

## Inappropriate use of intensive care

Over half the difference between "activity and treatment" in hospitals in the United States and in Britain is attributed to the much lower provision of intensive care in Britain.<sup>1</sup> Such units here comprise only 1% of acute hospital beds compared with 15% in the United States. Selection for intensive care has therefore to be more stringent in Britain, as it is for other high technology procedures (such as coronary artery surgery and renal dialysis). Even the Americans, however, have now reluctantly recognised not only that health care as a whole has to be rationed, but also that unlimited access to high technology medicine is not always in the best interests of patients and their families. In particular the cost benefit ratio of intensive care for certain types of patient has recently come under scrutiny at a National Institutes of Health consensus development conference and at the Massachusetts General Hospital.<sup>2,3</sup>

The purpose of intensive care is to reduce avoidable mortality and morbidity in patients who are critically ill; but how effective it is may be quite difficult to discover. Comparisons between intensive and ordinary care, as well as between alternative regimens of intensive care, are often invalidated by differences in the patient mix (for example, in diagnosis, severity of illness, and age). When these and other variables that influence outcome are taken into account outcome can be predicted with some accuracy using statistical models. Comparisons may then be made between groups of patients whose outcomes were calculated to be similar but whose management had been different. This has been done for general intensive care units within the United States,<sup>4</sup> as well as for groups of units in France and in the United States<sup>5</sup>; also for patients with traumatic<sup>6,7</sup> and non-traumatic<sup>8</sup> coma in Britain, the United States, and the Netherlands. In spite of wide differences between the regimens of management similar mortality rates were found for comparable groups of patients treated in different places. This does not mean, as some have mistakenly concluded, that intensive care does not influence outcome. Intensive care can influence outcome in only a limited subset of patients; and even in such patients the details of the regimens and technologies may matter less than the advantage that accrues from attracting intensive attention from doctors and nurses.

Patients who are unlikely to benefit from intensive care are of two kinds. The first are those who are admitted for monitoring to watch for complications—particularly in coronary care and postoperative units. Less than half the patients in one American multidisciplinary unit were judged to be critic-

ally ill<sup>9</sup>; in another medical unit three quarters of patients were there only for monitoring, and less than one in 10 required a major intervention.<sup>10</sup> The benefits for such patients are at best marginal. Many are unjustifiably exposed to the discomforts and hazards of invasive monitoring as well as to the psychological tensions and social deprivations associated with intensive care—quite apart from the unnecessary expense. At the other extreme are patients whose condition is so advanced that they cannot benefit from intensive care—though this may considerably extend the process of dying. It might seem obvious that for clinicians to persist with intensive care once it is clear that there is no prospect of recovery is against the best interests of the patient and his family. But patients who can never recover are not uncommon in some units, where they tend to stay longer than survivors and to cost substantially more.<sup>11</sup>

The deployment of skilled personnel and complex technology on treating patients who do not benefit is usually explained (or excused) on the grounds that prognosis is uncertain.<sup>11</sup> For many conditions, however, there are now prognostic criteria based on computer analysis of large data bases that make it possible to identify which patients have a low risk of complications and which are unable to survive.<sup>3,10</sup> Such a prognosis, however, may be confidently made after only a few hours of monitoring or treatment in an intensive care unit; criteria for discontinuing intensive care may therefore be as important as those for admission. Both admission rates and duration of stay of patients with suspected or confirmed myocardial infarction have been reduced by applying such prognostic criteria.<sup>3</sup> This same study showed, however, that doctors are reluctant to use such data as a basis for denying the admission or demanding the discharge of the patient with a hopeless prognosis. The longer this second decision is postponed the more difficult it becomes to make because of a phenomenon that I have called "the vicious cycle of commitment," giving this example.<sup>12</sup>

A 75 year old is sent 30 miles to a neurosurgical unit after head injury. Being flaccid with fixed pupils there is no prospect of his surviving but CT scanning is considered the least that can be done. That this shows a large intracranial clot makes no difference to the prognosis—but what, the senior registrar wonders, will the senior surgeon (or the coroner) say if he leaves it untreated? After operation the patient cannot breathe on his own—but no one likes a death on the table, so he goes to the intensive care unit. There he may be ventilated for days before the heart stops or he can be declared brain dead.

