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EDITORIAL

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Should cost considerations be included in medical decisions? No

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In a recent article in *Intensive Care Medicine*, Hernu and colleagues report the results of a survey in which they asked intensivists to estimate the costs of common intensive care unit (ICU) drugs and treatments, and then compared those estimates to actual costs [1]. Somewhat depressingly, they found that over two-thirds of estimates were wildly off the mark, with many estimates coming either well below or well above the actual values. On the basis of these results the authors call for efforts to better educate intensivists about the cost of critical care so that we can incorporate cost-control into daily practice. However, this recommendation begs a larger question: should cost considerations be included in medical decisions in the ICU?

In this commentary, part of an invited pro–con debate on the topic of cost containment, we argue "no". We do not take this position out of opposition to cost-containment in critical care, which all would agree is important given rising healthcare costs worldwide [2]. Instead, we make the case that the potential savings to be had through cost-conscious decision-making are very small, while the potential risks, both to patient outcomes and the patient–physician relationship, are large. Additionally, we argue that there are other, better ways to reduce ICU spending without emphasizing cost-cutting measures at the bedside.

Small potential benefits

The idea that intensivists should practice cost-conscious decision-making assumes that doing so could save a meaningful amount of money. However, the opposite is true—the spending over which intensivists exert control is relatively small and is dwarfed by the total spending during an ICU stay. About 80 % of ICU costs are fixed, meaning that they are attributable to staffing and overheads rather than direct patient care, and are therefore unaffected by day-to-day medical decisions [3]. Only a small minority of costs are actually due to discretionary spending, most of which is not truly discretionary since many tests and treatments will always be necessary.

For example, in this study the entire discretionary spending for a hypothetical patient with sepsis was 2223 €. Comparatively, for the same hypothetical patient the total ICU costs would be around 10,000 € [4]. Viewed in this context, cutting costs by avoiding some optional blood tests (at around 9 € per test) or cutting back on chest X-rays (at 38 € per film) would have little impact.

Significant potential for harm

Conversely, cost-conscious decision-making could lead to important harms. For example, cutting costs at the bedside could paradoxically increase the total cost of treatment by

increasing downstream costs. For example, in this study a dose of omeprazole for stress ulcer prophylaxis cost only 1 €. Yet the true costs of omeprazole are much different: if it prevents an episode of gastrointestinal bleeding the cost savings could be substantial, while if it causes an episode of *Clostridium difficile* colitis it would be extremely costly. The true costs of tests and treatments are more strongly related to their clinical impact rather than their upfront line item costs. Without accurate estimates of these downstream costs, which are hard to come by, efforts to cut costs are as likely to increase spending as they are decrease spending.

Additionally, cost-conscious decision-making neglects that fact that costs are only one part of the value equation. Cost-effectiveness, or the ratio of cost to quality, is the true number of interest [5]. Just because one drug is cheaper than another does not mean it is preferred. Rather, costs must be weighed against the value of the health produced. This complex calculus cannot be done at the bedside. Ultimately, cheap drugs like amphotericin B and low molecular weight heparin can be markedly less cost-effective than their more expensive alternatives [6, 7]. Decisions based purely on costs could therefore deprive patients of highly effective, and cost-effective, care.

Perhaps most importantly, incorporating cost considerations at the bedside might compromise physicians' duty to act in the best interest of the patient in front of us [8]. When we make decisions based purely on costs we put the needs of society before the needs of our patients, failing to live up to this requirement and altering the patient–physician relationship in potentially profound ways. As the intensivist and medical journalist Lora Goitein writes, "When patients are sick and helpless, do they really want their physicians to be influenced by costs?" [9].

So we can order any test we want, whenever we want?

On the contrary, opposition to cost-conscious decision-making does not mean that physicians can provide any care any time. Rather, efforts to reduce unnecessary testing and low value treatments, such as the Choosing Wisely campaign in the USA, are extremely important [10]. However, the justification for eliminating low value care is not that it is costly but that it is non-beneficial. We need not be cost-conscious decision-makers to be value-conscious decision-makers. Treatments that do not help patients should be avoided independent of costs.

Moving forward: how to save money in the ICU

Although we argue that costs should not be factored into medical decision-making in the ICU, this does not mean that we should not strive toward healthcare cost reduction in other ways. One strategy is to devise systems of care that prevent unnecessary or unwanted ICU admissions—given the small amount of ICU care that is due to discretionary spending, the only real way to reduce ICU costs is to prevent ICU admissions in the first place [11]. Another strategy is to support programs that encourage society-wide decisions about healthcare utilization based on careful cost-effectiveness analyses, such as the UK's National Institute for Health and Clinical Excellence [12]. These programs limit use of treatments that are not cost-effective, taking cost decisions out of the hands of physicians and putting them where they belong: in the hands of society at large.

Together, these efforts will lead to lower healthcare spending while maintaining quality, without putting undo burden on physicians at the bedside. Intensive care is hard enough. Cost-conscious medical decision-making will make intensive care harder, will not save a meaningful amount of money, and will open the door to potential harms. We will achieve real ICU savings only by encouraging a society committed to system-based reforms.

Compliance with ethical standards

Conflicts of interest None.

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