

Virtual Mentor

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Journal discussion

CPR—Is it always an appropriate option?

by Tom LeBlanc, MD, MA

Blackhall LJ. Must we always use CPR? *N Engl J Med.* 1987;317:1281-1285.

In her landmark 1987 paper, “Must We Always Use CPR?” Leslie Blackhall tackled a rather contentious issue in medical ethics: the appropriate use of cardiopulmonary resuscitation (CPR) [1]. Intimately intertwined with this topic are questions about code status and do-not-resuscitate orders (DNRs). While these topics were hardly novel 20 years ago, Blackhall’s approach and insights were unique. Writing as a medical resident, she effectively challenged the status quo by forcing physicians to ask, “Must we always use CPR?” She argued that physicians need not offer CPR as a treatment in cases where it offered no known medical benefit or where it was more likely to cause harm. Equally striking was her recommendation to rely on an evidence-based strategy to inform physician use of CPR, rather than simply deferring to patient self-determination.

Since its development in the 1960s, CPR has become a standard medical practice. In the absence of a documented DNR order, it is used on any patient who suffers cardiac arrest, regardless of the cause. Blackhall attacked this practice from many angles, describing a troubling but all-too-common case from her residency and supplying a plethora of condemning data [2]. At the time of its development, CPR was intended only for those who had suffered an acute insult, such as a myocardial infarction (MI). It is known that the most common cause of death following an MI is actually ventricular arrhythmia. If CPR is initiated quickly and effectively, and defibrillation is performed soon after, patient outcomes are quite good. But Dr. Blackhall pointed out that by 1987, CPR had become standard practice for patients with cancer, renal failure or other forms of advanced illness, despite the fact that it was not intended for such purposes. Unfortunately, outcomes are rather poor in these cases, throwing into question the wisdom and value of using CPR on patients with an advanced illness.

Blackhall reviewed a great deal of data that clearly suggested that survival after CPR was strongly correlated with the underlying illness and cause of the arrest [3]. Many studies carried out over the two decades prior to her article concluded that patients with chronic debilitating illnesses were highly unlikely to benefit from the use of CPR, and indeed might suffer great harm [3]. For example, Peathfield et al. analyzed the outcomes after CPR in more than 1,000 patients over a 10-year period. Only 8.7

percent survived until hospital discharge; in the subclass of patients with cancer, all died. On the other hand, 15 percent of patients who suffered an acute MI requiring CPR survived, a rate that is likely to be even higher today [4].

There is more at work here than just raw data. Blackhall asked the difficult yet critical question of why physicians continued to consider CPR for patients among whom it was known to offer no benefit. Her response was that physicians, due in part to their own discomfort with death and dying, tended to avoid end-of-life discussions, with the result that CPR and DNR conversations often didn't take place in the nonacute setting. Family members are then faced with the pressure of considering—on the spot—what their loved one “would have wanted.” After all, it is much easier and less uncomfortable to present CPR as an option than to inform a patient that she will die soon regardless of the intervention. Blackhall also implied that physicians were, on average, rather poor at having these discussions [5], and a 1995 study by James Tulsky supports her claim [6]. In a tape-recorded analysis of patient encounters, Tulsky found that medical residents discussed the likelihood of survival after CPR in only 13 percent of cases, and that none provided the patient with a statistical probability. Less than one-third of the residents mentioned the consequences of intensive care, and only about 10 percent initiated discussions about patient values and goals of care. Coupled with the public's rather skewed and inaccurate perception of CPR's efficacy, one can easily see how these emergency situations frequently lead to confusion.

Challenging the status quo

With its emphasis on patient autonomy, modern medical ethics dictates that patients and their families should play an active and leading role in making decisions about CPR and DNRs. Unfortunately, this assumption often leads to conflict between physicians and families at the end of life. As Blackhall astutely argued, patient autonomy cannot be our only guide, especially when patients are so poorly informed about the risks and lack of efficacy of CPR in chronic illness [4]. In such cases, said Blackhall, the physician's offer of CPR had become a sort of “high-technology placebo” and that served as a rather poor substitute for the difficult discussion that should have taken place [7]. Instead, evidence-based knowledge about the efficacy of CPR should have informed physicians' recommendations, and CPR should not always be offered as a “treatment.”

While it may sound paternalistic, Blackhall claimed that most patients lacked the medical knowledge needed to fully understand the role of CPR, especially when media depictions of the procedure tended to be skewed toward favorable results [7]. Blackhall challenged the presumption that patients always have a right to CPR any more than they have a right to receive a medically nonsensical treatment. After all, if the data are accurate, one can hardly call CPR a treatment in certain circumstances. Indeed, in some cases it would seem that a physician's primary duty to do no harm would preclude the provision of CPR. Furthermore, just as a physician would not ask a patient which antibiotic she wanted—patients generally lack the fundamental knowledge about pharmacology and microbiology needed to know which medicine

to choose—so should a physician refrain from offering CPR as an option when a patient is not fully informed about its risks, likely outcomes or benefits.

Still, the clinical question remains: How does one decide that CPR is unlikely to be useful? Statistics are of limited value from the perspective of an individual patient whose outcome is somewhat binary. Blackhall's article is now close to 20 years old, and the CPR data she draws upon are even older. Have survival rates changed significantly since then? We have all seen that, as medicine advances, what was once a death sentence is often no longer as dire. CPR protocols have changed dramatically as well. More recent studies still conclude that CPR is generally ineffective for patients with chronic disease or advanced age, with rates of survival-to-discharge continuing to be abysmally low [8, 9].

The next step

If the above analysis and discussion are fair and well-reasoned, where does this leave us? For one, the current system of CPR use may need modification. One might posit that hospitals overtreat terminally ill patients out of fear of litigation. This surely puts pressure on physicians to routinely perform CPR, despite its known medical futility in many cases. Yet if CPR is not medically recommended, and indeed thought to be detrimental for a certain patient or subset of the population, sound clinical judgment dictates that it should not be offered as a treatment option in all cases. This change will require a significant alteration in physicians' mindset and documentation practices. Regardless of safeguards, there will always be a gray zone of uncertainty in which it remains unclear whether CPR is a potential benefit or harm. In these cases, it would seem reasonable to defer to the patient and family, provided full and informed consent has taken place.

Given our litigious society, it seems unlikely that offering CPR to certain patients will be barred. To push for this would be unrealistic and perhaps counterproductive. Still, Dr. Blackhall's article provides much food for thought and highlights the vast need for improvement.

Conclusions

As a first step, medical students and residents must be made aware of the data regarding CPR's efficacy. The fact that they are not is quite troubling since most interns and residents discuss CPR with countless patients throughout their careers. If physicians do not have the most up-to-date and relevant data, our patients may suffer unnecessarily.

Second, efforts must be made to teach students, residents and practicing physicians how to have better discussions with their patients. Although most doctors think they possess more than adequate communication skills, Dr. Tulskey's study suggests otherwise.

Finally, physicians need to increase their comfort level with death and dying. Personal discomfort is no excuse for the provision of poor care at the end of life.

Sadly, when doctors fail to inform their patients properly about CPR, neglect to discuss outcomes and shy away from difficult conversations, patients and families suffer the consequences. We must absorb and integrate Dr. Blackhall's insights into our daily practice of medicine, lest we continue to neglect our patients when they are most vulnerable and most in need of our help and compassion.

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Tom LeBlanc, MD, MA, has just begun an internship in internal medicine at Duke University in Durham, N.C., and is the theme issue editor for this month's Virtual Mentor.

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