

# Elderly patients who survive ICU stay have high rate of death in following years

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An analysis of Medicare data indicates that elderly patients who are hospitalized in an intensive care unit (ICU) and survive to be discharged from the hospital have a high rate of death in the following three years, and that, in particular, patients who receive mechanical ventilation have a substantially increased rate of death compared with both hospital and general population controls in the first several months after hospital discharge, according to a study in the March 3 issue of *JAMA*.

Although there has been a decrease over time in the risk of in-hospital death for patients who receive intensive care in the United States, little is known about subsequent outcomes for those discharged alive. "Patients older than 65 years now make up more than half of all ICU admissions," the authors write. "Information is needed to understand the patterns of mortality, morbidity, and health care resource use in the months and years that follow [critical illness](#) to allow for better targeting of follow-up care."

Hannah Wunsch, M.D., M.Sc., of Columbia University Medical Center and NewYork-Presbyterian Hospital/Columbia, New York, and colleagues examined the 3-year outcomes and health care resource use of ICU survivors, and identified subgroups of patients and periods in which patients are at highest risk of death, using a 5 percent sample of Medicare beneficiaries older than 65 years. A random half of all patients were selected who received intensive care and survived to [hospital discharge](#) in 2003 with 3-year follow-up through 2006. From the other half of the sample, 2 matched control groups were generated:

hospitalized patients who survived to discharge (hospital controls) and the general population (general controls), individually matched on age, sex, race, and whether they had surgery (for hospital controls).

In the data analyzed for the study, 35,308 ICU patients survived to hospital discharge. The ICU survivors had a higher 3-year mortality (39.5 percent) than hospital controls (34.5 percent) and general controls (14.9 percent). The ICU survivors who did not receive [mechanical ventilation](#) had minimal increased risk compared with hospital controls (3-year mortality, 38.3 percent vs. 34.6 percent).

"However, mortality for those who received mechanical ventilation was substantially higher than for the corresponding hospital controls (3-year mortality: 57.6 percent vs. 32.8 percent, respectively). This difference was primarily due to mortality during the first 2 quarters following hospital discharge (6-month mortality: 30.1 percent for ICU survivors vs. 9.6 percent for hospital controls)," the authors write.

Discharge to a skilled care facility for ICU survivors (33.0 percent) and hospital controls (26.4 percent) also was associated with high 6-month mortality (24.1 percent for ICU survivors and hospital controls discharged to a skilled care facility vs. 7.5 percent for ICU survivors and hospital controls discharged home).

"The magnitude of the postdischarge use of skilled care facilities for both ICU survivors and hospital controls and the high long-term mortality for all of these patients call into question whether discharge to skilled care facilities is merely a marker for higher severity of illness with appropriate delivery of care. These patients could have been discharged prematurely from acute care hospitals, and needed a higher level of care than they received. It also is possible that these patients could have had better outcomes if discharged home, but were not able to be sent there due to lack of sufficient support from family or friends to

act as caregivers. These findings highlight the need for a much more detailed understanding of the long-term care needs of these patients," the authors conclude.

**More information:** JAMA. 2010;303[9]:849-856.

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