

*presidential address*

## Who should receive intensive care?

The question of who should receive intensive care was not really a problem until about 1960. About all we could do for sick patients was give fluids, blood, antibiotics, and make them comfortable. Survival of sick patients was more often due to divine intervention, than to what we did. The polio epidemics of the 1950s caused the victims of this disease to be congregated in wards where they could be ventilated if necessary and closely observed. The success of these units soon led other sick patients to be congregated into one place, which became known as the intensive care unit. New surgical procedures, especially cardiac and vascular surgery, increased the pace at which ICUs developed. Patients cared for in an ICU setting seemed to do better than those cared for on the ward. Unfortunately, there were no controlled trials to prove that this was true.

The people caring for ICU patients were smart, inquisitive, and desirous of improving patient outcome. Therefore, they thought of new therapies and new ways to monitor their therapy. They enlisted the help of industry and of engineers. New devices, such as cardiac output and pulmonary artery pressure monitors, were introduced. Each new device allowed them to do things that were not possible before. The better they got at caring for patients, the more demand there was for ICU beds and equipment. Both the increasing technology and improved care allowed sicker and sicker patients to be cared for; patients thought to have no chance of surviving only a few years before, survived.

There was little constraint on what we could do or buy. There was little question about who should receive intensive care. The government and/or insurance companies picked up the tab. Those caring for the patients usually had no idea how much ICU care cost. As long as there was plenty of money around and we had the confidence of the public, we were able to continue doing what we wanted. However, because of expensive technology and very labor-intensive services, the costs of care in an ICU rose rapidly (the basic daily cost in our hospital is \$1250). People began to question these costs and whether the outcome was worth the expense. We who are involved in ICUs ignored this, because we did not want to hear it. It was, and still is, easier for us to bury ourselves in our work and care for everyone, than to consider whether what we are doing is appropriate. I believe that we would have gone on blissfully forever as we were, if we had not outstripped our resources. The costs for all medicine became enormous. Because what we do is highly visible, very

technologic, and expensive, we have become the object of more scrutiny than other less visible specialities.

A second circumstance that has altered the perception of what we do and has altered society's view of life, was the Supreme Court decision to allow abortion on demand. Whether you are for or against abortion, this decision has significantly altered many Americans' views of life. Society has agreed that life can be terminated for other than medical reasons. It is a small step to question the value of life in other situations, such as ICUs. I am not arguing for or against abortion; I am only pointing out that its existence has altered the general view of life and its value.

Our abilities to support life, the costs involved, the poor quality of life in some instances, and an altered view of the value of life, have put critical care medicine on a collision course with society. To prevent this collision from occurring, we in critical care medicine need to become involved locally, statewide, and nationally. We need to make ourselves understood. We need to articulate clearly what it is we do and why. We, ourselves, must take a close look at what we do and its appropriateness; we need to take the approach of industry and study the cost-effectiveness of our care.

One major deficit is our inability to prove that what we do improves patient outcome, and is worthwhile. Like many things in medicine, most of critical care arose as someone's good idea. They studied 5 patients, published the data, and we all rushed to use this new therapy. It soon became a standard of care without proof that it worked. As an example, we made up the number of square feet we needed per bed in the Intensive Care Nursery, and the number of electrical, oxygen, and air outlets needed per bed. We did this to get more space from the hospital. Others thought these ideas sounded good. The next thing we knew, these were the recommendations of the Academy of Pediatrics and the law in 39 states.

In these days in which technology is being questioned, and those of us who use it are sometimes viewed as ogres, we must be able to support that the things we do really work. There is no controlled trial for most of what we do. There is no controlled trial showing that mechanical ventilation is better than no ventilatory support for patients with respiratory failure. We all believe that it is, but we cannot prove it to Congress, the public, nor to ourselves. If we are to continue to be allowed to provide ICU care for patients, we must demonstrate that these things make a

difference. Those of us in academic medicine, who can do the studies, have an obligation to do so.

