding against funding ICU care for those deemed less socially valuable. Having full public disclosure and fair processes for appeal and for obtaining alternative services are consistent with respect for basic human dignity and for patient autonomy.

**Position 9:** Health care institutions and their providers should ensure availability of ICU beds by matching supply to medical need.

A health care institution and its providers have an ethical obligation to provide ICU care or its equivalent to all medically appropriate patients. When the need for ICU resources *temporarily* exceeds their supply, intra- and interinstitutional transfer policies should be developed to ensure timely ICU admission.

A health care institution and its providers should correct persistent imbalances between supply and need for ICU beds. If shortages of ICU beds persist despite their appropriate and efficient use, they should be increased permanently. Alternatively, demand for ICU resources could be decreased by curtailing institutional programs whose patients are routinely admitted to the ICU. Institutions should not initiate new programs that would increase demand for ICU care unless they provide additional ICU capacity and funding sufficient for the needs of these programs. Prior to starting such a new program, its benefits should be judged worth its cost from a societal point of view.

If a health care institution has a persistent surplus of ICU beds relative to demand, it should not simply lower its thresholds for ICU admission to keep its ICU beds filled with patients who could safely be cared for in non-ICU locations. Instead, it should decrease its supply of ICU beds in the interests of overall efficiency.

#### Discussion

Health care institutions and their providers have a moral and societal duty to provide medical care appropriate to their patients' needs or, if not possible, to stabilize and then transfer the patient to another suitable facility. This statement endorses the concept that this obligation, recognized for the provision of emergency care (109–111), should apply to intensive care as well.

If no beds are available in one ICU to which medically appropriate patients are waiting to be admitted, they should be provided with an equivalent level of care. However, if the wait is unreasonably long, patients should be admitted to another ICU in the same hospital. If necessary to provide beds for waiting patients, demand for ICU beds should be decreased by postponing elective procedures on patients who normally receive ICU care afterwards. Finally, if an ICU bed is still not available, critically ill patients should be transferred to an ICU at a nearby hospital. To decrease demand for ICU beds solely by raising a previously established, medically reasonable threshold of severity of illness needed for admission or discharge is inappropriate.

Persistent shortages of ICU beds do not necessarily mandate an increase in their supply. The alternative is to decrease demand for ICU beds by restricting certain programs that routinely admit patients to the ICU. Conversely, starting a new program that would predictably impact on a limited supply of ICU beds, e.g., starting new liver transplant service or expanding open heart surgery for octogenarians, is not justified unless directly linked to increasing availability of ICU beds. The cost of ICU care for patients of such programs and their expected benefits should be included in considerations of how worthwhile the benefit of the new program is relative to its cost. The same should apply to reevaluation of old programs that utilize ICU resources.

Although much has been written about scarcity of ICU beds, empirical evidence documenting the degree, frequency, and impact of that scarcity and how ICU providers respond is limited (57, 58, 89, 112). These periods of ICU bed shortages do not seem to have substantial adverse impacts on patient outcomes. This is likely due to the efforts of clinicians to provide patients appropriate care outside of the ICU while they work to decrease elective demand (36). Patients awaiting admission to a bed in an ICU are almost always located in a non-ICU setting, such as an emergency department, operating room, postanesthesia care unit, or even a general patient care unit. On

a temporary basis (subject to availability of extra resources if needed), waiting patients in these locations can be provided with the medical care appropriate to their condition. Having the flexibility to convert ICU beds to intermediate care unit beds with lower staffing requirements during slack periods of demand would promote their efficient use (51, 83).

On the other hand, if an institution has persistently unused ICU beds or keeps its ICU beds occupied with patients who could be safely cared for in a non-ICU location, changes should be made. Since it would be less expensive to treat such patients in non-ICUs, converting ICU beds to intermediate care beds would reduce wasteful medical practices. Alternatively, the underutilized beds could be used to accommodate additional medically appropriate patients, e.g., by accepting inter-hospital transfers or by starting or expanding worthwhile programs that depend upon access to ICU beds. ICU directors should not be pressured to keep their ICU beds filled with medically inappropriate patients.

