

## **Commonly used Cognitive Screens and Assessments.**

*It is important to note that this is not an exhaustive list and other assessments may be suitable for use depending on the clinical setting.*

### **MOCA: Montreal Cognitive Assessment**

Is a 30-point assessment tool designed as a rapid screen instrument to detect cognitive impairment. Cognition domains assessed include; attention, concentration, executive functions, memory, language, visuospatial skills, abstraction, calculation and orientation. This is a standardised quick screen which takes approximately 10-15 minutes to administer. There are ranges available to grade severity of cognitive impairment i.e. mild, moderate and severe however, research for these severity ranges has not been established yet.

Training and certification are currently recommended but not mandatory. However, after September 1st 2020, access to the test will be restricted to those officially certified. Certification for the MOCA takes 1 hour and costs \$125 and is valid for two years. Retraining after 2 years is recommended but not mandatory and will be at 50% of the initial training cost.

Reference:

- <https://www.mocatest.org/>

### **MMSE: The Mini-Mental State Exam**

Is a 30-point questionnaire that was originally developed as a brief screening tool to provide a quantitative evaluation of cognitive impairment and to record cognitive changes over time (Folstein, Folstein, & McHugh, 1975). It is a quick standardised cognitive screen and is easy to use. It assesses the following cognitive domains: orientation, attention, memory, language and visual-spatial skills. It takes less than 10 minutes to administer and does not require training. It is familiar to most health care professionals and provides a breakdown of the level of cognitive impairment based on the score. Despite the many free versions of the MMSE that are available on the internet, Psychological Assessment Resources (PAR) claims that the official version is copyrighted and must be ordered only through it at <https://www.parinc.com/Products/Pkey/237>.

Reference:

- <https://www.ncbi.nlm.nih.gov/pubmed/1202204>

### **Addenbrookes cognitive examination-III (ACE)**

The ACE-III is a cognitive screening tool recommended for use by health care professionals to assess for cognitive impairment. The ACE-III is available online for free. There are various versions available for re-testing (i.e. version A, B or C). The following cognitive domains are assessed: language, memory, visuospatial skills, verbal fluency and orientation. The ACE-III is

scored out of 100 with 5 domain scores. The cut-off score of 82-88 out of 100 for a suspicion of dementia is recommended however, there is no breakdown to identify the level of cognitive impairment. It takes 10-20 minutes to administer and no training is required.

Reference:

- International Journal of Geriatric Psychiatry. 2012 Jul;27(7):659-69. doi: 10.1002/gps.2771.
- [http://dementia.ie/images/uploads/site-images/ACE-III Administration \(UK\).pdf](http://dementia.ie/images/uploads/site-images/ACE-III_Administration_(UK).pdf)

### **Mini Addenbrookes Cognitive Examination (ACE)**

The mini ACE is a shortened version of the ACE III. It is a brief screen and takes approximately 5-10 minutes to administer. It is easy to use and to score and has good sensitivity and specificity. It is free to use and no training required. It assesses the following: temporal orientation, memory registration and delayed recall, verbal fluency and visuospatial skills through clock drawing.

References:

- Lerner, A. J. (2015). Mini-Addenbrooke's Cognitive Examination: a pragmatic diagnostic accuracy study. *International journal of geriatric psychiatry*, 30(5), 547-548.
- Lerner, A. J. (2017). MACE versus MoCA: equivalence or superiority? Pragmatic diagnostic test accuracy study. *International psychogeriatrics*, 29(6), 931-937.

### **The Rowland Universal Dementia Assessment Scale (RUDAS)**

The RUDAS is a short cognitive screening instrument designed to minimise the effects of cultural learning and language diversity on the assessment of baseline cognitive performance. It is quick and easy to administer (approx. 10 minutes) and is freely available online. It assesses: memory, visuospatial skills, praxis, judgement and language.

Reference:

- [http://www.multiculturalmentalhealth.ca/wp-content/uploads/2014/04/20110311\\_2011NSWRUDASscoring\\_sheet.pdf](http://www.multiculturalmentalhealth.ca/wp-content/uploads/2014/04/20110311_2011NSWRUDASscoring_sheet.pdf)
- Ismail, Z., Rajji, T. K., & Shulman, K. I. (2010). Brief cognitive screening instruments: an update. *International Journal of Geriatric Psychiatry: A journal of the psychiatry of late life and allied sciences*, 25(2), 111-120.

### **4AT Assessment test for delirium & cognitive impairment**

The 4AT is a screening instrument designed for delirium detection. It is a short and practical tool designed to be used by any health professional at first contact with the patient, and at other times when delirium is suspected. No training is necessary and it is free to download and less than 5 minutes to administer.