Doubts about the value of intensive care arise also when such intervention is indeed likely to postpone the immediate threat to life but the reprieve is expected to be brief or incomplete (or both). This may be because the patient is already disabled by progressive irremediable disease or he is of advanced age (or both). Intensive care then either prolongs life which is already of a quality that the patient considers unacceptable, or it gives such a limited additional period of survival that it may be said to have imposed a disproportionate burden relative to benefit. Similar decisions have often to be made about the use of other rescue technologies such as cardiopulmonary resuscitation, renal dialysis, major surgery, and radiotherapy.

Decisions in these circumstances raise controversial issues. On the one hand there is the dilemma that extending life may cause additional suffering and indignity and on the other that withholding treatment may be regarded as passive euthanasia or even as illegal. Doctors and the public are also concerned about ignoring the wishes of a patient not to be treated "heroically," and also about using resources unwisely. Action about intensive care for an individual patient can be guided by reference to the four principles of medical ethics proposed by Beauchamp and Childress<sup>13</sup>:

*Beneficence*: what is the probability that life of reasonable quality and duration will be restored by intensive care?

*Non-maleficence*: how much stress, hazard, and indignity are likely to be associated with intensive care?

*Patient autonomy*: informed of this balance of probabilities what is the patient's preference?

*Justice*: does the expected benefit to the individual justify the cost in resources to the community?

The first two questions are technical medical ones depending on the prognosis with or without intensive care. The increasing availability of powerful predictive data gives less excuse than previously for deferring a decision on grounds of uncertainty about outcome. The latter two are personal and social and are rarely given more than passing mention in medical journals.

### Harm from intensive care

The harm that can come from intensive care is of several kinds. The patient who is aware may endure additional suffering from invasive procedures; and for all patients the risks associated with interventions may balance if not outweigh potential benefits. The loss of dignity that goes with intensive care, even for the patient who is not conscious, is clearly a fate feared in prospect by many patients (and it may be an affront to relatives); so also is the possibility of extending life of poor quality. Wherever possible the patient's own attitude should be determined—for patients are increasingly demanding autonomy. Many now want to take part in decisions about their management, and nowhere more so than when there is a possibility of their lives being prolonged by rescue procedures. This attitude is most obvious in patients with progressive disease and in the elderly. But younger patients in good health now sometimes make known to relatives that in certain circumstances they would not wish to have their lives prolonged, and they may take measures such as drawing up a "living will" or "right to die" document. This device acknowledges that when the time comes for such interventions the patient may no longer be competent to refuse consent; such declarations are now legal in several of the United States, where some 5 million have been enacted.<sup>14,15</sup>

The issue of consent is commonplace when surgery is undertaken, and interest has recently been shown in considering it before cardiopulmonary resuscitation.<sup>16</sup> Intensive care is often less clearly demarcated than surgery or resuscitation. Indeed, care often becomes intensive as part of a stepwise process, or admission to an intensive care unit may be a sequel of another intervention such as surgery or resuscitation. In any event it has not yet become customary to ask for permission to embark on intensive care.

Because resuscitation demands an instant decision guidelines for issuing "do not resuscitate" orders for individual patients have long been commonplace in North America.<sup>17</sup> These take account of prognosis, patient preference, family wishes, and the views of doctors and nurses treating the particular patient. Such formality is not yet part of British practice, but a recent report on cardiopulmonary resuscitation in the elderly in an English hospital listed a series of circumstances in which it would be withheld.<sup>18</sup> Some American hospitals also have codes that indicate a scaling down of active treatment for patients who are hopelessly ill by defining several levels of care.<sup>19,20</sup> Moreover, the President's Commission on Ethical Problems in Medicine has published a 500 page report on "Deciding to Forego Life-sustaining Treatment,"<sup>21</sup> and in Canada the legality of limiting treatment when the quality of life is threatened has also been clearly stated.<sup>22</sup> Proposals have recently been made in several countries (including Britain) that in some circumstances even the maintenance of fluid and nutritional intake might be regarded as extraordinary care.<sup>23-26</sup> The admission and discharge policies of some British intensive care units imply some prior consensus about limiting the use of intensive care when it is unlikely to bring benefit. Clinicians still, however, seem reluctant to adopt explicit guidelines designed to minimise the inappropriate use of intensive care, though the need for a humanitarian approach to the terminally ill in acute hospitals is widely recognised.<sup>27,28</sup>

