



The nurses' role in reducing delirium risk in older adults: A focus on modifiable risk factors

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Abstract

This opinion piece aims to discuss modifiable risk factors, highlight the important role nurses play in delirium prevention and discuss preventative measures that can be implemented. Delirium is a complex and multifaceted neuropsychiatric syndrome associated with the disorientation of attention, memories and hallucinations and is known to impact an individual's functionality and physical health. The condition is often associated with prolonged hospital stays, higher mortality, and prolonged cognitive and functional decline. Delirium can also incur high financial costs and emotional burdens for families and caregivers. Therefore, the identification of risk factors is important to the prevention and management of this morbid disease. Delirium is prevalent amongst the older adult population, it is often undiagnosed within healthcare, thus nurses play an imperative role in managing delirium and providing compassionate and tailored interventions to minimise the incidence and impact of delirium in older adults. Nurses can play a role in modifying factors to ensure that preventative measures are implemented to reduce the risk of delirium. However, an open-minded attitude and a knowledge of delirium are essential to effectively implement preventative measures to prevent poor outcomes associated with delirium.

Keywords: Delirium; Prevention; Risk

Introduction

Delirium is described as an acute onset of deficits in attention and other aspects of cognition which can manifest with suspiciousness, misperceptions and hallucinations (Seiler et al., 2019; Wilson et al., 2020). Symptoms can often fluctuate abruptly (Johansson et al., 2018). Delirium commonly impacts older adults who are defined as those over the age of 65 (Sabharwal et al., 2015; Ouchi et al., 2017). Delirium in older adults can differ substantially between specialities and settings. Rates are much higher in hospitalised settings, particularly in intensive care units (ICU), immediate care units, and medical services (Fuchs, 2020) with nearly a third of patients admitted to ICU developing delirium (Salluh et al., 2015).

Delirium is a costly condition associated with high healthcare costs (Thom et al., 2019). In the UK, an episode of delirium alone is reported to cost an additional £1275 for the NHS due to prolonged hospital stay (Young and Inouye, 2007). Delirium remains under-recognised in the healthcare system, with detection rates as low as 30% in hospitals (Inouye et al., 2014). Various authors have argued that underdiagnosis of delirium is often due to the lack of knowledge within the healthcare system among nurses and physicians (Inouye et al., 2014; Ritter et al., 2018). Furthermore, misidentification of delirium can be due to its many labels within healthcare such as acute mental status change, confusion, acute brain dysfunction, and brain failure (Hall et al., 2012). Delirium can present differently amongst individuals depending on the subtype one might have, varying from hyperactive (agitated), hypoactive (lethargic), and mixed (a combination of both) (Smit et al., 2022).

This opinion piece aims to provide insight for nurses to identify modifiable and non-modifiable risk factors associated with delirium in older adults. There are a multitude of modifiable risk factors for delirium, those that have been identified for this opinion piece are anticholinergic medications (Saluhdeen et al., 2015; Pioli et al., 2018; Reiter et al., 2021) and environmental factors such as patient transfers. Notably, age and cognitive impairment are common risk factors that are non-modifiable (Schenning and Deiner., 2015; Zaal et al., 2015; Wu et al., 2021). This opinion piece also seeks to help nurses recognise their pivotal role in detecting and preventing delirium. By applying the knowledge gained, nurses may become more aware of risk factors and implement targeted interventions to improve patient outcomes.

Evidence and Analysis

Nurses play a fundamental role in delirium prevention in older adults (Min et al., 2022; Sist et al., 2024), as they have more direct contact with patients than other healthcare professionals (Hoch et al., 2022). They may be the first to notice a change in mental status (Bennet, 2019) by identifying a change in their baseline. Nurses can reportedly prevent delirium in up to thirty to forty per cent of at-risk patients (Faught et al., 2014). Despite this, studies have noted that nurses often lack an understanding of risk factors for delirium in older adults (Tauro, 2014; Grover et al., 2022; Ceccarelli et al., 2024). Furthermore, a more pronounced gap in knowledge is even evident in multiple studies as nurses were unable to identify delirium in patients (Akroun and Velroo, 2017; Helgesen et al., 2020; Waszynski et al., 2024). One study found that 53.1% of ICU nurses had never been educated on delirium, leading to gaps in understanding its risk factors and complications (Lange et al., 2023). This is disturbing considering the high prevalence of delirium in the ICU (Ali et al., 2021). Thus, an understanding and recognition of risk factors for delirium is crucial for early prevention and treatment.

Non-modifiable factors cannot be changed, while modifiable factors, like the environment, can be adjusted to reduce risk. Prominent non-modifiable risk factors include older age (Kubota et al., 2018; Magny et al., 2018; Muraquetand et al., 2021) and having a cognitive impairment such as dementia (Schenning and

Deiner, 2015; Zaal et al., 2015; Wu et al., 2021). Early identification of these risk factors can help reduce adverse outcomes associated with delirium such as decreased quality of life, functional decline and death (Barra et al., 2023). However, since factors such as a person's age cannot be changed, focusing on modifiable risk factors may be more beneficial for patient outcomes. This is supported by the National Institute for Health and Care and Excellence (NICE; 2023) and the Scottish Intercollegiate Network (2022) in their clinical guidelines on delirium, which support targeting modifiable risk factors when treating delirium. Emphasis on modifiable risk factors may have significant implications for healthcare professionals, influencing their clinical practice and approach to delirium management. Such modifiable risk factors include environmental factors such as transfers at nighttime, anticholinergic drugs, opioids, poor nutrition and iatrogenic events and polypharmacy (NICE, 2023), which is the regular use of five or more drugs (Varghese et al., 2024).

