

## LOOKING FOR A FEW JUST MEN

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In the biblical tale of Abraham interceding with the Lord on behalf of Sodom,<sup>1</sup> because the men of Sodom were considered so wicked by the Lord, He was proposing to completely destroy the city. Abraham started to negotiate the number of just men that would need to be found to halt the planned demolition. The Lord agreed that 50 would be sufficient, and Abraham proceeded to get the number down to 45, then 40, then 30, then 20, and finally 10. Two angels were dispatched to the city and stayed at the house of a just man—Lot. Apparently, no other good men were to be found, and the angels advised him to flee Sodom the next day and not look back. Lot went with his wife and daughters, and the Lord destroyed Sodom, and the neighboring sinful Gomorrah, with a rain of fire and brimstone. Lot's wife was unfortunate enough to look back and was turned into a pillar of salt, but the others escaped.

An interesting point in this lesson is the liberty with which Abraham had to bargain with the Lord, and when the outcome produced only a small fraction of the agreed amount, the proposed solution was set into motion! A judgment had been placed on the value of just human beings, and a ratio established (although this day we do not have the denominator) as to the comparative value of wicked men. Sooner or later, all of us in the practice of critical care have to make judgments regarding the value of human life; frequently, because of limited resources; occasionally, because the outcome looks bleak; and sometimes, because the risk/benefit ratio is considered low in terms of what we have offer.

The major problems facing critical care today are related to resource allocation and misallocation resulting in inadequate manpower, a perceived shortage of beds, sepsis, and a long-term quality and length of life

that has a startlingly poor return for the amount of energy expended.

How much critical care do we need? This question never has been satisfactorily answered. In terms of intensive care unit (ICU) beds available per capita, the United States is overwhelmingly the world leader. On any day, US hospitals have about 55 000 patients in 6000 ICUs. Typically, between 8% and 12% of a medical center's beds are devoted to some form of critical care, which consumes about half of an institution's direct patient care budget. This is a tremendous amount of money and represents more than 1% of the gross domestic product or more than \$200 billion annually. (Total healthcare costs for 2004 were almost 14%, or approximately \$1.7 trillion.) The frightening aspect of this predicament is that no one is responsible for the U.S. healthcare, and 45 million people currently are without health insurance.<sup>2</sup>

Most countries with similar standards of healthcare operate with much lower percentages of critical care beds; in general, non-US hospitals devote less than 3% of beds to critical care patients. Critical care staff are often in charge of, or work closely with, high-dependency or step-down units that care for patients who require extra care, but who are not critically ill. Longer term postanesthesia care units (PACUs) may also augment acute surgical recovery. In the United States, many patients who are placed in an ICU to receive a little extra care and observation could receive the care they need in a unit with a lower but appropriate level of management and then be transferred to the general floor.

Does the United States have too many ICU beds, or do other countries have too few? The smaller number of beds in some countries allows for a 1-to-1 patient-to-nurse ratio to be the norm, or at least the goal. At times when the incidence of critical illness rises, it is possible that the low capacity will be insufficient in meeting the needs of the hospital patients, the ICU will become overloaded, and the PACU and step-down units must provide a higher level of care than

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originally intended. On the other hand, in the United States, where, appropriate or not, a 2-to-1 patient-to-nurse ratio is considered the goal, the only way ICU staff can care for patients requiring the full power of critical care is to pair the patients so that 1 of the 2 patients does not need the high degree of attention and full services provided in an ICU. Nurses become overloaded when they must care for 2 critically ill patients simultaneously. In either system, outcomes are prone to deteriorate with an excess of eligible patients.

It seems that a more appropriate number of ICU beds would be somewhat smaller in the United States and somewhat higher in other countries. This concept is based on the premise that ICUs are used only for patients who require the extra support provided by critical care staff and that patients with predictable trajectories are cared for in a more appropriate setting.

About 20% of Americans die while receiving ICU services. In a study<sup>3</sup> on the use of intensive care at the end of life, the authors pleaded for “more effective advanced care planning, and augmented capacity to care for dying patients in other settings.” Once dying patients are in an ICU, it often is difficult to transfer them. Most hospitals have downsized so much that there is a chronic and often severe shortage of beds for patients transferred from PACUs and ICUs. Lack of appropriate beds for dying patients creates a perceived shortage of critical care beds and is probably the reason why US hospitals have such a high percentage of critical care beds.

It is difficult to convince those in charge of hospital finances that running a hospital at 95% capacity might increase the efficiency of more expensive operations. The brunt of the problem is usually taken on by the nursing department, which has the chore of finding space and caregivers. ICU medical directors must handle the issue of who will have access to potentially beneficial resources and therefore are in the uncomfortable business of rationing.

Because it seems likely that many of us will die with the benefit of ICU services, the recent upsurge of interest in “compassionate critical care” at the last annual meeting of the Society of Critical Care Medicine was reassuring. There seemed to be recognition that palliative care has become an essential part of critical care. The suggestion that all patients (or at least all patients with APACHE scores greater than 26) should have a palliative care consultation on admission was well received. This approach would obviously set the correct tone for patients’ families witnessing the deterioration of their loved ones, but might be unnecessarily worrisome to families of patients who are doing well. When a patient’s prognosis becomes poor, the palliative

care service would already be in position to make it easier for families to reconcile their hopes and fears with the lack of further need for ICU care, and possibly give the patient a more comfortable end of life.

The idea of rationing critical care resources, while anathema to most politicians, has in fact been with us for a long time. ICU directors, as mentioned previously, have had to make triage decisions based on the availability of ICU beds. The US hospital system makes it difficult because our hospitals are so crowded with patients that, at times, it is nearly impossible to move patients expeditiously to appropriate levels of care. As long as ICUs are billed for by the day, and not by the hour, much of the urgency is lost on those not working in the area. Our payment systems may be partly to blame, as they encourage hospital systems to maximize profitability rather than utilization of resources. As a result, many critical care units are dancing to slow music because the services they need are geared to a much slower pace than is optimal for the seriously ill patient. For instance, chronically ill respiratory patients may wait 2 or 3 days to be scheduled for a tracheotomy and percutaneous endoscopic gastroenterology so that they can be cared for in a step-down facility or the general floor. Computed axial tomography scans and endoscopies, unless urgent, have to be scheduled too far in advance and are often delayed. ICU stat laboratories are becoming a thing of the past, and point-of-care testing has become mired in turf and health department bureaucracy in many states, making them basically unusable. The time wasted and unnecessary blood wastage is a tragedy.

Now that most of us are in the business of evaluating people’s need for critical care and, as best we can, rationing our limited resources to those whom we feel we can benefit most, the *realpolitik* is that patients with no meaningful future and too distant a past are being admitted to ICUs. We have no easy test for measuring suitability for critical care on the basis of likely outcome. If we did, it would be difficult to present in a politically correct manner, because it has to do with dying. Allowing people to die correctly has become difficult because of the red tape that is needed to avoid possible legal complications. Physiologic scoring systems, while statistically predictive, cannot be applied ethically to individuals. Using the QALY<sup>4</sup> (Quality-Adjusted Life-Year) is too arrogant an approach, as an individual’s value of his or her own life may greatly differ from someone else’s opinion. It does give an idea, though, as to what can be expected for a given expenditure of resource.

Until we arrive at some moral, ethical, and compassionate process for ensuring that the right patients

are admitted to our ICUs, we will continue to live with the stress of trying to stretch our limited resources to cover those who will receive little benefit.

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