Factors contributing to misdiagnosis and delayed recognition of delirium in hospitalized older adults

Published: March 17, 2026

Source: mariresearch.com

Generated By MARI Research Team

Introduction

Hospitalized older adults often experience delirium, an acute and fluctuating disturbance in awareness and cognition. The Diagnostic and Statistical Manual of Mental Disorders (DSM-5) defines delirium as a disturbance in attention and cognition acquired in a short period of time. It is a preventable and potentially reversible condition that is triggered by other factors such as infections, surgery, and dehydration (Zuluaga et al., 2022). Delirium is characterized by a rapid onset and can impair cognition. It can also cause changes in mood and affect, as well as delusions and hallucinations (Hercus & Abdul-Rahman, 2020). Research indicates that delirium impacts 14% - 56% of hospitalized older adults, with rates rising to 82% for ventilated patients (Hercus & Abdul-Rahman, 2020). Further studies show that older adults who develop delirium during their hospital stay have a higher mortality rate and lower discharge rates (Titlestad et al., 2024), with 35.9% of patients with delirium being discharged to their own homes compared to 80.6% of those without delirium (Eeles et al., 2010). Despite these alarming rates and severe consequences, delirium is often misdiagnosed, with its symptoms being mistaken for cognitive disorders such as dementia (Eeles et al., 2010). Any error in diagnosis can lead to errors in treatment (Blissy, 2024). Broadly, misdiagnosis falls under the category of mismedicine, any medical act that results in harm (Blissy, 2024). Misdiagnosis of delirium can delay appropriate treatment and worsen prognosis for patients (Zuluaga et al., 2022). Identifying factors that contribute to missed or delayed recognition of delirium in hospitalized older adults may help reduce misdiagnosis rates, prevent treatment delays, and improve patient outcomes.

Consequences of Misdiagnosis and Delayed Recognition of Delirium

In a review of 110 patients with in-hospital delirium, only 31% had received a formal diagnosis despite showing clear symptoms (Titlestad et al., 2024). In older adults, delirium is associated with prolonged hospitalization and a higher risk of falls, infections, and long-term cognitive decline (Hercus & Abdul-Rahman, 2020; Milisen et al., 2005), leading to worsened outcomes and prolonged hospital stays. This can also prevent appropriate screening for long-term cognitive decline after patients have been discharged (Titlestad et al., 2024). In addition, patients who had previously experienced delirium have been found to be at greater risk for experiencing it again (Milisen et al., 2005). Misdiagnosis of delirium is a lost opportunity to perform proper preventative interventions for delirium in subsequent hospital visits (Titlestad et al., 2024). Delirium can also contribute to low mood and distress in both patients and families as patients struggle with disorientation (Zuluaga et al., 2022). Without proper care and clarity about patients' conditions, these symptoms can worsen (Eeles et al., 2010), prolonging recovery and increasing risk for future injury and long-term cognitive decline.

Factors Contributing to Misdiagnosis and Delayed Recognition of Delirium

There are several factors contributing to the misdiagnosis and delayed recognition of delirium in hospitalized older adults. Part of misdiagnosis can be attributed to errors in paperwork (Blissy, 2024). Symptoms of delirium are often omitted in discharge reports, preventing follow-up care. Since one episode of delirium increases the risk of future occurrences, a missed diagnosis may prevent patients from receiving appropriate care during future hospitalizations (Hercus & Abdul-Rahman, 2020). A major contributor to the delayed recognition and misdiagnosis of delirium is a history of mental illness (Hercus & Abdul-Rahman, 2020).

In a phenomenon called diagnostic overshadowing, physicians tend to attribute new changes in cognition and awareness as symptoms of a previously diagnosed issue (Kishi et al., 2007). One study revealed that a history of psychiatric disorders, particularly conditions like depression and schizophrenia, increased the likelihood of misdiagnosis (Hercus & Abdul-Rahman, 2020). Symptoms such as psychosis, agitation, and cognitive changes were attributed to mental health disorders without considering delirium. Two-thirds of patients with a history of mental illness and suspected delirium were misdiagnosed (Hercus & Abdul-Rahman, 2020). It has also been shown that gender differences can influence diagnosis. Female patients presenting with cognitive changes are more likely to have their symptoms attributed to anxiety or depression rather than delirium (Hercus & Abdul-Rahman, 2020). This indicates that gender biases within healthcare settings contribute to the misdiagnosis of delirium in older adults.

