

# FOCUS ON RESEARCH

## VALIDITY OF THE 4-ITEM ABBREVIATED MENTAL TEST IN ACCIDENT & EMERGENCY

### Researchers

Ms. I. Schofield, Mr. J. Monaghan, Dr. A. McFadyen, Prof. D. Stott, Prof. D. Tolson, Mr. D. Nelson

### Aim

We aimed to determine whether a shortened 4-item version of the routinely recommended 10-item Abbreviated Mental Test is a good screening test for cognitive problems in older patients attending an Accident and Emergency Department. The short version (AMT4) consists of asking the person their age, date of birth, name of current place and current year.

### Project Outline/Methodology

Patients aged 65 years and over attending a large inner city Accident and Emergency Department were asked by a research nurse to complete two cognitive screening tests, the Abbreviated Mental Test and the more complex and lengthy Mini Mental State Examination as a reference standard. The AMT4 was extrapolated from the full version score and compared with the total score from the Mini Mental State Examination. In addition, the nurse admitting each patient was asked whether they thought the person was cognitively impaired or not.

### Key Results

A total of 601 patients agreed to undergo cognitive screening (1 refusal); 81 (13.5%) were unable to complete the Mini Mental State Examination. This gave 520 patients who completed both cognitive screening tests. Of these, 226 patients (43.5%) were rated as having cognitive impairment by the Mini Mental State Examination (score less than 24/30). The Abbreviated Mental Test score (score less than 8/10) correctly identified 76%, and the AMT4 (score less than 4/4) identified 80% of older patients with cognitive impairment. Subjective assessment by the admitting nurse without formal cognitive assessment resulted in cognitive impairment being undetected in 50.5% of patients.

### Conclusions

Patients attending the Accident and Emergency Department were very willing to complete brief cognitive screening tools administered by a research nurse. Many were found to have cognitive

impairment on formal testing. The shortened 4-item version of the Abbreviated Mental Test identified the large majority of older patients with cognitive impairment. In contrast subjective assessment by the admitting nurse had very poor sensitivity for identifying cognitive impairment.

### What does this study add to the field?

Previous studies have shown that the 4-item version of the Abbreviated Mental Test is acceptable and reliable for use in medically stable patients. Our study confirms that the shortened test performs well in older people attending an Accident and Emergency Department and that routine cognitive testing is practicable and acceptable to older patients.

### Implications for Practice or Policy

Undetected cognitive impairment can compromise clinical assessment and diagnosis, and potentially leads to inappropriate consenting and planning of treatment and care. Our study findings suggest that adoption of the AMT4 as a routine screening test for older people attending Accident and Emergency would markedly improve detection of this common problem because although the test is brief and simple it correctly identifies the majority of patients with cognitive impairment.

### Where to next

More research is needed to develop brief screening methods to differentiate between long-term cognitive impairment as in dementia and short term problems of delirium.

### Further details from:

Ms. I. Schofield  
School of Nursing, Midwifery  
& Community Health  
Glasgow Caledonian University  
Cowcaddens Road  
Glasgow G4 0BA  
I.Schofield@gcal.ac.uk

