

## Functional Outcomes After Invasive Mechanical Ventilation for Older Adults



Invasive mechanical ventilation can be a life-saving treatment, but it has poor short- and long-term outcomes for patients. In older adults, especially those with pre-existing long-term care needs due to functional and cognitive impairment, it may not be beneficial and could cause more suffering. Therefore, it is important to discuss with patients and families whether or not invasive mechanical ventilation aligns with their values and goals, especially considering the fact that there is limited evidence on its impact on older adults with poor functional and cognitive status at baseline.

A recent study used a large administrative claims database to investigate the incidence and 1-year outcomes of invasive mechanical ventilation in adults aged 65 and over with pre-existing long-term care needs in Japan. The patients' functional and cognitive impairment were assessed using a standardised care-needs certification system and categorised into care-needs levels based on daily estimated care minutes - no care-needs, level 1–2 and care-needs level 1 (estimated care time 25–49 min), level 2–3 (50–89 min), and level 4–5 ( $\geq 90$  min). The goal was to assess the impact of pre-existing care needs on the outcomes of invasive mechanical ventilation.

The study included 593,990 eligible people, of which 4,198 received invasive mechanical ventilation. The mean age of the patients was 81.2 years, and 55.5% were male. The 1-year mortality rates after invasive mechanical ventilation varied significantly based on the pre-existing care-needs levels at the time of ventilation. Patients with no care needs had a mortality rate of 43.4%, whereas those with care-needs level 4-5 had a mortality rate of 74.1%. The study also found that patients with worsened care needs had a lower mortality rate, with patients with care needs level 4-5 having a mortality rate of 1.9%.

The study found that among patients with pre-existing care needs levels 2-5 who received invasive mechanical ventilation, a significant proportion experienced death or worsening care needs within one year. Among patients with complete dependence on long-term care who received invasive mechanical ventilation, approximately 76.0% to 79.2% experienced death or worsening of care-needs levels within one year. These results suggest that patients with poor functional and cognitive status at baseline may not benefit from invasive mechanical ventilation and that shared decision-making between patients, families, and healthcare professionals is crucial in determining its appropriateness.

This evidence can be helpful in shared decision-making among older adults with poor functional and cognitive status at baseline who are being considered for invasive mechanical ventilation. This information can help guide discussions among patients, families, and healthcare professionals regarding the appropriateness of invasive mechanical ventilation in such cases.

Source: [Critical Care Medicine](#)

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