

COMMENTARY

Interpreting the odds

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42cc-2-2-041

'What Chance does she have doctor?'

This is a common question in intensive care units when discussion is begun with families as to the appropriateness of continuing therapy with a goal of cure, or instituting or withdrawing therapy to provide a peaceful appropriate death. Limiting therapy is primarily instituted to reduce the likelihood of patient's inappropriate suffering, but it has important resource implications in addition to this. Futile care wastes money and denies resources to others. Callahan [1] suggests that instituting therapy when an appropriate life has been completed increases the risk of a wild death as opposed to a peaceful death. Notwithstanding that a peaceful death is not necessarily the same as a painless death, this is not always true. Despite documentation of a high frequency of badly managed deaths in the US Support studies [2], our ability to provide pharmacological oblivion in ventilated patients should allow death to be pain-free, albeit undignified.

Few outside the specialty understand the complexity of the practical aspects of determining chances of survival in intensive care units. Only in extreme cases can the intensivist categorically say there is no chance of survival. The intensivist's solicitude is compromised by the number of patients in whom unprecedented survival has occurred, emphasising the fallibility of their knowledge.

When the intensivist uses their mandate from society to work with families to determine whether the treatment is what the patient would wish, odds and uncertainty are serious dilemmas. This is because:

1. Intensive care unit predictive indices are unreliable in individuals [3].
2. Physician determinants of risk are biased [4].
3. Surrogate decision makers often have little idea of the risks to the patient [5].
4. Fifteen percent of patients with advance declarations will change their minds [6].
5. Determination of patient wishes from second-hand conversations is hazardous [7].

Often, therefore, the chance of survival will be dismissed in discussions about the appropriateness of treatment. Although science plays a part in estimating the odds, ultimately we deal with value judgements based on personal preferences and the decisions cannot be classified in terms of right and wrong [8]. It seems, however, that relatives will usually opt for the treatment option, even when the chances of survival are poor. This may lead to the doctor being trapped into an inappropriate and wasteful care plan, particularly in the US system where courts are likely to give weight to the decisions of surrogates.

A recent book, *Against the Gods* by Peter L Bernstein [9], gives some insight as to why this is so. Detailed studies have been performed over the years as to what risks people will accept. Although these studies are economic and based on decisions for oneself rather than others, the book suggests that people put in the situation of acquiescing to treatment based on odds are placed in a situation where appropriate behaviour is to ask for continuation.

Accepting odds involves a risk and a gain. In the intensive care unit, the risk is death and the gain is life, surely an ultimate set of gains and losses. Death is likely to occur whatever course is taken. Thus, in reality, little is risked.

When the potential gain is significant most people will reject a low risk in favour of a smaller certain gain. Furthermore, the perceived value of a gain is inversely proportional to what the person had in the beginning. Life in the desperately ill is a sufficient gain to predict a treatment option.

The language therefore involved in such decision making may place the participants in a situation where logic compels them to favour the worst option and alternative strategies are essential. Indeed the quantification of outcomes to families in terms of odds is something that should almost certainly be avoided unless it can be categorically said that there is no chance. The use of the expression 'no reasonable chance' is an attractive alternative. Although only the patient can determine what is reasonable, it is fair to consider the decision in the

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context that most people do not wish their dying prolonged [10] and suffering without the prospect of a good outcome is the worst form of suffering [11].

While quantification of outcomes in terms of odds and risk is valuable in terms of assessing treatment and efficiency it may be an inappropriate tool for the bedside discussion that occurs with families and patients on a daily basis in the intensive care unit.

Published: 22 May 1998

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doi:10.1186/cc123

Cite this article as: Fisher: Interpreting the odds. *Critical Care* 1998 2:41.

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