Abstract

During the past few years the ethics sections of critical care societies have proposed a number of policies describing the goals of intensive care unit (ICU) care and providing broad guidance on the diagnoses and physiological criteria that would mandate using the specialized skill and technologies of an ICU environment. Discussions on what constitutes appropriate use of such scarce resources, incorporating cultural and religious beliefs and exploring how they interact with these medical criteria, remain vague. To date, these policies do not provide any definitive guidance in the difficult decision making faced by clinicians. Some argue that they were never meant to do so and yet they have served to guide the development of local hospital policies. Many have explored how critical care services are allocated without achieving consensus on the best way to achieve fair and equitable access to life-sustaining interventions. A consensus is needed though, one that is reflective of both individual and societal values and goals. Otherwise, increasing pressure to provide treatments with marginal benefits at best will threaten the ability of others to access treatments that may offer them very real benefits.

Introduction

During the past few years, the ethics sections of European, Canadian and American Critical Care Societies have issued position statements and proposed a variety of position papers and policies describing the appropriate use of critical care services [1-3]. All of these policies describe the goals of intensive care unit (ICU) care - to support a patient through a potentially reversible, acute life-threatening illness - and provide broad guidance on the medical diagnoses and physiological criteria that would mandate patient care using the specialized skill and technologies of an ICU environment. Arguably, the greatest purpose that such policies have served is to define the scope of critical care, one of the newest fields in medicine.

Some policies have gone further and describe ‘best practices’ regarding triage decisions and raise issues beyond purely medical criteria for admission, issues of the appropriateness - or lack thereof - of ICU care [1,2]. This concept of appropriateness is most often defined as encompassing some idea of benefit, the likelihood of such benefit and the burdens of treatment, combined with consideration and respect for patient values, goals and beliefs [1-3]. However, in the final analysis, with the exception of the occasional proposed example [3] of what would constitute inappropriate ICU admission, these definitions remain vague and are of little practical use in defining an overarching consensus on the standard of care. Additionally, they do not provide definitive guidance in the day-to-day difficult decision making faced by frontline clinicians. It can be argued that these societal policies were not designed to serve such a purpose. It can be argued that they are only meant to describe mission-like statements for the critical care field and are not meant to be used practically on a daily basis. However, they have served to define what constitutes good ethical practice in critical care. On this basis, for better or worse, individual hospitals have incorporated these recommendations into their own admission, triage and resuscitation policies.

Decisions to admit a patient to the ICU or to continue or withdraw life-sustaining interventions are inherently challenging because of scientific uncertainty, ongoing advances in knowledge and technology, and our abilities to predict accurately outcomes that remain limited despite ongoing research efforts. Some would argue that a standardized consensus of appropriateness regarding the provision of critical care is not needed. It is postulated that such a consensus would undermine both physician-patient relationships and clinical judgement by negating individual patient characteristics and failing to respect their cultural and religious beliefs. Without such a consensus, however, intensivists struggle with what weight should be given to medical versus nonmedical criteria and how should the limits and progresses of medical sciences be taken into account.

ICU = intensive care unit.
By failing to answer the most fundamental pressing question in critical care medicine today - ‘Just because I can, should I?’ - have societal position papers and individual hospital policies become obsolete?

**Hospital policies: uses and implementation challenges**

Most ICUs within hospitals have developed their own admissions and discharge policies. These policies currently serve a number of purposes: they define the patient population that will be admitted to the ICU; they guide triage decisions and define how admissions will be prioritized; they define the interaction of priority programs (for instance, transplantation or trauma) and their impact on subsequent triage decisions regarding ‘regular’ ICU admissions; and, on occasion, they provide some preliminary guidance on the resolution of any conflicts arising from decisions to refuse admission. However, once created, such policies are rarely looked at, front-line staff are unaware of their content [4,5] and (some would argue) they are rarely followed by the ICU team [6-10]. Currently, little information is available as to why this is the case, although such findings are not surprising because, presumably, training in critical care medicine allows one to identify the need for ICU care based on medical diagnoses and physiological criteria, which would render these policies somewhat superfluous. Once need is established, most intensivists will still triage based on a first come, first served principle. Excluding how identified hospital priority programs and individual hospital mission statements should influence the use of critical care services, what guidance do admission and discharge policies then truly provide?

