

Better healthcare management can reduce the risk of delirium among older adults

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Elderly patients with neurological conditions are significantly more likely to develop delirium shortly after they are hospitalized.

A new study has discovered that a delayed transfer to a hospital floor is associated with greater short-term risk of [delirium](#) among patients aged

65 and over, and for those who arrive to the Emergency Department (ED) on days with higher risk of prolonged lengths of stay—found to be Sunday and Tuesday.

Delirium is an acute cognitive disorder characterized by altered awareness, attentional deficits, confusion, and disorientation. Current estimates of new-onset delirium highlight the fact that delirium overwhelmingly develops in medical settings (as high as 82 per cent in intensive care settings) compared to the community at large (between one per cent and two per cent). Research has shown that between 30 per cent and 40 per cent of all delirium cases are preventable.

Authored by Valdey Moura Junior, an Executive Ph.D. Research student at the Business School (formerly Cass), the study explores whether a combination of the care experienced at the ED and the delayed implementation of delirium prevention measures contribute to an increased risk of the disorder. For example, it is possible that the bright lights and high ambient noise level of the ED for 24 hours a day will contribute to increased short-term risk.

The findings showed that of the 858 patients who presented to the ED with a neurological emergency, delirium was documented in 234 (30 per cent) patients within the first 72 hours from ED arrival.

This study also found that there was a connection between the onset of delirium and the day in which the patient arrived in the ED. Those arriving on Sundays and Tuesdays were more likely to demonstrate symptoms in a shorter time. Casual factors suggested include fewer hospital beds, delayed floor admission—a waiting time greater than 13 hours—and a greater proportion of elective pre-surgical admissions.

Mr. Moura has outlined several measures which can be taken to help prevent the likelihood of the onset of delirium in these settings, as well

as reduce spending. These include an earlier initiation of delirium prevention measures; a quicker transfer from the ED to the hospital bed; and improving communication across healthcare managers in primary care, emergency rooms, operating rooms, and post-acute services.

Valdery Moura Junior, who is also computer scientist and technical leader at the Mass General Brigham, a Boston-based non-profit hospital and physicians network that includes Brigham and Women's Hospital (BWH) and Massachusetts General Hospital (MGH), two of the Harvard Medical School's most prestigious teaching hospitals, said that "new-onset delirium in older patients alone will mean a high price for the health care system and poses a global challenge for healthcare managers, providers, and payors. Managing hospital capacity has been an enormous challenge throughout the pandemic, with many admission processes reviewed as a result with the goal of improving patient outcomes. Our study may help to identify feasible targets to improve processes between ED and the rest of the hospital."

Professor Feng Li, Chair of Information Management at the Business School, said that "this is an excellent example where routine operational data in a hospital can be used to identify anomaly and improve patient outcomes. Valdery's research demonstrated that more systematic use of such data can lead to significant improvement in the management of [hospital](#) capacity and operational processes, and most of all, quality of patient care."

More information: Valdery Moura Junior et al, Hospital complications among older adults: Better processes could reduce the risk of delirium, *Health Services Management Research* (2021). [DOI: 10.1177/09514848211028707](https://doi.org/10.1177/09514848211028707)

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