**Position 10: Patients qualifying for ICU care should receive all resources appropriate to meet their medical needs.**

Health care providers and institutions should ensure that ICU patients receive all of the resources that are medically appropriate to meet their needs. Two exceptions are justified. First, limiting specific ICU resources for an individual patient should be done if the needs of that patient are *disproportionately great* such that continuing to provide resources to that patient would jeopardize the availability of resources for others. Second, if availability of a specific resource is severely limited, it should be utilized on a first-come, first-served basis. However, it should be stopped if continued use is not justified by a sufficient degree of medical need or benefit. These starting and stopping rules should be discussed as part of the informed consent process prior to initiating specific scarce interventions.

If available, all health care resources with proven efficacy or whose use is widely agreed upon as having reasonable chance for benefit should be provided to those meeting their indications for use. In contrast, there is *no* ethical obligation to provide any health care intervention shown to be ineffective or whose potential benefit is clearly questionable. In order to ensure fairness, it is critical to determine the relative effectiveness and cost of all ICU interventions. ICU health care providers and payers of ICU care have a duty to continue evaluating existing ICU services in these regards.

ICU practitioners and health care institutions should not accept expensive new diagnostic tests or technology or treatments for routine use until their safety and efficacy, including improved medical outcomes and/or lower costs, have been established. Moreover, they, as a group, have an ethical obligation to carry out research to evaluate new technology or other interventions that might improve ICU care and outcomes as well as lower costs. Financial support for such research should be provided, in part, by organizations that fund health care services as part of their societal mission. Such funding should be done through a public-sponsored peer review process, the research conducted free of proprietary influence, and the results should be in the public domain.

#### Discussion

An inherent tension exists between the physician's duty to place his or her patient's interest first and the interests of fair allocation of resources (1, 8, 26, 28, 113–116). The relevant ethical issues are how to ensure that all patients in need will

receive a fair share of a given resource and how fairness is defined in specific circumstances.

One consideration is whether one patient's need for a limited resource is disproportionately great, i.e., clearly excessive. One exception to the rule that resources should be supplied according to the individual's need is when doing so would have a potentially adverse impact on the other patients who could benefit from access to the same resource. For example, a patient with gastrointestinal hemorrhage continues to bleed despite all standard interventions and needs large amounts of blood products. When continued consumption of these blood products would jeopardize availability of blood supplies for others, it is justifiable for the institution to limit further transfusions. Although traditionally individual physicians have no professional duty to benefit patients other than their own except for matters of public health, a health care institution has a moral responsibility for meeting the health care needs of all that institution's patients (117). This responsibility should be expressed in the form of institutional policies so that an individual physician is not put into conflicting roles to serve his/her patients while considering the needs of other patients.

The situation is different when the resource in question is truly scarce and its use by one ICU patient precludes its use by another (even if the first patient's use is not disproportionate). In this case, first come, first served is the recommended selection rule because this approximates a natural lottery. The resource should continue to be used for the first patient until he or she no longer needs it or benefits from it. For example, extracorporeal life support is typically a scarce resource even in the centers specializing in its use. When a patient on this therapy no longer is reasonably expected to benefit from its continued use, it should be discontinued. In this sense, criteria for use and discontinuation of a specific scarce resource are analogous to those for ICU admission and discharge based on thresholds of sufficient medical need and potential benefit.

This statement recognizes the important role of new technology in the success of modern medicine and ICU care while at the same time acknowledging that the widespread adoption of new technology has been a prime factor in the rise in health care costs. It is irresponsible to spend some of a health care system's limited funds on unproved new technology or therapy for routine use. Critical care practitioners are in the best position not only to resist routine use of unproved new technology or treatments in ICUs but also to evaluate new approaches by assessing their costs, benefits, and other outcomes. In these roles, they and their institutions have an ethical obligation to act as responsible stewards for society's resources.

Although health care providers and institutions may have a duty to assess new technology or therapies, they may not have the means or support to do so. They cannot be expected to finance more than a small part of such research. Financing some of ICU outcomes research should be the responsibility of the organizations that finance health care services. This is justified on the basis that such payers should aim to promote the health of their members and to do so in as efficient a manner as possible. Defining which treatments are effective, which are not, and how much they cost will help accomplish both aims. In order for such studies to be scientifically convincing and ethically justified, precautions should be taken to ensure that the funds for ICU research from these sources are awarded by a peer review process free of commercial or special interests, that the research is conducted without interference by the funding organizations, and that the results of the research are available in the public domain to all health care providers and institutions. A fundamental rule should be that all such out-

comes research should be open and subject to scientific peer review and not viewed as a market commodity or trade secret.