Environmental aspects such as transfers have been associated with increased delirium risk among older adults. Night-time transfers, in particular, have been associated with an increased incidence of delirium as well as feelings of stress and anxiety. A nurse-led project found that elderly patients were being moved unnecessarily, which heightened stress levels in those with pre-existing dementia, further exacerbating their agitation and emotional instability (Cole et al., 2018). Additionally, the association between nighttime transfers and disturbances have been associated with an increased risk of anxiety, agitation and sleep deprivation, all of which contribute to delirium (Farasat et al., 2020). Light and sound were identified as modifiable risk factors for delirium among elderly patients (Ali et al., 2020). Goldberg et al. (2015) and Bo et al. (2016) identified significant associations between room transfers, prolonged stays in the emergency department and the incidence of delirium among the elderly patient population. Repeated changing was found to increase anxiety and stressors amongst elderly patients, which increased disorientation.

Medications have also been associated with delirium in older adults. In a systematic review by Clegg and Young (2011), various medication classes associated with delirium were listed. These included anticholinergics, benzodiazepines, opioid medications, antihistamines and dihydropyridines, and potentially antiparkinson medications, steroids and NSAIDs. Alagiakrishnan and Wiens (2004) suggest that drug-induced delirium is high among the elderly, particularly those with dementia, and that the risk of anticholinergic toxicity is greater in this population. Anticholinergic drugs such as promethazine and morphine are significant contributors to the onset of delirium, with promethazine having a more pronounced impact on patients compared to morphine (Van Yperen et al., 2019) thus emerging as a distinctive risk factor for delirium. Polypharmacy is also associated with delirium (Nishtala and Chyou., 2020) and is common in the elderly population (Delara et al., 2022). It is suggested that the administration of five or more drugs to the older individual plays a role in inducing delirium as well as worsening it (Kurusu et al., 2020). However, people prescribed five or fewer medications may experience shorter delirious episodes (Van Velthuisen et al., 2018).

A lack of knowledge of delirium may prove detrimental to elderly patients. Some research has shown that nurses with poor knowledge of delirium have more negative attitudes towards it (Zamoscik et al., 2017; Xing et al., 2022), which can potentially result in poor clinical practice and outcomes (Yu et al., 2023; Mathew et al., 2024). However, not all research suggests that nurses have a negative attitude towards delirium (Eyayu et al., 2024, Hebeshy et al., 2024). Bennet (2019) notes that nurses can also miss the subtle signs of delirium or confuse them with other disorders, such as dementia, due to their similar presentation. This may be common in older patients, as dementia is prevalent within this population (Alzheimer's Association, 2024). Thus, nurses' attitudes towards delirium can also be detrimental to the care of patients who may present with challenging symptoms such as agitation and shouting. Delirium and its symptoms can be difficult

to identify and manage; however, if spotted early, nurses play a vital role in modifying care to prevent the adverse outcomes associated with delirium.

Discussion and Implications

Addressing the gap in nurses' ability to detect delirium is crucial, as it often stems from a lack of understanding of specific risk factors. Nurses must differentiate between modifiable risks, such as medication use or environmental factors and non-modifiable risks, such as age or underlying comorbidities. Educational interventions are essential for enhancing knowledge, but evidence suggests that knowledge alone is insufficient to change clinical practice (Yanamadala et al., 2017; Eagles et al., 2022). However, equipping nurses with the skills and tools to identify and mitigate risks, such as the Confusion Assessment Method (CAM), a validated tool for delirium detection (Green et al., 2019), is a critical first step. These strategies can increase nurses' confidence, possibly change attitudes towards delirium and encourage earlier detection, and ultimately reduce morbidity.

As discussed, polypharmacy and anticholinergic drugs are established modifiable risk factors for delirium in older adults. Medication reviews are vital, as polypharmacy increases the risk of adverse drug reactions and cognitive impairment. Nurses play a pivotal role in initiating medication reviews or advocating for them with prescribing doctors, ensuring only necessary medications are administered. Tools such as the STOPP (Screening Tool of Older Persons' potentially inappropriate Prescriptions)/START (Screening Tool to Alert to Right Treatment) criteria (O'Mahoney et al., 2015) can help identify potentially inappropriate medications and reduce adverse effects. Anticholinergic drugs should be carefully reviewed, including assessing the necessity of their use and duration. Despite these efforts, limitations arise from the need for polypharmacy in managing complex comorbidities in older adults. This highlights the importance of nurses raising awareness of the overprescription of patient medications with relevant multidisciplinary teams, to weigh the benefits of treatment against the risk of developing delirium.

Non-pharmacological approaches further support delirium prevention by promoting holistic and patient-centred care. Avoiding unnecessary nighttime transfers can help prevent overstimulation, maintain sleep cycles and thus, reduce stress-related delirium risks (Goldberg et al., 2015; Bannon et al., 2018). Re-orientation strategies, such as using clocks, calendars, or familiar objects, can help patients feel grounded in their environment. Critics argue that the primary condition necessitating hospitalisation may be a stronger predictor of delirium than environmental factors (Evensen et al., 2018). Nonetheless, nurses' use of these approaches fosters meaningful interaction, enhances patient care, and supports overall well-being, reinforcing their essential role in reducing delirium risks.

Conclusion

Overall, both modifiable and non-modifiable risk factors have been identified for delirium amongst older adults and implications on how to reduce and further prevent these risk factors have been discussed to reduce delirious episodes. As nurses work more closely with patients than any other health professional, they must prioritise practical solutions to detect and prevent delirium in older adults. It is important for them to understand the critical role they play in prevention. Strategies to achieve this include education to improve understanding of delirium, medication reviews and focusing on environmental factors such as avoiding transfers at nighttime. However, these solutions are only effective once nurses embrace and cultivate an open-minded perspective and attitude towards their role in preventing delirium in older adults.

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