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Interventions for preventing delirium in older people in institutional long-term care: A Cochrane Systematic Review

UNIVERSITY of York

Cochrane Dementia and Cognitive Improvement

HULL YORK MEDICAL SCHOOL

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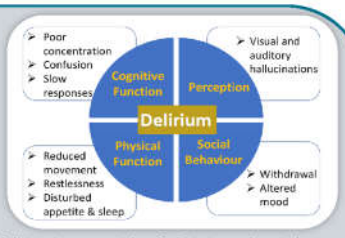
Introduction

Delirium is a common and distressing condition which develops rapidly over a few hours or days. It is characterised by fluctuating changes in symptoms and behaviours (NICE 2016).

Adults living in institutional long-term care (LTC) are at particularly high risk of delirium (Siddiqi 2009).



An episode of delirium increases risks of admission to hospital, development or worsening of dementia and death. Multicomponent interventions can reduce the incidence of delirium by a third in the hospital setting (Siddiqi 2016). However, it is currently unclear whether interventions to prevent delirium in LTC are effective.

Objectives

To assess the effectiveness of interventions for preventing delirium in older people in institutional long-term care settings.

Methods

Search:

- We searched ALOIS the Cochrane Dementia and Cognitive Improvement Group's Specialised Register of dementia trials, Cochrane Central Register of Controlled Trials (CENTRAL), major healthcare databases, trial registers and grey literature sources.

Inclusion criteria:

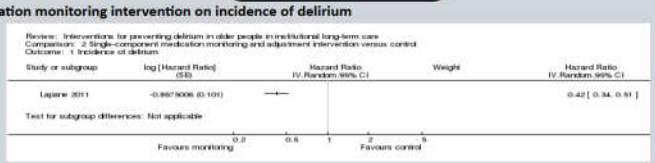
- Randomised controlled trials (RCTs) and cluster-RCTs of interventions for preventing delirium in older people (aged 65 years and over) in long-term care residence.

Data collection and analysis:

- We used standard Cochrane methods. Primary outcomes were incidence, prevalence and severity of delirium; and mortality. Secondary outcomes included falls, hospital admissions and other adverse events.

Findings

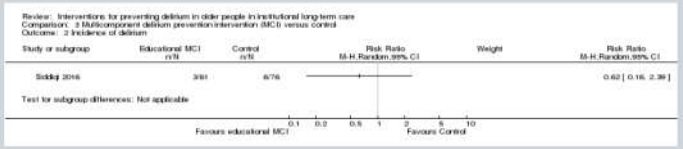
1. Medication monitoring intervention on incidence of delirium



A medication monitoring software-based intervention was probably associated with a reduction in delirium incidence (12-month HR 0.42, CI 0.34 to 0.51; 1 study, 7311 participant months; moderate-certainty evidence downgraded for risk of bias).

- There was probably little or no effect of the medication monitoring intervention on mortality, hospital admissions, or falls.

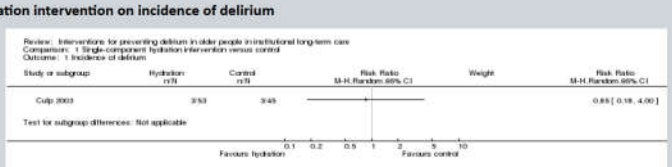
2. Educational intervention on incidence of delirium



In the educational intervention, it was not possible to determine the effect of the intervention on delirium incidence (RR 0.62, 95% CI 0.16 to 2.39; 1 study, 137 resident months; very low-certainty evidence downgraded for risk of bias and serious imprecision).

- It was not possible to determine the effect of the educational intervention on delirium prevalence, and there was probably little or no effect of the intervention on mortality. The intervention was probably associated with a reduction in hospital admissions.

3. Hydration intervention on incidence of delirium



In the hydration trial, it was not possible to determine the effect of the intervention on delirium incidence (RR 0.85, 95% confidence interval (CI) 0.18 to 4.00; 1 study, 98 participants; very low-certainty evidence downgraded for risk of bias and very serious imprecision).

Results

Three trials were included in the review, all complex, non-pharmacological, cluster RCTs:

- One trial involved medication monitoring software which flagged up medications that may contribute to delirium risk to trigger a medication review, n=3538
- One trial was a feasibility trial of an educational invention, aimed at changing practice to address key delirium risk factors, n=215
- One trial was a hydration management intervention with individual fluid intake goals, n=98

We found three ongoing studies and excluded six studies after assessing the full-texts.

Owing to the heterogeneous nature of the interventions, we did not combine the results statistically, but produced a narrative summary.

Future recommendations

- This review found very limited evidence on the effectiveness of interventions for preventing delirium in older people in institutional long-term care.
- Further large trials of computerised medication management interventions and of enhanced educational interventions are justified.
- Future studies should pay particular attention to accurate recording of delirium incidence and prevalence.

References and Acknowledgements

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Siddiqi N., Cheater F., Collinson M., Farrin A., Forster A., George D., et al. (2016). The PITSTOP study: a feasibility cluster randomized trial of delirium prevention in care homes for older people. *Age and Ageing*, 45:651-61

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Full publication can be accessed on the Cochrane Library website — www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD009537.pub3/full