

ICU care for COPD, heart failure and heart attack may not be better

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IV medication. Credit: ATS

Does a stay in the intensive care unit give patients a better chance of surviving a chronic obstructive pulmonary disease (COPD) or heart failure flare-up or even a heart attack, compared with care in another type of hospital unit? Unless a patient is clearly critically ill, the answer may be no, according to University of Michigan researchers who analyzed more than 1.5 million Medicare records.

Their study, "ICU Admission and Survival among Older Patients with Chronic Obstructive Pulmonary Disease, Heart Failure, or Myocardial Infarction," is published online in the *Annals of the American Thoracic Society*.

The researchers decided to study how [patients](#) with the three conditions fared in the ICU after previously reporting that patients admitted to the ICU for pneumonia were more likely to survive.

The authors noted that these three conditions frequently result in an ICU admission, but there is great variability across hospitals. They estimated that approximately one in six patients was admitted to the ICU only because of living closest to a hospital that places a high percentage of its patients in ICU beds.

The researchers looked at 30-day mortality and also at cost of care. "We wanted to evaluate whether ICU care is always beneficial," said lead author Thomas Valley, MD, MSc, a pulmonary and critical care researcher at the University of Michigan Medical School. "ICU care can save lives, but it is also very costly."

In addition to experiencing higher costs, he added, ICU patients are

more likely to undergo invasive procedures and be exposed to dangerous infections.

Although the researchers found no difference in mortality between patients treated in the ICU and those treated as regular inpatients, the cost of care in the ICU for [heart failure](#) exacerbation was significantly higher (\$2,608 more) and [heart attack](#) (\$4,922 more) than regular inpatient care. There was no difference in the cost of treating patients for COPD exacerbations between the two settings.

"Our results highlight that there is a large group of patients who doctors have trouble figuring out whether or not the ICU will help them or not," Dr. Valley said. "We found that the ICU may not always be the answer. Now, we need to help doctors decide who needs the ICU and who doesn't."

Dr. Valley emphasized study results do not apply to patients who clearly require intensive care, such as those who cannot breathe on their own.

Study limitations include the fact that only Medicare patients were part of the study so results may not apply to younger patients. Costs include only hospital charges, not physician fees.

The authors concluded, "These findings suggest that the ICU may be overused for some COPD, heart failure, or acute [myocardial infarction](#) patients with an uncertain indication for [intensive care](#), and opportunities exist to decrease health care costs by reducing ICU admissions for certain patients."

Future studies, they said, should help define which patients with these conditions would benefit from the ICU and which can be treated elsewhere in the hospital without compromising their care.

Provided by American Thoracic Society

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