Delirium in critically ill people

A meta-analysis reported that critically ill people with delirium were more than twice as likely to die in the intensive care unit or hospital as people without delirium.

**Overview:**

- Adults admitted to an intensive care unit who had delirium were at higher risk of in-hospital death than people without delirium.
- The study supports current guidance recommendations that all hospitalised patients should be assessed for risk of delirium, and those at risk offered multicomponent delirium interventions.

**Background:** Delirium, also known as ‘acute confusional state’, is a common clinical syndrome characterised by disturbed consciousness, cognitive function and perception.

Between 18% and 35% of people admitted to general medical wards have delirium, whereas around 50% of people admitted to surgical wards and up to 82% admitted to intensive care units have the disorder (Inouye et al. 2014).

People in hospital who have delirium have an increased risk of death, dementia, and being discharged to a nursing home compared with people who do not have delirium (Witlox et al. 2010).

**Current advice:** The NICE guideline on delirium recommends assessing people for the following risk factors for delirium when they first present to hospital:

- age 65 years or older
- cognitive impairment (past or present) and/or dementia
- current hip fracture
- severe illness (a clinical condition that is deteriorating or is at risk of deterioration).

People at risk should be assessed at presentation for recent (within hours or days) changes or fluctuations in behaviour. A multicomponent intervention tailored to the person’s individual needs and care setting should be provided to prevent delirium.
All people in hospital or long-term care should be observed, at least daily, for recent (within hours or days) changes or fluctuations in usual behaviour. If any behaviour changes are present, a healthcare professional who is trained and competent in the diagnosis of delirium should carry out a clinical assessment to confirm the diagnosis.

The NICE pathway on delirium brings together all related NICE guidance and associated products on the condition in a set of interactive topic-based diagrams.

**New evidence:** A meta-analysis by Salluh et al. (2015) investigated the link between delirium in critically ill people and short-term inpatient and post-discharge outcomes.

The authors sought studies of adults admitted to an intensive care unit and assessed for delirium using a validated screening or diagnostic instrument. A total of 44 papers on 42 studies were identified (n=16,595). Two of the studies were randomised controlled trials and 40 were prospective observational cohort studies.

Just under a third (31.8%) of participants in intensive care had delirium. In the 28 studies that reported on mortality (n=10,656), the risk of death in the intensive care unit or in hospital was significantly higher in people with delirium than in those without delirium (random risk ratio=2.19, 95% confidence interval [CI] 1.78 to 2.70, p<0.001). This risk remained high after adjustment for age, gender and severity of illness (effect size=2.72, 95% CI 1.75 to 3.69).

Among the 8 studies that reported outcomes after discharge, 2 studies reported increased mortality at 6 months in people who had delirium when they were in intensive care (p<0.001, n=523 and p=0.033, n=224). Four studies with between 3 and 12 months’ follow-up reported worse scores on cognitive tests in people who had delirium in intensive care compared with those who had not had delirium.

Strengths of this analysis include the large number of studies and participants. This study is limited by the heterogeneity of the included studies (I²=72%), such as in the patient populations and the methods used to detect delirium. In addition, the studies were at moderate risk of publication bias, and the results may have been affected by unmeasured confounders.

---

**Commentary by Dr Najma Siddiqi, Clinical Senior Lecturer and Consultant Psychiatrist, Department of Health Sciences, Hull York Medical School, University of York and Bradford District Care NHS Foundation Trust:**

“This study confirms that delirium is common in people admitted to intensive care units and that it is strongly associated with increased hospital mortality, even after adjusting for illness severity. It also suggests that delirium in people who are in intensive care units may be linked to long-term cognitive impairment and increased mortality following hospital discharge, although these outcomes have been investigated in only a limited number of studies.

“The findings confirm previous reviews reporting an association between delirium and cognitive function and mortality (Ouimet et al. 2007). However, we still cannot be certain whether this is a causative link or whether delirium is merely a marker of severity of disease.

“The study supports current guidance, which recommends that all hospitalised patients should be assessed for risk of delirium, and those at risk offered multicomponent delirium interventions. The authors call for further prospective studies with standardised methods for delirium ascertainment and for characterising outcomes.

“The effectiveness of multicomponent interventions for preventing delirium among people admitted to hospital has been established (Siddiqi et al. 2007). However, it is not yet known whether any interventions are effective for people in intensive care units; a Cochrane review of this topic is currently underway. “Further trials in people who are in intensive care units are needed. Such research will be helped by a project to agree a set of outcomes for delirium, including outcomes specifically for people who are in intensive care units (registered with the Core Outcome Measures in Effectiveness Trials [COMET] Initiative).”
**Study sponsorship:** The study was performed with institutional funding.

**About this article:** This article appeared in the March 2016 issue of Eyes on Evidence.

Eyes on Evidence is a monthly email service that summarises and provides expert commentary on important new evidence in health, public health and social care, to help busy professionals stay up to date. The service outlines how the new evidence fits in with current guidance and provides expert views on how the evidence might influence practice. It does not constitute formal NICE guidance. The commentaries included are the opinions of contributors and do not necessarily reflect the views of NICE.

Subscribe on the [NICE website](https://www.nice.org.uk) to receive Eyes on Evidence each month.

[Visit NICE Evidence search](https://www.nice.org.uk)

Copyright © 2016 National Institute for Health and Care Excellence. All Rights Reserved.