

# HOSPITAL PHYSICIAN®

## CRITICAL CARE MEDICINE BOARD REVIEW MANUAL

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The *Hospital Physician Critical Care Medicine Board Review Manual* is a study guide for fellows and practicing physicians preparing for board examinations in critical care medicine. Each quarterly manual reviews a topic essential to the current practice of critical care medicine.

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## End-of-Life Care

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# End-of-Life Care

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## INTRODUCTION

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More than 2.5 million people die in the United States each year, with more than 60% of those deaths occurring in hospitals.<sup>1</sup> Almost half of those who die in the hospital have been cared for in an intensive care unit (ICU) within 3 days prior to their death.<sup>2</sup> There has been an increasing interest in the care of the dying patient and the physician's role in ensuring a comfortable and dignified death. Recent evidence has changed our perspective regarding distinctions between "critical illness" and "terminal illness" and has introduced the integration of palliative care as a component of global intensive care.<sup>3</sup> In the past few decades, clinical medicine has made extraordinary technological advances, but many of these innovations may not so much improve the quality of life as comparatively extend the dying process. Correspondingly, public interest in decisions regarding the use of medical technologies and pain control near the end of life is increasing.

In the present-day hospital ICU, the terminally ill patient who is enmeshed in medical technology can escape in 2 ways: the physical organism reaches its breaking point and the body can no longer function even with technological assistance; or the physician, patient, and family decide to withdraw life-sustaining technologies and allow death to happen. The decision to withdraw life support, in which the physician, family, and patient participate together, has been called the "bargaining of death."<sup>4</sup> Although the exact frequency of treatment withdrawal is hard to determine, some studies have shown that of the total of hospital deaths, 75% occur after treatment is forgone.<sup>5</sup> Other studies have demonstrated that in the ICUs of tertiary care centers, the withdrawal or withholding of life support precedes death in 65% to 90% of all deaths.<sup>6-8</sup>

Although ICUs present many challenges to providing excellent end-of-life care, they also have special resources available, including a low patient-to-nurse ratio that allows better care for the dying patient.<sup>9</sup> Few ICU patients are able to make decisions about end-of-life issues for themselves; therefore, clinicians dealing

with these patients must be familiar with the patient's expressed preferences regarding withdrawing life support, surrogate input, and options for withholding life support.

The methods through which various medical interventions are either not administered or are taken away from a patient with the expectation that he or she will die from the underlying illness constitute withholding and withdrawing life support (**Table 1**). Palliative care is an important component of end-of-life care. The Society of Critical Care Medicine has stated that all ICU patients can benefit from palliative care, affirming that palliative and curative care are not mutually exclusive.<sup>10</sup>

Patients have the right to refuse medical treatment, even life-sustaining treatment.<sup>11</sup> Although withholding and withdrawing treatment are options that allow the fundamental disease to progress in its natural course, they do not approach a decision to end a patient's life, as does euthanasia.<sup>12,13</sup>

## ECONOMICS OF END-OF-LIFE CARE

Terminally ill patients consume significant resources, including nursing care, transportation, and medications.<sup>14,15</sup> Evidence has shown that health care expenses for patients in the ICU are high. End-of-life care consumes 10% to 12% of all health care expenditures and 27% of Medicare expenditures in the United States.<sup>16</sup> In 1999, terminal hospitalizations accounted for 7.5% of all inpatient costs.<sup>17</sup> Palliative care increases the costs of hospital care by elevating pharmacy costs of analgesics and sedatives and by increasing the need for nursing.<sup>18</sup> Previous studies have shown that the amount that might be saved by reducing the use of aggressive life-sustaining treatment for dying patients is 3.3% of total national health expenditures.<sup>19</sup>

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## EVALUATION OF THE PATIENT AT THE END OF LIFE

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### CLINICAL SIGNS AND SYMPTOMS

Patients who are suffering from advanced disease,