**Position 11:** Health care institutions should limit access to ICU resources by means of explicit policies that are made known to patients and the public.

Policy-making processes regarding how to allocate limited ICU resources should be fair, open, and accountable. Patients, providers, and members of the public representing diverse communities should be meaningfully involved in the development of policies that deny ICU care for specific categories of patients on the basis of its high cost relative to benefit.

Decisions to limit access to ICU resources should be made according to institutional policies that are explicit, verifiable, and accountable and not based on the personal judgments of individual physicians or small groups of physicians. Patients and families directly affected by such policies should be informed of the decision and its rationale and how to appeal an objectionable decision.

Institutions should establish an explicit mechanism for implementing policies to allocate ICU resources. In the event of a disagreement over these allocation decisions, the institution should clearly stipulate in its policy how such conflicts should be resolved.

#### Discussion

Keeping an institution's allocation policy-making process open and involving patients, health care providers in the institution, and diverse members of the community at large provides a safeguard for the process. Involvement of "outsiders" will help to ensure that the process is viewed as fair by all participating parties and to hold the institution accountable for its policies and decisions. Another element to promote fairness is the inclusion of an appeal procedure and the need for making it explicit to affected patients or their surrogate decision makers (65).

Recommending an institutional approach to defining allocation policies and practices promotes fairness in another way. Such an approach should decrease the influence of personal biases or conflicts of interest. It decreases the risk that individual health care providers might try to conserve health care resources on an *ad hoc* patient-by-patient basis at the possible expense of the patient's best interests. Problems posed by *ad hoc* decisions include the likelihood that they reflect only the values and opinions of the health care provider making the decision, the lack of institutional or peer scrutiny, and the lack of a defined and fair process to appeal decisions.

Furthermore, there is an inherent conflict of interest when a health care provider is forced to choose between his or her own patients and other patients in an allocation decision. Being required to follow institutional allocation rules partially removes this ethical burden from the health care providers.

Physician directors of ICUs should be responsible for implementing institutional policies. Based on their prior knowledge, involvement, and expertise in critical care medicine, ICU directors are the best individuals to effectively deal with the medical decisions to limit ICU resources and with associated administrative issues. Whenever possible, decisions to admit or discharge patients from an ICU should be made collaboratively by the ICU director (or his or her designee) and other physicians caring for the patient. It is important that the institution have a clearly defined mechanism for addressing, resolving, and appealing conflicts among physicians involved if a patient is denied ICU care.

**Position 12:** Patients and the public should be informed of financial incentives for limiting ICU care by physicians or health care institutions.

The primary role of physicians and other health care providers should be as advocates for their patients. In this role, they should ensure that their patients are, or have the opportunity to be, informed about potential financial conflicts of interest that encourage restriction or overuse of medical care, including ICU care.

It is inappropriate for physicians, as their patients' advocate, to knowingly enter into an agreement with health care systems or other payers if it prohibits them from informing their patients of existing financial incentives to restrict or to overuse medical care. This same applies if the agreement provides them with a significant personal financial incentive to inappropriately restrict or overuse ICU resources.

#### Discussion

Traditionally, physicians in fee-for-service practice have had financial conflicts of interest that have encouraged overuse of medical services. In contrast, more recently physicians, particularly when involved in managed care systems, are commonly being faced with financial conflicts of interest that discourage the use of medical services (118, 119). For example, primary care physicians in such systems may have financial incentives, such as salary withholds, to control costs for referrals made to specialists or for expensive diagnostic tests (21). The size of incentives varies but may be substantial. In addition, incentives may impact an individual physician's finances directly or indirectly, e.g., as when it applies to a group of physicians. The timing also varies between when a treatment decision is made and when that decision's financial consequence occurs. Depending on its magnitude and how it is implemented, financial incentives of these types have the potential to exert considerable influence over physicians' decisions.

Studies of the effects of such practices and their persistence suggest that they successfully achieve their goals of cost control. Although it remains controversial whether such incentives lead to a lower quality of care or worse outcomes, reports of changes in clinical decision making of primary care physicians subject to such incentives are of concern and indicate the importance of monitoring quality of care outcomes (20, 120).

How much and what type of incentive is so significant as to be ethically unacceptable is difficult to define in monetary terms. No specific cutoff can be identified as a reasonable ceiling for prohibition until more accurate information becomes available. As a general rule, any incentive that influences a physician to withhold clearly beneficial services or medically necessary care from his or her patients (or to provide them with nonbeneficial services) is regarded as morally unacceptable.

