

# Can an Education Intervention Designed through the PRECEDE Model, Targeted at Clinicians, Improve Delirium Diagnosis?

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## Abstract

**Background:** Delirium is a common clinical problem among hospitalised patients, associated with increased mortality, morbidity, and healthcare expenditures. Despite its significance, delirium remains widely under-detected and often misdiagnosed. Delirium screening relies on multiple tools, including the 4 'A's test to improve delirium diagnoses. The Predisposing, Reinforcing and Enabling Constructs in Educational Diagnosis and Evaluation (PRECEDE) model, a four-phase framework for developing public health interventions, may provide a foundation for an effective education intervention to improve delirium awareness and diagnoses. **Objective:** This study aimed to assess whether a delirium education intervention developed using the PRECEDE model, targeted at nurses and doctors, could improve delirium diagnoses in older adults. **Methods:** The education intervention, aligned with the PRECEDE model, was tailored for doctors and nurses in a medical ward within a teaching hospital located in Melbourne. An audit of data from two patient samples, defined as those reviewed before and during the intervention, were collected from electronic medical records. Concordances between delirium diagnoses made by the medical team, and a retrospective review of the patients' records identifying the likelihood of delirium, were compared between the samples. Information surrounding delirium screening was also collected and compared. **Results:** During the intervention, the proportion of diagnosed delirium was 12.4% (95% confidence interval = -0.0358 – 0.274,  $p=0.77$ ) more in patients with probable delirium than before the intervention. Patients reviewed during the intervention were 20% ( $p=0.00$ ) more likely to be identified as high-risk for delirium development and were 15.3% ( $p=0.00$ ) more likely to register a positive 4 'A's Test score during their admission. **Conclusion:** This study demonstrated that a systematically planned education intervention, utilising the PRECEDE model improved the identification of patients at high risk of delirium, however, this did not translate into reducing the amount of missed diagnoses in a general medical ward. The intervention applied to both medical and nursing staff appeared to be an effective strategy in improving delirium screening.

**Keywords:** Delirium, Education, Retrospective study/review, Geriatric population, Interprofessional care