The literature to date sheds little light on how admission, discharge and triage criteria are used [4]. Studies have found that bed availability, patient age, diagnosis, reversibility of acute disorder, comorbidities and pre-ICU dependency, and physician attitudes were factors that influenced admission to the ICU [4,5,9,10-14]. In the recent French ADMISSIONREA study [13], reasons for refusal of ICU admission were too well to benefit (55.4%), too sick to benefit (37.2%) and unit too busy (6.5%). Moreover, although the definition of ‘inappropriate’, like that of the term ‘futility’ that preceded it, remains elusive and poorly described, studies have found that 86% of physicians have acknowledged admitting patients they considered to be inappropriate. The reasons for this included clinical doubt (33%), limited decision time (32%) and assessment error (25%) [15]. Few would argue that clinical uncertainty means that an admission is inappropriate, for in the face of such uncertainty the value of a trial of therapy to give the patient the ‘benefit of the doubt’ is arguably the most ethical option by far. However, our inability or unwillingness to take a leadership role in clearly describing what is meant by inappropriate and to develop a decision-making process that consistently and fairly balances medical and nonmedical factors, albeit a tough task, raises concerns of inequity and bias [16].

**Triage decision making: ethical and legal quandaries**

Triage and admission decisions are well recognized as being challenging. Many intensivists in clinical practice have for a number of years decried a lack of support (personal communications) when faced with demands for treatment that they feel would not be in the patient’s best interests or for treatment that would be deemed inappropriate. ‘Inappropriate’ in this case is usually broadly defined as encompassing all or some of the following: treatment whose chances of benefit are very poor, treatment whose benefits are outweighed by the burdens involved, and treatment that serves only to prolong the dying process. To date, very few data can be found to support these perceptions, but one European study [15] interestingly revealed that pressure from superiors (13%), referring clinician (11%) and family (5%), and threat of legal action (5%) also came into play in decisions to admit patients who otherwise would have been refused. Intensivists have also reported pressures in opposite directions to ensure there is ‘productive’ use of ICU beds and have admitted to refusing financially disadvantaged patients, prioritizing profitable surgery admissions, and withdrawing treatment from patients with lower chances of survival or for whom nothing else could be done when faced with requests for more appropriate admission [15].

It cannot be said that it is ethical behaviour for other clinicians, administrators, or family members to pressure the intensivist to override their clinical judgement regarding the likelihood of benefit and appropriateness of admission. Arguably, neither is it ethical for intensivists to succumb to such pressures, for to do so fails their fiduciary duty to the patients they admit who will not benefit and may even be harmed by enduring the pain of procedures serving only to prolong their dying; to those who could benefit but are not given priority for socioeconomic reasons; and to those who see their treatments arbitrarily limited based on beliefs regarding their likelihood of survival when another ‘more appropriate’ patient presents. Nevertheless, such practices are understandable in view of the lack of support for such decision making and the lack of consensus on what constitutes appropriate care [16,17].

**Ethical models of resource allocation**

Some would argue that these ethical issues in triage decision making arise because schemes based on need and that employ a first come, first served principle to ration critical care resources are flawed. Currently, our system based on need is failing because ICUs are filled to 90% capacity, precluding any surge capacity. Long hours are spent searching for beds to which patients can be transferred when such care is not available within a given institution. Such delays are far from optimal and can result in deteriorating patient condition and increased morbidity and mortality. For these reasons, other models of resource allocation may offer additional guidance and help in resolving current challenges.
Those working to develop schemes for mass disasters (including pandemic situations) have proposed a utilitarian grounding for the allocation of critical care services, one that focuses on achieving the greatest good for the greatest number [18]. One can understand that in disaster situations, where the numbers of patients are overwhelming, this may be the most feasible paradigm. However, it represents a huge culture shift from day-to-day practice by excluding the very sick from the ICU - the very patients to whom we currently devote most of our time and efforts, even though the odds of survival are stacked against them. A utilitarian approach in contrast would suggest focusing resources instead only on the moderately ill, those who from the start would have a better chance of survival. It is not clear that utilitarianism is an approach that we should use on a daily basis. Many would argue against this approach because, unlike disaster situations, daily ICU need is much more difficult to predict and define; it is impossible to anticipate who will present to hospital requiring life-sustaining interventions, what resources will be available, and what the odds of survival for any given individual would be compared with others. Furthermore, utilitarian philosophy gives rise to broader ethical concerns because it can result in systematic devaluation of any and all individuals for the greater good of the majority. Without an overarching perspective of demand and supply issues, it is difficult to apply a triage model based on doing the most for the most. Nevertheless, considerations of a utilitarian model should not be totally dismissed out of hand. They can serve to keep issues of the effectiveness of life-sustaining interventions at the fore of decision making regarding their use. Honouring individual beliefs and subsequent rights to treatment will inexorably impact on the rights of access to critical care services of others. Questions of where consideration for the individual ends and the rights of the majority begin remain valid ones in the face of limited resources.