Disclosure of financial incentives to limit ICU and other health care is needed because patients in managed care plans may lack knowledge that their physician has such incentives to restrict their care. In managed care, patients and the public may not fully understand the relationship between services provided and their financial implications for the physician or that their physician may earn a "reward" for limiting access to care. Disclosure may be accomplished by information published by the managed care plan or by other means, including disclosure by their physicians. Because the same lack of knowledge about financial conflicts of interest may be true for patients of fee-for-service physicians, especially those providing ICU care, they also should be disclosed.

Some managed care organizations have stipulations in their hiring contracts that prohibit open discussion of these finan-

cial arrangements by contracting physicians (120). Such policies are directly contrary to the concept of informed consent and a physician's ethical duty to patients and, as such, should be unacceptable.

#### UNRESOLVED ISSUES AND UNANSWERED QUESTIONS

The Task Force found itself facing a number of unresolved issues and unanswered questions. Some of these relate to difficulties in how to put its recommendations into practical use. Others require a public consensus for their resolution. Because many allocation decisions ultimately relate to societal values, the need for societal consensus in the United States and other countries is critical for fairness. This statement views its positions not as final answers to challenging public policy questions but rather as contributions for furthering a more thoughtful public and professional discussion on the road to consensus. The following issues and questions were judged to merit special emphasis in this regard.

1. *Lack of accurate outcome information that would facilitate medical judgments regarding medical need for ICU care and its benefits.* For example, which potential ICU patients would do just as well with care in an intermediate unit? Information about other ICU outcomes, e.g., post-hospital life expectancy, or functional and neurological status, would also be useful to patients and their families when they are weighing the benefits and burdens of ICU admission or continued ICU care. In addition, societal costs associated with poor outcomes need to be documented in order to assess which marginally beneficial services might qualify as being too costly relative to their benefit.

2. *How infrequently critically ill patients or their families give informed consent for their ICU care and how well (or how poorly) ICU practitioners and patients' primary care and other physicians facilitate this process.* For example, in one large study (121), a substantial fraction of seriously ill patients did not want life support but, despite this, were admitted to the ICU and received life support. Many had physicians who either did not discuss the patients' preferences to forgo life support with them or ignored those preferences. On the other hand, a large number of these patients indicated that they did not want to forgo life support despite many being terminally ill. The first result indicates a serious problem with the absence of informed consent for ICU care in too many instances. The second suggests a considerable lack of patient understanding of the limits of modern medicine, including intensive care. Are the patients in the latter category giving consent without being truly informed about benefits and burdens of ICU care? Better outcomes studies would also help answer this question.

The number of these patients, i.e., those receiving ICU care without their informed consent and those wanting to undergo cardiopulmonary resuscitation and other life support despite being seriously or terminally ill, no doubt vastly outweighs the few patients who are permanently unconscious for whom ICU is sought. These large differences in magnitude should alert health care providers, health care educators, and the policy makers where their initial educational efforts should be directed.

3. *Large numbers of U.S. residents without adequate or any health care insurance will persist.* This, in turn, will increase the likelihood that lack of ability to pay will limit access to health care, including ICU care, in the future. Societal safeguards are needed in support of this statement's position that there is an ethical obligation to provide equal ICU access de-

spite ability to pay. This statement strongly endorses incorporating access to ICU care for medically appropriate patients as part of a package of basic health care benefits available for all U.S. residents (75) (see APPENDIX for further discussion of the concept of a decent minimum of health care benefits). However, until such a package is established, access to intensive care should be held to the same standard by health care institutions and providers as currently applies to providing emergency medical care in the United States.

4. *How to use ICU beds most efficiently.* Which are the best approaches to organize and administer ICU beds within a single health care institution, in a network of institutions, or in a region? Intra-institutional solutions need to maintain flexibility between an allotment of ICU and intermediate care unit beds so as to accommodate periods of varying demand for ICU beds. Interinstitutional solutions will depend on how efficient it is to have a regional hierarchy of ICU services for adults, similar to existing levels of trauma care or neonatal intensive care. Health services studies of these types of questions are needed before more definitive recommendations can be made.