No one any longer denies that expenditure on health care has to be limited, but everyone argues about what kind of rationing is most rational and most just. Preaching is easier than practice; memorable phrases may be coined such as "the intensivist has an obligation to ensure that the only right that remains is not the right to utilise medical technology." But analysis of responses to the need to ration intensive care in one prestigious American hospital showed reluctance to conserve resources by withdrawing technology from the acutely ill even when the expected benefit was vanishingly small.<sup>3</sup> Yet a study of the morality and economics of terminal care (in the same journal the following month) pointed out that while to deny care to the dying because there would be no economic return would be to stigmatise such patients, to give priority to the dying would be unjust to other patients.<sup>29</sup> These non-medical authors considered that to use intensive and expensive treatment for the dying could be regarded as disproportionate, unreasonable, and unjust expenditure. They noted that one fifth of the annual Medicare expenditure went on the 5% of patients who died in that year, and that many deaths were in intensive care units and in patients aged over 65. They concluded that much current expenditure was on procedures that were of little or no value to the patients concerned and that might even be against their best interests. Doctors do not, however, find it easy to resist the impulse to rescue a patient in a crisis; the result may be that other patients who might be cured by intensive care are deprived of this opportunity. For when resources are restricted a decision to treat one patient implies deciding against treating another.<sup>30</sup>

## Conclusion

No one doubts that intensive care, like many other high technologies, can bring benefit to many patients. But to use this or any other technology inappropriately shows lack of humanity and wastes resources. Such inappropriate deployment may be unnecessary, because the same end could be achieved by simpler means; unsuccessful, because the condition is beyond influence; unsafe, because the risks of complications outweigh the probable benefit; unkind, because the quality of life afterwards is unacceptable; or unwise, because resources are diverted from more useful activities.<sup>12</sup>

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## Eat, drink Perrier, and be merry

It has taken more than 30 years for us to progress from Humphrey Bogart and his leading lady blowing smoke into each other's faces to Larry Hagman using a fan to blow away his beautiful companion's smoke, and it may take us as long to change attitudes on alcohol. Just as with smoking, doctors have a responsibility to lead the way with this change—not least because we have such a dreadful record of abusing alcohol. Sadly, at the operating theatre Christmas party the traditional star is still the houseman who drinks two bottles of Beaujolais Nouveau and dances naked on the operating table, whereas nobody wants to know the nice young man in the corner sipping lettuce juice.

The attitude that opting not to drink alcohol is boring and killjoy must be one of the first to be changed. Those concerned about alcohol abuse can learn a lot from those who have been campaigning on smoking. They spent almost 20 years pushing the message that smoking was bad before switching to the more rewarding line that not smoking is beautiful: "Kiss a non-smoker—taste the difference" in the long run seems to achieve more than "Smoking kills." The new and excellent guidelines on stopping smoking produced by the International Union Against Cancer say: "Health is the most powerful motivating issue for persuading smokers to stop."<sup>1</sup>

Fitting in with this positive approach, the American National Council on Alcoholism has come up with some tips on what to drink and how to drink at Christmas parties. They give recipes for some agreeable sounding non-alcoholic cocktails: International Renaissance (cranberry and apple juice with Perrier and 7-Up); Yankee Winter (apple juice, cinnamon, lemon, cloves, maple syrup, and Perrier); and

Perrier Noel Sparkler (Concord grape juice with cranberry juice and Perrier).

But more important the council also advises on how to avoid alcohol related tragedies from your Christmas knees up:

- When you entertain, offer a selection of attractive non-alcoholic drinks for those who choose not to drink alcohol.
- Parties should not be arranged solely for drinking. Be sure to serve food or snacks when people are drinking alcohol.
- Don't overserve: pace drinks, push snacks, and serve meals promptly.
- Drinks should be sipped, not gulped.
- Decide *before* a party who will drive home. If you drink, don't drive. If you drive, don't drink. People react differently to alcohol on different occasions.
- Don't drink on any empty stomach.
- During the final hour of a party, serve snacks and non-alcoholic drinks to set the tone for departure and give the body time to begin metabolising the alcohol.

These seem to us excellent tips, and we shall be adopting them for the *BMJ* office parties. If all the hospitals and surgeries in the land were also to adopt them for their Christmas parties then not only will there be more doctors and nurses in one piece at the beginning of 1985 but also we shall be sending out a strong message to the rest of the community.

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