For daily triage decisions, some have proposed that we turn to a new model of resource allocation, one known as accountability for reasonableness [19,20]. This model claims that resource allocation should proceed on the basis of relevant criteria that are public, that decision making be accountable, and that an appeals process exist in cases of conflict. In the ICU, studies have shown that we fall far short of meeting the criteria outlined in such a model; triage and admission decisions are variable depending on the attending staff, and nonmedical reasons are rarely discussed openly. Moreover, criteria for admission are not made public and any appeals process, if it exists, revolves around informal negotiation between staff [6-8]. Although this has resulted in criticism regarding equitable, fair and just ICU resource allocation, there are significant problems with such a model in the ICU setting that have not yet been addressed.

The first challenges relate to what criteria determine relevancy. Dr Daniels [19,20] describes these as criteria that reasonable people can agree upon to guide the rationing of scarce resources. Although the scientific part of critical care medicine can be at least partially defined, defining the art - which attempts to factor in benefits, burdens, quality of life, and cultural and religious beliefs - of decision-making remains a greater challenge. In addition, the general public lacks an understanding of what life-sustaining interventions entail and what they can reasonably be expected to do. Although each intensivist is held accountable for the decisions he or she makes, the means to appeal against these decisions in a fair and timely manner in such an acute setting remain problematic. If accountability for reasonableness is the best model for admission/discharge and triage policies, then much work must be done to develop a consensus regarding relevant nonmedical criteria, to educate public and professionals alike [17], and to establish a formal appeals mechanism that takes into account the unique nature of ICU practice. Certainly, a plan for broader public education at this point can only help to improve any decision-making process, both on an individual patient level by better informing advance care planning, and on a societal level by developing consensus on how these scarce resources can best be allocated.

A call for action

In today’s era of scarce ICU resources and future projected increase in need for ICU beds as the population ages, admission/discharge and triage policies need to provide concrete help regarding how these resources can be used effectively. To date, existing position papers and policies have failed to do this. The ideal model to guide resource allocation also remains elusive. A professional consensus needs to be reached, one that develops a plan to remove the discussion of admission/triage and discharge policy solely from the realm of the ICU team and bioethicists. A strategy to educate the public about life-sustaining interventions and to promote their engagement in decisions regarding the use of scarce critical care resources is also required. Further research is needed into how the use of technology is perceived by different cultural and religious groups in end-of-life situations. An appreciation of how such perceptions change and are influenced by others living in a multicultural society is also required. Ethics sections of critical care societies should consider developing means to promote and support research projects that seek to answer these questions.

Perhaps instead of continuing to struggle with definitions of inappropriateness and/or futility, a time has come to reframe the question. A better question may be as follows; can best practices for the appropriate usage of critical care services be developed that would provide fair, equitable and reasonable access to critical care for those in need? Such criteria would need to allow for the ongoing progress of technology and would need to devise means of respecting the multitude of individual cultures and beliefs within our societies. No consensus on best practices will ever be perfect. Critical care societies can, if they choose to do so,
provide the starting platform for such discussion and attempts to reach consensus.

**Conclusion**

One thing is certain; the field of critical care medicine has moved beyond the need to define itself as a distinct entity by describing who needs the supports it offers. It is time for a consensus on best practices for the use of critical care resources, one that is reflective of both individual and societal values and goals. Otherwise, increasing pressure to provide treatments with marginal benefits at best will threaten the ability of others to access treatments that may offer them very real benefits.

**Competing interests**

The author declares that they have no competing interests.