5. *How to involve the community at large in the process of limiting ICU care on the basis of excessive cost relative to benefit.* Which representatives of society's diverse communities should be involved and at which level? As a start, health care professionals or their organizations should suggest, as this statement has done, certain circumstances characterized by high cost and low benefit as potential circumstances for such limitations. These will initially be based on clinical observations but will need confirmation from outcome studies. Although input from health care payers such as insurers or government agencies is needed, the most effective ways to involve a broader representation of the public remains unclear.

In other countries, the public is involved through political processes, e.g., in setting budgets for the provincial health care systems in Canada (94) or by governmental advisory panels (12), or through administrative decision making, such as the Regional Health Boards in the United Kingdom (88). In the United States, only certain segments of the health care system involve the public directly. For example, the public is involved in decisions to limit access for solid organ transplantation, i.e., its legally mandated national organization, UNOS, sets national standards for patients once on waiting lists (122). Likewise, the revised Oregon Medicaid System used several public processes before arriving at its final prioritization list (42).

This statement urges professional organizations of health care providers to take responsibility for being leaders in this process. Health care providers also need to be patient advocates to ensure that vulnerable groups of the community are not unfairly denied access to beneficial health care by the decisions of the majority.

6. *How to identify which incentives would encourage physicians to make the best decisions for their patients and which would do the opposite.* Research is needed to define which elements of incentives, financial or otherwise, influence physicians' medical judgment and in which direction. Incentives can be constructed to encourage positive actions, e.g., for success in providing preventive screening or following clinical pathways when appropriate, as well as to negative actions, e.g., for much greater than average use of expensive consultants or expensive diagnostic tests. Other elements of an incentive that need study include the influence of its magnitude, its timing, and dilutional effects, i.e., whether qualifying for the incentive depends on decisions by a group or a single physician. More empirical studies are needed to answer these questions and justify more specific recommendations. Furthermore, these

studies may show that additional external mechanisms are needed to monitor incentives to influence their physicians.

There is a vital need for health care providers and their professional organizations to take leadership roles in educating the public about the pros and cons of different systems of health care coverage and the potential conflicts of their incentives, financial and otherwise.

## CONCLUSION

If one accepts that limitations on access to some beneficial health care services, including ICU care, are inevitable, then one must face the challenge of how to do so in a fair manner. The principles in this statement provide an ethical framework for that decision-making process. Its positions provide a more detailed guide for ICU practitioners and health care organizations to apply to their ICUs. These principles and positions are intended to serve as a stimulus for the continuing professional and public dialogue regarding allocating ICU and other health care resources.

Furthermore, these considerations have identified several pressing needs to address major current deficiencies: (1) the need for changes in behavior of health care providers in affirming rights of patients to forgo life support and to receive ICU care only with their informed consent; (2) the need for increased public education about the benefits and burdens of ICU care and the limitations of modern high-technology medicine in caring for terminally ill patients; and (3) the need for additional ICU outcomes research provided through a publicly sponsored peer review process and funded, in part, by health care insurers and other payers. This research should aim to provide vital information for counseling patients and their families regarding ICU care and developing fair and rational policies regarding limits on ICU utilization.

In conclusion, the leadership of ICU health care providers and their professional organizations as well as broad community involvement is essential to guide these discussions and decisions. The ultimate goal of these efforts should be to ensure that the difficult decisions to allocate ICU resources will be made fairly and in accord with both the traditional values of the health care professions and with deeply held societal values that respect basic human rights.

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## APPENDIX

### Principles for Fair Allocation of Limited Health Care Resources

Rules for allocating limited health care resources have to be viewed as fair by health care providers, their professional organizations, and the general public in order to be acceptable. To accomplish this, the rules should follow a set of guiding principles that, in essence, define what is meant by fair allocation. These principles should be consistent not only with the fundamental values of the medical and nursing professions but



also with the cultural and ethical values strongly held by the community at large, which will be affected by the rule's applications (1-3). Finally, these principles should provide a coherent moral framework when examined from the perspective of ethical theory as applied to distributive justice (how to allocate limited resources fairly when there is not enough for all). The purpose of this APPENDIX is to examine in detail the set of principles endorsed by the accompanying statement and how they relate to ethical theory and other ethical principles.

