



## Study: When to Admit Geriatric Patients and Avoid the ICU



There are four signs in patients over 65 years that indicate they should be admitted to hospital when they present to the emergency department. A study published in the [Annals of Emergency Medicine](#) has identified the clinical characteristics and management decisions that are associated with poor outcomes after ED discharge.

Gelarah Gabayan, MD, MSHS, of the Department of Medicine at the University of California at Los Angeles, and colleagues analysed the outcomes in a matched case-control chart review study of patients 65 years or older who died or were admitted to the ICU within 7 days of being discharged from the emergency department. They found that older adults who present with acute or chronic cognitive impairment or change in mental state, a change in disposition plan from admit to discharge, systolic blood pressure less than 120 mm Hg and pulse rate greater than 90 beats/min were more likely to be admitted to the intensive care unit (ICU) or to die within 7 days.

See Also: [Improved Emergency Care Could Reduce Hospital Admissions](#)

Lead author Gabayan advised caution when deciding whether to admit or discharge a geriatric patient, as these patients are usually more delicate than younger patients. "Even abnormal vital signs, like blood pressure and heart rate, are associated with potentially catastrophic events for patients who are discharged from the ER rather than admitted," he said. While pressures exist not to admit, Gabayan explained that the finding should serve as a tool for ED physicians rather than a blanket recommendation to admit all geriatric patients.

The researchers conclude: "Our findings suggest that EDs use higher scrutiny when managing patients with cognitive impairment and emergency providers address abnormal vital signs before discharge while being especially cautious when a change in disposition plan is initiated by the patient or care team."

### Vital Signs and Mortality: Scandinavian Study

A retrospective cohort study, published in the [Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine](#), analysed the association between vital signs and age with 1-day mortality in the emergency department of Södersjukhuset hospital in Stockholm, Sweden (Ljunggren et al. 2016). The study also measured the association with 30-day mortality and admission to the intensive care unit (ICU). The study included patients over 18 and excluded those who presented with circulatory or respiratory arrest and patients directed to fast track treatment for conditions demanding few resources. 96,512 patients were included, and the 1-day mortality

rate was 0.3%. After adjusting for differences in the other vital signs, comorbidities, gender and age, the following vital signs were independently associated with 1-day mortality:

- oxygen saturation
- systolic blood pressure
- temperature
- level of consciousness
- respiratory rate
- pulse rate
- age

30-day mortality was 2.2% and the ICU admission rate was 3.1%. Most of the vital signs used in the ED are significantly associated with one-day mortality. The researchers found that the more the vital signs deviate from the normal range, the larger are the odds of mortality. They explain that they did not find a suitable way to adjust for the inherent influence the triage system and medical treatment has had on mortality.

They conclude: “Future triage scales should consider incorporating age as a core variable and assign patients with deviations in vital sign values relating to respiratory function and level of consciousness a higher priority than those with deviations in vital signs adhering to circulation or temperature. The optimal cut-offs for vital signs in the ED setting with respect to risk remains to be determined.”

Source 1 and image credit: [American College of Emergency Physicians; Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine](#)

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