

## Protocols needed for discharging patients directly home from ICU



Researchers in Canada have found that the discharge of select adult patients directly home from the intensive care unit (ICU) is common, associated with shorter hospital stays, but not associated with increased healthcare utilisation or mortality. These findings are based on a population-based cohort study of adult patients admitted to the ICU of nine medical-surgical hospitals. The study is published in *JAMA Internal Medicine*.

"Three risk factors including leaving against medical advice, prescription of community supports at time of discharge, and discharge from an ICU with higher volumes of patients discharged directly home may help to identify patients at increased risk of a hospital readmission or an emergency department visit within 30 days of discharge," study authors write. "We recommend that ICUs develop discharge procedures that include identification of candidate patients for discharge directly home, develop protocols to facilitate the process, train ICU clinicians in these procedures, and measure outcomes."

Patients recovering from critical illness have historically been transferred from the ICU to a hospital ward before being discharged home. These transitions allow patients to progressively receive lower-intensity care, physical and functional assessments, and rehabilitation before returning to the community. However, long waits for hospital ward beds in many healthcare systems have resulted in a new model of care where select patients recovering from critical illness are discharged directly home from the ICU.

While the transfer of patients from the ICU to a hospital ward before discharge home has been extensively studied, much less is known about the discharge of patients from the ICU directly home. This multicentre cohort study aimed to compare the healthcare utilisation and clinical outcomes for ICU patients discharged directly home with those of patients discharged home via the hospital ward. The primary outcome was readmission to the hospital within 30 days of hospital discharge; secondary outcomes were emergency department visit within 30 days and death within one year.

The cohort consisted of 6,732 patients – 2,826 (42%) were female; median age, 56 years – admitted to nine medical-surgical ICUs and discharged alive from the hospital to their home. Compared with patients discharged home via the hospital ward (5,810; 86%), patients discharged directly home were younger (median age 47 vs. 57 years;  $P < .001$ ), more likely to be admitted with a diagnosis of overdose, substance withdrawal, seizures, or metabolic coma (32% [295] vs. 10% [594];  $P < .001$ ), to have a lower severity of acute illness on ICU admission (median APACHE II score 15 vs. 18;  $P < .001$ ), and receive less than 48 hours of invasive mechanical ventilation (42% [389] vs. 34% [1984];  $P < .001$ ).

In the propensity score matched cohort ( $n = 1,632$ ), patients discharged directly home had similar length of ICU stay (median, 3.1 days vs. 3.0 days;  $P = .42$ ) but significantly shorter length of hospital stay (median, 3.3 days vs. 9.2 days;  $P < .001$ ) compared with patients discharged home via the hospital ward. There were no significant differences between patients discharged directly home or home via the hospital ward for readmission to the hospital (10% [ $n = 81$ ] vs. 11% [ $n = 92$ ]; hazard ratio [HR], 0.88; 95% CI, 0.64-1.20) or emergency department visit (25% [ $n = 200$ ] vs. 26% [ $n = 212$ ]; HR, 0.94; 95% CI, 0.81-1.09) within 30 days of hospital discharge. Four percent of patients in both groups died within one year of hospital discharge ( $n = 31$  and  $n = 34$  in the discharged directly home and discharged home via the hospital ward groups, respectively) (HR, 0.90; 95% CI, 0.60-1.35).

"Earlier findings of our research group demonstrate that delays in patient discharge from ICU are common, and data from the present study show that these delays are strongly associated with discharge directly home," the authors say. "One in 3 patients in the present cohort spent more than 24 hours in the ICU after being determined ready for ICU discharge. This misallocation of resources may slow care progression for patients recovering from critical illness and limit ICU access for other patients. The root causes of flow failure need to be delineated and strategies developed to improve patient flow including ICU discharge."

Processes and outcomes of care for patients discharged directly home from the ICU, the authors continue, should be monitored to ensure that patients are not exposed to increased risk and that any burden of care is not inappropriately shifted to the community or family.

Source: [JAMA Internal Medicine](#)

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