Although this statement relies predominantly on principles in its approach to the ethical issues of ICU resource allocation, it also utilizes other philosophical approaches. For example, a communitarian approach underlies the recommendations for incorporating community values and consensus. Likewise, an ethic of care is endorsed when defining the mission of the ICU as encompassing compassionate care. Notwithstanding recent criticism of the shortcomings of a principled approach to medical ethics (4), this statement emphasizes explicit principles in order to enhance the statement's clarity and consistency, universality of concept, and ease of understanding. Because this statement is intended to stimulate societal discussion of the ethics of resource allocation, it is hoped that others will apply other ethical constructs to these problems and, in doing so, provide additional insights to the discussion, the sum total of which will lead to their ultimate solution.

One faces a number of serious problems when considering fair allocation in the context of traditional values of the health care professions and of broad cultural values of the larger community. First, although the former can be expressed by the ethical principles of beneficence, nonmaleficence, and respect for patient autonomy (5-7), the ethical codes of these professions have been, until recently, conspicuously silent on matters of distributive justice (8, 9). Physician duties to patients other than their own has been limited to selected issues where public health or health of third parties takes precedence over patient confidentiality. Some have even argued that the fiduciary duty of physicians to their own patients should always override concerns for distributive justice related to use of health care resources (10).

A second problem is to clearly identify principles consistent with broad cultural values, such as respect for the individual, human rights, individual equality, and fair equal opportunity for the disadvantaged. The difficulty resides in defining how these values apply to specific allocation decisions, such as denial of care to the elderly because of advanced age *per se*. Unfortunately, one cannot refer to society's professional code nor seek the judgment of a single judicial council. Instead, cultural values may be expressed in multiple ways, e.g., through the media, regulations of governmental or other organizations, or the political process, and by multiple institutions, such as the law, and professional, religious, social, and political organizations.

A third problem lies in the varied and often contradictory approaches to distributive justice taken by current ethical theories. Although all of these approaches can be condensed to Aristotle's Principle of Formal Justice: that equals must be treated equally, and unequals unequally; what criterion is upheld as morally relevant for determining that equality or inequality differs according to each ethical theory (7). Ethical theory has been notoriously unhelpful in solving problems in allocation decisions. Despite decades of ethical writing and debate, controversy in selection of recipients of solid organ transplants continues and is illustrated by the variations in how patients on waiting lists are prioritized to which organ is being transplanted (11).

Because of these problems, the following principles and interpretations of these principles are offered as an initial approach to construct the ethical and social framework upon which recommendations for specific allocation decisions can be based. This set of principles is envisioned as one contribution to promote a continuing dialogue among health care providers, patients, and other members of society. The ultimate goal of this dialogue is to develop a societal consensus both on the principles underlying fair allocation of health care resources and on how to apply those principles—a consensus that is currently lacking.

Principle 1: Each individual's life is valuable and equally so.

This principle affirms two key concepts: equality among individuals and the intrinsic value of a human life. The equality expressed by this principle reflects the egalitarian concept that all individuals are equal because they have the same intrinsic worth. On this basis, individuals should be respected and treated equally. Some believe that this intrinsic worth arises from their humanity and relates to their dignity as human beings while others interpret this intrinsic worth in a spiritual or religious sense.

One interpretation of this principle is to provide equal access for all persons having the same medical need. In violation of this principle would be to limit access to health care services according to perceived social worth, e.g., by the nature of an individual's job or family role. Limits on access to health care services based only on age, race, personal behavior, including self-injurious or noncompliant behavior, and other personal characteristics would also violate this principle. Denying health care for life-threatening conditions because of inability to pay would also be inconsistent with this principle. As applied to health care, this principle is illustrated by the systems of health care in Canada, in many countries that comprise the European Union and, for the most part, by the Medicare system in the United States.

While this principle holds that the lives of all individuals have a certain intrinsic value, for the sake of distributive justice, the resources available to save a single life are not infinite. Although society may be reluctant to acknowledge that life is not priceless explicitly, many of society's decisions at the macro-allocation level, e.g., insufficient funding of certain public health programs, failure to mandate corrections of safety and environmental hazards, and failure to restrict use of tobacco products by children, are clear evidence to the contrary.