**References**

1. Draft Critical Care Unit/Program/Dept Statement of Service and Admission and Discharge Policy; Canadian Critical Care Society, 2000 [http://www.canadiancriticalcare.org/cccs/AdmDischTransPolicy.doc]
2. Guidelines for ICU Admission, Discharge and Triage; Society of Critical Care Medicine, 1999 [http://www.sccm.org/professional_resources/guidelines/table_of_contents/Documents/ICU_ADT.pdf]
3. Challenges in End-of-life Care in the ICU: Statement of the 5th International Consensus Conference in Critical Care: Brusels, Belgium, April 2003 [http://www.esicm.org/CYFILE_challengesinlife/file?ahve]
4. Cooper AB, Joglekar AS, Gibson J, Swota AH, Martin DK: Communication of bed allocation decisions in a critical care unit and accountability for reasonableness. *BMC Health Serv Res* 2005, 5:67.
5. Miele J, Martin DK, Singer PA: Priority setting in a hospital critical care unit: qualitative case study. *Crit Care Med* 2003, 31: 2764-2768.
6. Martin DK, Singer PA, Bernstein M: Access to intensive care unit beds for neurosurgery patients: a qualitative case study. *J Neurol Neurosurg Psychiatry* 2003, 74:1290-1303.
7. Azoulay E, Pochard F, Chevreau S, Vinsonneau C, Garrouste M, Cohen Y, Thuong M, Paugam C, Appere C, De Cagny B, et al.: PROTOCETIC Group. Compliance with triage to intensive care recommendations. *Crit Care Med* 2001, 29:2132-2136.
8. Joynt GM, Gomersall CD, Tan P, Lee A, Cheng CA, Wong EL: Prospective evaluation of patients refused admission to an intensive care unit: triage, futility and outcome. *Intensive Care Med* 2001, 27:1459-1465.
9. Tailgren M, Kiepstad P, Petersson J, Skram U, Hyninnen M: Ethical issues in Intensive Care: a survey among Scandinavian intensivists. *Acta Anaesthesiol Scand* 2005, 49:1092-1100.
10. Giannini A, Leoncino S: Guidelines on triage and end of life decisions in intensive care. *Acta Anaesthesiol Scand* 2006, 50: 634.
11. Graf J, Janssens U: Still a black box: what do we really know about the intensive care unit admission process and its consequences? *Crit Care Med* 2005, 33:901-903.
12. Garrouste-Orgeas M, Montuclard L, Timst JF, Misset B, Christias M, Carlet J: Triageing patients to the ICU: a pilot study of factors influencing admission decisions and patient outcomes. *Intensive Care Med* 2003, 29:774-781.
13. Garrouste-Orgeas M, Montuclard L, Timst JF, Reignier J, Desmettre T, Karoubi P, Moreau D, Montesino L, Duguet A, Boussat S, et al.; French ADMISSIONREA Study Group: Predictors of intensive care unit refusal in French intensive care units: a multiple-center study. *Crit Care Med* 2005, 33:750-755.
14. Einav S, Soudry E, Levin PD, Grunfeld GB, Sprung CL: Intensive care physicians' attitudes concerning distribution of intensive care resources. A comparison of Israeli, North American and European cohorts. *Intensive Care Med* 2004, 30:1140-1143.
15. Giannini A, Consonni D: Physicians’ perceptions and attitudes regarding inappropriate admissions and resource allocation in the intensive care setting. *Br J Anaesth* 2006, 96:57-62.
16. Halpern P, Rosen B, Carasso S, Sorkine P, Wolf Y, Benedek P, Martinovich G: Intensive care in a field hospital in an urban disaster area: lessons from the August 1999 earthquake in Turkey. *Crit Care Med* 2003, 31:1410-1414.
17. Ravenscroft AJ, Bell MD: ‘End-of-life’ decision making within intensive care: objective, consistent, defensible? *J Med Ethics* 2000, 26:435-440.
18. Ontario Health Plan for an Influenza Pandemic [http://www.health.gov.on.ca/english/providers/program/emu/pan_flu/pan_flu_plan.html]
19. Daniels N: Accountability for reasonableness. *BMJ* 2000, 321: 1300-1301.
20. Daniels N, Sabin JE: Setting Limits Fairly: Can We Learn to Share Medical Resources? Oxford: Oxford University Press; 2002.