

ARE NEUROPSYCHOLOGICAL TESTS REALLY HELPFUL IN DIAGNOSING DEMENTIA?

YES

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This year a joint workgroup from the National Institute for Ageing and the Alzheimer's Society published revised guidelines for the diagnoses of dementia (McKhann et al. *Alzheimer's & Dementia* 2011, 7:263-269). According to these guidelines, dementia is diagnosed when there are cognitive or behavioural (neuropsychiatric) symptoms that: (1) Interfere with the ability to function at work or at usual activities; and (2) Represent a decline from previous levels of functioning and performing; and (3) Are not explained by delirium or major psychiatric disorder; (4) Cognitive impairment is detected and diagnosed through a combination of history-taking from the patient and a knowledgeable informant and an objective cognitive assessment, either a "bedside" mental status examination or neuropsychological testing. As most bedside mental status examinations will require the patient to perform a test, they can be considered crude forms of neuropsychological or cognitive testing. Thus neuropsychological testing is necessary for such diagnoses, but the question remains 'it is helpful?'. One issue to be addressed is useful 'compared to what'? McKhann et al (2011) state that AD dementia is fundamentally a clinical diagnosis, and that to make a diagnosis of AD dementia with biomarker support, the core clinical diagnosis of AD dementia must first be satisfied. This attests to the importance and helpfulness of cognitive testing in clinical diagnosis over traditional biomarkers. Data will be presented from various scales and test systems on the accuracy of diagnoses of different dementias. Further, the contribution of measures from automated tests of cognition to the specificity of diagnoses of different types of dementia will be reviewed. It will be concluded that such testing is helpful in diagnosis, and the consideration extended to whether neuropsychological tests are helpful in a broader sense. Issues to be discussed will include acceptability to patients, sensitivity both to disease severity and progression, reliability when repeated or used in a wide variety of settings, relevance for everyday behaviour, relationship to other biomarkers, sensitivity to treatment effects and whether they are able to predict response to therapy.