Another way that American culture perpetuates the myth that life has infinite value to society is by the "Rule of Rescue" (12-14). According to this, if members of society become aware that an individual's life or vital function is in danger and if means are available, they should try to prevent the death or disability. As such, the Rule of Rescue supports society's use of as much of its available resources as necessary to save the identified person, i.e., a type of cultural resource and technological imperative. The emotional commitment of American society to this rule and its anti-egalitarian consequences for public policy is evident by the nature of how costly resources are expended in this manner. One extreme example of this rule when applied to animals is spending large amounts of money to save a whale trapped in the ice. When used in the context of public policy as well as in the intensive care unit (ICU), the Rule of Rescue is antiethical to the basic principle of distributive justice because it is used to justify spending resources as if they are limitless.

**Principle 2: Respect for patient autonomy, as represented by informed consent, is a central tenet for providing health care, including ICU care.**

That informed consent should be the ethical basis for health care arises from the basic principle of respect for patient autonomy and the strong legal doctrine of self-determination in the United States. It also reflects one key element of Principle 1: obtaining valid informed consent respects patients as individuals and their intrinsic value. Because obtaining informed consent prior to ICU admission is commonly difficult due to the urgency of the clinical situation, consent for ICU care should be presumed as in other emergency situations. However, the guiding principle for continued ICU care should rely on obtaining informed consent from the patient, if he or she is capable of decision making, or from the patient's surrogate decision maker as soon as feasible after ICU admission.

This process should contain all elements of informed consent: explaining the purpose and benefits of ICU care, its risks and burdens, the consequences of forgoing ICU care, and possible alternative therapies, including their risks and benefits (15–17). Physicians should aim to provide that information that reasonable patients would regard as important in their decision-making process. If known, specific information desired by the patient at hand should also be given. Discussion of ICU benefits should include estimates of chances for survival and for good functional outcomes. Discussion of its burdens should provide a description of the invasive nature of ICU interventions, consideration of physical and mental suffering due to both disease and interventions, and estimates of chances of dying and of having poor functional outcomes despite ICU care.

During this process, physicians should communicate in a manner that avoids coercion or manipulation in order to clarify and understand the patient's values, goals, and preferences. While it is unavoidable that physicians have their own personal preferences or biases about alternatives for their patients, these should be acknowledged during the communication but kept from unduly influencing the patient's decision.

Often patients with serious and sometimes terminal underlying diseases are admitted to the ICU. Despite these patients having poor prognoses from their underlying disease, often neither they nor their physicians have previously discussed the patients' preferences with regard to life support and ICU care. Studies support the generalization that many seriously ill patients who do not want efforts at cardiopulmonary resuscitation or other life support are often cared for by physicians who do not either understand or respect these preferences (18). As a consequence, when combined with the presumption that they have consented to ICU care, they inappropriately spend much of their terminal phase of illness on life support in the ICU.

**Principle 3: Enhancement of the patient's welfare, by providing resources that meet an individual's medical needs and that the patient regards as beneficial, is the primary duty of health care providers.**

This principle affirms that the primary duty of health care providers is to work on behalf of their patient's best interests and that these interests should be defined by the patient, not by the provider. This arises from the traditional principles of medicine, beneficence and nonmaleficence, and from the more recent principle, respect for patient autonomy. In contrast to the latter, traditional Hippocratic beneficence was largely based on paternalism, which would affirm that the health care pro-

vider alone should define what is in the best interest of the patient.

The legal representation of the physician's duty to his or her patients is embodied in the fiduciary obligation of physicians to their patients (10, 19, 20). Although, under this study, they are obligated to place their patients' interests above their own interests or the interests of others in rendering medical services, this relationship contrasts with many other commercial transactions between provider and consumer where no such duty exists. This fiduciary obligation reflects the marked inequalities in medical knowledge and vulnerability between health care provider and patient. It is an essential component of professionalism.

This principle supports the concept that health care providers and their institutions should provide patients with the same medical need, the same medical services. For example, decisions relating to access to ICU should first be grounded in knowledge of the patient's medical condition. From this, one can assess if that degree of medical need is sufficient for ICU admission and continued ICU care. Determination of medical need is primarily a medical decision by health care providers knowledgeable about the medical indications for the particular health care service. As a general rule, patients with the same degree of medical need should have access to the same range of treatments rather than the same specific treatment. This is because the same medical need can be paired with one of several, or even many, medical interventions—each of which may have different potential benefits and burdens from the patient's point of view.

