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## **Decisions to Forgo Life Support May Depend Heavily on the ICU Where Patients are Treated**



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*Study to Be Presented During 2013 ATS Special Session: "Care at the End of Life: Room for Improvement, Ideas for Change"*

The decision to limit life support in patients in the intensive care unit (ICU) appears to be significantly influenced by physician practices and/or the culture of the hospital, suggests new findings from researchers at the Perelman School of Medicine at the University of Pennsylvania presented at the American Thoracic Society International Conference on May 21.

A retrospective analysis of over 269,000 ICU patients from the Project IMPACT database revealed a substantial variation in decisions to forgo life-sustaining therapies rates among 153 ICUs in the United States—which suggests many factors unrelated to the patient or family may be affecting such decisions, particularly for patients who are unable to participate in decision making.

"Patient factors such as severity of illness, age, race, and functional status explain a significant amount of the variability in decisions to forgo life-sustaining therapies, but it is likely that ICU culture and physician practices also play a major role," said Caroline M. Quill, MD, a fellow in the department of Pulmonary, Allergy, and Critical Care at Penn Medicine. "My sense is because patients in the ICU are often unable to participate in decision-making, the influence of providers and the ICU culture may be even greater than the patient or family preference."

One in five Americans die during or shortly after an ICU stay, with many them dying following a decision to forgo life support. Though these decisions are common, the influences on these decisions are not well understood.

Limitations on care include do-not-resuscitate orders, withholding or withdrawing mechanical ventilation, withholding CPR, or an order for comfort measures or hospice care.

In order to study better understand these influences, the researchers wanted to quantify the variation among ICUs after adjusting for patient factors—gender, condition, age, and race, for example. The thought is that if a host of patient characteristics can be identified that reliably predict who will and who will not have a decision to forgo life-sustaining therapy, then after adjustment for such characteristics among large samples of ICU patients, rates should be relatively consistent among ICUs.

Here, that was not the case. Overall, 11.7 percent of patients had a decision to forgo life-sustaining therapies among 153 ICUs in the US between 2001 and 2009. Of those, 58.8 percent died in the ICU and 41.2 percent survived to ICU discharge. After researchers adjusted for patient factors in their model, the study still revealed a six-fold variation among ICUs in the probability of a decision to forgo life-sustaining therapy. This suggests that the ICU to which a given patient is admitted influences his or her odds of having a DFLST, regardless of personal or clinical characteristics.

The team also looked at which patient characteristics are associated with these decisions. Older patients, women, and patients with more functional limitations at the time of admission to an ICU were more likely to limit life support, the researchers found. Conversely, black race and other non-white races were less likely to make the decisions to forgo life-sustaining therapies.

“This high variability among ICUs highlights an opportunity to improve upon ‘patient-centeredness’ in end of life decisions,” said Dr. Quill. “Knowing how certain physicians reach and convey prognostic judgments, and how an ICU culture, their organizational factors, like nighttime staffing, influences these decision may help us devise targeted interventions to improve the quality of end-of-life care.”

Sarah J. Ratcliffe, PhD, Michael O. Harhay, MPH and Scott D. Halpern, MD, PhD are co-authors on the study.

Source: Penn Medicine via [Newswise](#)

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