Delirium in the Elderly

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KEYWORDS

• Delirium • Cognitive decline • Dementia • Delirium prevention
• Nonpharmacological interventions

KEY POINTS

- Delirium is a common problem that affects older hospitalized patients, resulting in significant morbidity and mortality.
- Delirium is associated with long-term cognitive and functional decline and is costly to society.
- Delirium is often unrecognized unless actively screened: the Confusion Assessment Method (CAM) provides a simple diagnostic algorithm and is widely used for identification of delirium.
- Delirium is usually due to multifactorial causes and diagnostic evaluation should be targeted based on patient's history and physical examination; cognitive impairment is an important risk factor for delirium.
- Multicomponent, nonpharmacological approaches are the first line of delirium prevention and management strategies.

INTRODUCTION

Delirium is defined as an acute disturbance in attention and cognition that develops over a short period of time. Delirium is the most common complication afflicting hospitalized patients ages 65 years and older, affecting more than 2.6 million older adults each year in the United States.[1] Despite its high prevalence, it often remains unrecognized, with a recent study estimating the rate of undetected delirium to be as high as 60%.[2] Delirium can be a life-threatening condition, yet is often preventable.[1]

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Hospitalized patients who develop delirium are especially at high risk for long-term cognitive and functional decline. This, in turn, leads to increased posthospitalization treatment costs, including institutionalization, rehabilitation, and home health care services.[1] Total health care costs related to delirium and its complications are estimated at more than $164 billion per year.[3] Because it is highly preventable,[4,5] delirium is increasingly the target for interventions to reduce its associated complications and costs. Nationally, delirium is also considered an important component of patient safety agendas[6] and an important indicator of health care quality of older patients.[7]

EPIDEMIOLOGY

Delirium is often the only sign of a serious underlying medical condition afflicting a patient. **Table 1** demonstrates how common delirium is, with prevalence (present on admission) and incidence (new onset) rates of delirium in various patient populations. The highest incidence rates were observed in the intensive care unit (ICU) and palliative care settings. These rates are likely to be underestimated because many studies of delirium exclude patients with cognitive impairment or dementia at baseline who are particularly vulnerable. The prevalence of delirium in the community is relatively low (1%–2%). This may be because its onset typically brings the patient to emergency care.[1] On presentation to the emergency department, delirium is present in 8% to 17% of older patients and up to 40% of nursing home residents.[1]

Delirium has been consistently associated with poor outcomes, including mortality. Patients with delirium on general medical or geriatric wards are at 1.5-fold increased risk for death in the year following. Delirium in the emergency department is associated with a 70% increased risk of death in the 6 months following the visit.[1,8] Delirium on admission to postacute care is associated with a 5-fold increased risk of 6-month mortality.[9] Delirium in the ICU is associated with a 2-fold to 4-fold increased risk of overall mortality.

Delirium is also associated with long-term cognitive and functional impairment. Delirium in the ICU is associated with cognitive impairment up to 1 year post-discharge.[8] In cardiac surgery patients, a longer duration of delirium ($\geq$3 days) was associated with greater decline in cognitive function after surgery, followed by a slower cognitive recovery over the ensuing 12 months.[10] Physical function is also more significantly impaired after discharge among surgical and nonsurgical patients who develop delirium.[10,11] A recent study showed that delirium was associated with persistent and clinically meaningful impairment of functional recovery up to 18 months later,[12] and that the odds of institutionalization were 2.4-times higher if the patient developed delirium during hospitalization.[13]

DIAGNOSIS, ASSESSMENT, AND WORKUP

The *Diagnostic and Statistical Manual of Mental Disorders*, 5th edition,[14] and the *International Statistical Classification of Diseases and Related Health Problems,* 10th Revision,[15] have specific criteria for delirium that are currently accepted as the diagnostic standard. Expert consensus, however, was used to develop both criteria. The Confusion Assessment Method (CAM)[16] continues to be the most widely used delirium instrument worldwide, used in more than 4500 original studies and translated into more than 20 languages to date. The CAM provides an algorithm based on the 4 core features of delirium: acute onset, fluctuating course of symptoms, inattention, and either disorganized thinking or altered level of consciousness.[17] The CAM algorithm has been validated in high-quality studies and has high sensitivity (94%–100%) and specificity (90%–95%)