Alongside gender bias, the presentation of delirium in patients influences diagnosis and recognition. Delirium includes both hypoactive and hyperactive subtypes (Titlestad et al., 2024). Hypoactive delirium, characterized by subtle symptoms such as increased passivity (Titlestad et al., 2024), goes unnoticed or misattributed to depression (Hercus & Abdul-Rahman, 2020). Furthermore, time constraints in intensive care units and emergency departments can complicate the diagnosis of delirium. In surgical and emergency departments, patients do not spend as much time with hospital staff compared to other medical units, resulting in a misdiagnosis rate of 76% (Hercus & Abdul-Rahman, 2020). Misdiagnosis and delayed recognition of delirium stem from several factors, including diagnostic overshadowing, gender biases, inadequate recognition of the hypoactive subtype, and time constraints.

Conclusion

Although delirium is a common and serious condition in hospitalized older adults, it is misdiagnosed or delayed in recognition. Diagnostic errors can arise from diagnostic overshadowing, biases, and time constraints in fast-paced medical settings. This can lead to inadequate interventions, prolonged feelings of distress, and worsened patient prognosis and quality of life. These consequences bring a need for better screening and improved diagnostic practices. Addressing these factors may require better clinical education about delirium symptoms and risk factors, as well as differentiating between delirium and other mental illnesses. Further standardized and efficient delirium screening protocols, which account for gender differences and different subtypes, can help improve timely recognition and management of delirium. Additionally,

further research should focus on early detection and delirium prevention strategies to reduce delirium incidence, enhance detection, and improve patient outcomes.

FAQ

What is the difference between delirium and other disorders such as dementia?

Delirium is a fluctuating disturbance in attention and cognition that develops rapidly. In contrast, dementia is a chronic and progressive decline in cognition that develops gradually and steadily (Hercus & Abdul-Rahman, 2020).

What is the impact of delirium on older adults?

Delirium increases the risk of prolonged hospitalization, falls, infections, and cognitive decline, which can prolong hospital stay and increase mortality rates. This makes timely diagnosis important (Hercus & Abdul-Rahman, 2020).

What are some preventative measures against delirium?

Preventative measures include early detection and managing triggers such as hydration, nutrition, as well as maintaining independence and mobility if able (Eeles et al., 2010).

Why is delirium misdiagnosed in older adults?

Delirium is often misdiagnosed due to diagnostic overshadowing caused by pre-existing mental health conditions, gender biases, subtle symptoms, and time constraints within fast-paced settings (Hercus & Abdul-Rahman, 2020; Titlestad et al., 2024).

References

Blissy. (2024, August 9). Why your skin issue might be misdiagnosed! Dr. Beigi's insights | The Blissy Experience Ep. 10. YouTube. https://www.youtube.com/watch?v=yA7PpiNM600

Eeles, E. M. P., Hubbard, R. E., White, S. V., Eeles, E. M. P., Hubbard, R. E., White, S. V., O'Mahony, M. S., Savva, G. M., & Bayer, A. J. (2010). Hospital use, institutionalisation and mortality associated with delirium. Age and Ageing., 39(4), 470-475. https://doi.org/10.1093/ageing/afq052

Hercus, C., & Abdul-Rahman, H. (2020). Delirium misdiagnosis risk in psychiatry: a machine learning-logistic regression predictive algorithm. BMC Health Services Research., 20(1). https://doi.org/10.1186/s12913-020-5005-1

Kishi, Y., Kato, M., Okuyama, T., Hosaka, T., Mikami, K., Meller, W., Thurber, S., & Kathol, R. (2007). Delirium: patient characteristics that predict a missed diagnosis at psychiatric

consultation. General Hospital Psychiatry., 29(5), 442-445. https://doi.org/10.1016/j.genhosppsych.2007.05.006

Titlestad, I., Haugarvoll, K., Solvang, S.-E. H., Solvang, S.-E. H., Norekval, T. M., Skogseth, R. E., Andreassen, O. A., Arsland, D., Neerland, B. E., Nordrehaug, J. E., Tell, G. S., & Giil, L. M. (2024). Delirium is frequently underdiagnosed among older hospitalised patients despite available information in hospital medical records. Age and Ageing., 53(2). https://doi.org/10.1093/ageing/afae006

Ramirez Zuluaga, L. P., Ruano Restrepo, M. I., Osorio Bermudez, J. D., Ramirez Zuluaga, L. P., Ruano Restrepo, M. I., Osorio Bermudez, J. D., & Diaz Vallejo, J. A. (2022). Diagnosis and management of delirium in hospital oncology services. Journal of Geriatric Oncology., 13(4), 462-468. https://doi.org/10.1016/j.jgo.2021.11.016

Provided and edited by the members of MARI Research, Error in Medicine Foundation and MISMEDICINE Research Institute, including Kaaviya Sivakaran, Nitya Kharidehal, Rojina Nariman, and Dr. Pooya Beigi MD. MSc.