Although potential benefit of ICU or other care relates to how well the patient's needs can be met, the patient ultimately determines whether the potential benefit of the intervention sufficiently outweighs its burdens. This principle reiterates the important role of the patient's informed consent when considering whether a proposed medical intervention will be sufficiently valuable or not. It also holds that the patient's own values and goals should determine whether and how the patient will benefit from ICU care. Although the patient's opinions are central to these considerations, health care providers are critical in their role as reliable sources of information about prognosis and about degrees of medical effectiveness of alternative treatments, as well as for recommendations based on their understanding of the medical situation and the patient's goals and preferences.

**Principle 4: ICU care, when medically appropriate, is an essential part of a basic package of health care services available for all.**

Medically appropriate ICU care means that the patient has sufficient medical need for ICU care, that ICU care would meet that medical need, and would provide a sufficient degree of benefit to the patient.

Providing a basic package of health care services for all is an egalitarian concept that forms the ethical core of the systems of health care delivery in other industrialized countries. It also is contained within many proposals for health care reform in the United States, including that of the American Thoracic Society and American Lung Association (21). Although exactly which services constitute such a basic package is debatable and subject to the overall resources available for health care services in a given country, the fundamental idea is that such a package should be regarded as a "decent minimum." This latter concept applied to health care is derived from the contractual approach determining societal fairness proposed by John Rawls (22–24). In this approach, fairness is

defined by unbiased hypothetical "contractors" who have the power to design a social structure and social institutions that they would live in but without knowing in which specific societal role they might end up due to a "veil of ignorance."

Another concept of fairness derived from Rawls is "fair equality of opportunity" (24). Under this, persons who are disadvantaged due to either life's or society's lottery should receive sufficient societal resources in order to ensure that they can function at a certain basic level in society. For example, this principle justifies why students with a learning disability should receive more, not equal, educational resources compared with those without a learning disability. These extra resources are needed so that the learning disabled students might achieve the same level of educational skills as the non-learning disabled. On this basis of providing fair equality of opportunity, one can argue that providing those who are sick or injured access to certain health care services is necessary if those health care services would be vital for achieving or maintaining a certain basic level of functioning in society. For example, requiring that hospitals provide emergency care to all those in need, irrespective of ability to pay, can be justified on the basis of fair equality of opportunity. Because both deal with treatment of life-threatening illness or injuries, and threats to function effectively at a basic level in society, the same ethical considerations that apply to providing emergency care also apply to intensive care.

**Principle 5: The duty of health care providers to benefit an individual has limits when doing so unfairly compromises the availability of resources needed by others.**

This principle recognizes that problems of unfair allocation may result when providers offer benefits to their own patients without limits. For example, providing a disproportionate share of a health care system's limited resources to one patient may make resources unavailable to meet the needs of other patients. Problems of this sort represent a "tragedy of the medical commons," a metaphor reflecting an economic truth about the inevitable depletion of common resources by multiple self-interested parties in the absence of external controls (25, 26). Similarly, if health care providers spend limited health care resources on their own patients without restriction, the system's resources would eventually be depleted and resources would become unavailable for anyone. This tension between needs of the individual and the group is unavoidable and must be recognized as such.

There are other limits to one's duty to benefit one's patients as well. For example, health care providers should not be dishonest, as they would be if they misrepresented the patient's medical needs to obtain desirable but otherwise restricted services (20). The same holds for violations of other established rules or attempts to "game" the system. Similarly, health care providers should not provide useless, futile, or medically inappropriate therapy even if requested. On the other hand, they should not withhold beneficial care from their patients solely because of their personal concerns for the cost of that care.

Despite an obligation to respect a system's rules limiting access to certain services, health care providers should not acquiesce to unreasonably burdensome and restrictive rules. Indeed, if health care providers view some rules as unfair and unjust, they have a strong moral duty to work to change those rules in their role as advocates for their patients. This duty to advocate for their patients will become increasingly important as patients need more help overcoming barriers to needed medical services within closed health care systems.

## Conclusion

The above principles define elements of fairness with regard to allocation of limited health care resources and can be applied to decisions regarding admission and continued care in ICUs. These principles reflect an egalitarian approach based on medical need and benefit. This is supplemented by support for individual autonomy by considerations of informed consent. However, this focus on patient autonomy is balanced by concerns for distributive justice and fairness. As society faces inescapable decisions with regard to its limited health care resources and increasing demand for those resources, these principles will be increasingly important for ensuring that just allocation goals are reached without sacrificing respect for individuals and other strong cultural values or the traditional values of the medical and nursing professions.

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