We can no longer survive on clinical impressions and case reports. As you know there are 4 types of lies: (1) little white lies; (2) big dark lies; (3) it is in the computer; (4) clinical impressions. The latter, clinical impressions, is the basis for much of what we do.

We must think about who is going to get care, and how these decisions will be made. Government and insurance agencies are NOT going to tell us we can not provide care for patients. That would be political suicide. They will give us a certain amount of money for all patient care and tell us we can only spend that amount. We will have to make the decisions about what can or cannot be done for patients while remaining within that budget. We should start working toward this now, because it will be a reality in the next year or two.

There are several things we can and must do soon:

1. We must make known to the public what it is we do, and how it benefits society. It is little known by the public that deaths from heart disease are down 25%, and deaths from cancer are down 30% since 1955. Few know that infant mortality has decreased nationally from 18/1000 live births to 11/1000 live births. In some institutions, it is 5/1000 live births and has been for 6–10 yr. People need to know these facts. We in critical care medicine need to mount a publicity campaign to offset the negative picture of what we do that is presented by some. After all, if Madison Avenue can sell cigarettes to the American public who know that cigarettes cause cancer and lung disease, they certainly ought to be able to do very well with what it is that we do. We also need to make the public feel pride in these accomplishments. By and large, they have paid for the things that we have accomplished. They should feel pride in them.

2. We must examine what we are doing. Are we, in fact, benefiting the patient, the family and the nation? Which patients do and which do not do well? If they do not do well, why? Is there something we can improve on? Does the patient have a nontreatable condition? We have to examine not only outcome, but the quality of that outcome and the cost. We must, in fact, develop criteria for which patients will and will not get care. Because of our knowledge and involvement, we should be leaders in developing these criteria. Unless we are vocal and involved, others will make decisions that we and our successors will have to live with, and I am pretty sure they will not be in our favor, or more importantly, in the favor of our patients.

3. We must reduce costs. We need to evaluate the cost-effectiveness of what we do, and reduce costs where possible. We need to ask: (a) Are there better ways we can provide care for less money? (b) Are the things we do necessary? Does every cardiac surgery patient need a pulmonary artery line and measurement of cardiac

output? We need to ask whether the information we get from these devices tells us anything a physical examination cannot. Does every cardiac surgery patient require postoperative mechanical ventilation? (c) Do we need the number of nurses, therapists, physicians we have, or can patients be cared for by fewer people? We must find other ways to support ICU fellows than from patient care funds. Whatever we decide, we will have to provide evidence to support our conclusion, because we will have to convince tough-minded people that we are right. (d) Does it make a difference whether critical care specialists or the patient's physician provides care in the ICU? Are the results better, and does discharge from the ICU occur earlier if critical care specialists provide most of the care? This is a hotly contested subject. Data from neonatal ICUs indicate that the answer is yes; specialized care makes a difference. We need similar data for all age groups. (e) We need to look at who occupies ICU beds. This is the place we can make the most savings. In many instances, patients occupying ICU beds do not really require intensive care. They may require monitoring, but this could just as easily be done at a much lesser cost in an intermediate care unit. I know the pressure to keep the ICU beds full. However, inappropriate use of ICU beds is adding to the pressure on patient care dollars. (f) We need to take a close look at centralizing ICU care. I know this has been a dirty word to many hospital administrators and to many of us who think we do a good job and want to protect our units. However, small units are often kept full by monitoring patients who could just as well be cared for on the ward. The number of really sick patients cared for in the units is small, and the ability to provide 24-h care, limited. A physician is seldom immediately available. As you remember, Dennis Greenbaum has shown that less than 50% of ICUs have full-time physicians.

My purpose today is not to be negative, but to stimulate thought, and I hope action. If we do not reduce the cost of care and use our resources more wisely, and if we do not change our image in society at large, we will be faced with very serious problems, and less care will be available to our patients. If we accept this challenge, I believe that the next few years in medicine can be some of the most satisfying and rewarding we have ever had. The challenge is great. With the intelligence and dedication of people in critical care medicine, I believe we will meet these challenges and as a result, be able to continue to provide excellent care for our patients.

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