

ICU Admission for the Very Elderly: A Cost Analysis



Considering the poor clinical outcomes, and that many intensive care unit (ICU) admissions may be undesired by very elderly patients (aged 80 or older), ICU costs in this population are substantial, according to a new study published in the journal *Critical Care*.

"Our finding that a preference for comfort care predicted a lower cost independent of mortality reinforces the importance of early goals of care discussions to avoid both undesired and potentially non-beneficial interventions, consequently reducing costs," the authors write.

Very elderly patients are often admitted to ICUs despite poor outcomes and frequent preference to avoid unnecessary prolongation of life. Critical care remains amongst the most expensive of healthcare interventions, consuming approximately one percent of the GDP. These costs continue to rise, and are expected to increase further as the incidence of critical illness requiring ICU admission is projected to increase by 80 percent by 2026. Researchers sought to determine the cost of ICU admission for the very elderly and the factors influencing this cost.

This prospective, observational cohort study included patients 80 years and older admitted to 22 Canadian ICUs from 2009 to 2013. A subset of consenting individuals comprised a longitudinal cohort followed over 12 months. Costs were calculated from ICU length of stay and unit costs for ICU admission from a Canadian academic hospital. A generalized linear model was employed to identify cost-predictive variables.

In total, 1,671 patients were included; 610 were enrolled in the longitudinal cohort. The average age was 85 years; median ICU length of stay was four days. Mortality was 35 percent (585/1,671) in hospital and 41 percent (253/610) at 12 months. The average cost of ICU admission per patient was \$31,679 \pm 65,867. Estimated ICU costs were \$48,744 per survivor to discharge and \$61,783 per survivor at one year. For both decedents and survivors, preference for comfort measures over life support was an independent predictor for lower cost ($P < 0.01$).

"Interestingly, we found that patients whose family members had specified a preference for comfort care over life support had a significantly lower cost of ICU care, not only for those who died in hospital, but also for survivors to discharge. This finding suggests that, without adversely affecting clinical outcomes, an approach that focuses early on comfort measures instead of life support led to a reduction in cost," the authors note.

The main limitations to this study surrounded the calculation of ICU cost. As cost estimates were based on figures from a single academic institution, the authors point out these estimates do not account for variability in costs between institutions and the known lower costs in the community ICU setting.

Source: [Critical Care](#)

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