A score of 4 or more *suggests* delirium but is not diagnostic: more detailed assessment of mental status may be required to reach a diagnosis. A score of 1-3 suggests cognitive impairment and more detailed cognitive testing and informant history-taking are required. A score of 0 does not definitively exclude delirium or cognitive impairment: more detailed testing may be required depending on the clinical context. Items 1-3 are rated *solely on observation of the patient at the time of assessment*. Item 4 requires information from one or more source(s), eg. your own knowledge of the patient, other staff who know the patient (eg. ward nurses), GP letter, case notes, carers. The tester should take account of communication difficulties (hearing impairment, dysphasia, lack of common language) when carrying out the test and interpreting the score. The 4AT is supported by several validation studies.

Reference:

- <https://www.the4at.com/>

### **Rivermead Behavioural Memory Test- Third Edition (RBMT-3)**

The *Rivermead Behavioural Memory Test – Third Edition (RBMT-3)* was specifically developed as a measure of everyday memory function. It is an in-depth cognitive assessment. It includes 14 subtests assessing aspects of visual, verbal, recall, recognition, immediate and delayed everyday memory. Additionally, prospective memory skills and the ability to learn new information are measured. It takes approximately 30 minutes to complete

There are 2 versions of the tool to allowing retesting. New tests of reliability and validity demonstrate the utility of the tool. The test can be carried out by occupational therapist or other qualified health professional. Test has to be purchased – see link to website

Reference:

- <https://www.pearsonclinical.com/psychology/products/100000644/rivermead-behavioural-memory-test-third-edition-rbmt-3.html>

## Functional Standardised Cognitive Assessments

### The Disability Assessment for dementia (DAD) Scale

Basic and instrumental activities of daily living are examined in relation to executive skills to permit identification of the problematic areas. The primary aim is to have a standardized, valid, reliable and sensitive measure of functional disability in DAT and other dementias. The DAD Scale includes: Basic activities of daily living, Instrumental activities of daily living and Leisure activities. The activities of daily living have been subdivided and are assessed according to executive functions which have showed regression patterns in dementias. These are initiation, planning and organization, and effective performance. For example: a person can be able to plan and complete the action but cannot initiate it.

- The DAD is administered through an interview with the caregiver.
- There is no specific expertise required for administering this assessment.
- This instrument can be administered in any setting and does not require any material for administration other than the questionnaire and a pencil. It is preferable to do it in a quiet environment alone with the caregiver.
- Administration of the DAD takes approximately 15 minutes.
- The resulting score assigns a percentage which provides an appreciation of global function in ADL. Higher scores represent less disability in ADL while lower scores indicate more dysfunction.

References:

- [http://dementiakt.com.au/wp-content/uploads/2016/06/DAD\\_Manual.pdf](http://dementiakt.com.au/wp-content/uploads/2016/06/DAD_Manual.pdf)
- [http://dementiakt.com.au/wp-content/uploads/2016/06/DAD\\_Scale.pdf](http://dementiakt.com.au/wp-content/uploads/2016/06/DAD_Scale.pdf)

### AMPS

The AMPS is an observational assessment that is used to measure the quality of a person's activities of daily living (ADL). The quality of the person's ADL performance is assessed by rating the effort, efficiency, safety and independence of 16 ADL motor and 20 ADL process skill items, while the person is doing chosen, familiar and life-relevant ADL tasks. There are more than 120 standardised ADL tasks. Requires specific training (5 day course, and costs approx. €800-1000) and takes longer time to administer

References:

- <http://www.innovativeotsolutions.com/content/amps/>
- [www.ampsukandireland.com](http://www.ampsukandireland.com)

### KETTLE TEST

The Kettle Test is a standardised measure and was developed as a brief performance-based measure designed to assess cognitive skills in a functional context. It requires the patient/resident to make two hot beverages (one for themselves and one to the therapist's

requirements). Using the functional task of preparing a hot beverage, the cognitive-functional and problem-solving skills of the client are assessed. The person is scored based on their performance and takes into consideration the amount of cueing required by the therapist. The observation is structured so that the rater is required to score the performance on 13 discrete steps of the task (e.g., turning on the faucet, filling the kettle with 2 cups of water). Clear guidelines for cueing are provided, and the rater scores each step according to the degree of cueing that was necessary to complete the step (0 through 4). An overall score is generated in the range of 0-52 with higher scores indicating more severe problems in performance. However, there are no sub-scales for cognitive impairment. It takes approximately 5-20 minutes to complete. There is no formal training required to administer the Kettle Test, however the examiner should have some experience and training in observational evaluation of functional performance. It is freely available online at <https://www.sralab.org/rehabilitation-measures/kettle-test>. There is only one version of this assessment available.

Reference:

- [https://www.strokingengine.ca/en/indepth/kt\\_indepth/](https://www.strokingengine.ca/en/indepth/kt_indepth/)
- Poulin, V., Korner-Bitensky, N., & Dawson, D. R. (2013). Stroke-specific executive function assessment: A literature review of performance-based tools. *Australian Occupational Therapy Journal*, 60(1), 3-19.

### **Occupational Therapy Kitchen Assessment – Primary Care**

This is a checklist developed by primary care OTs for assessing kitchen tasks in person's home. It is quick to administer, easy to document and takes as long as the activity. It is not standardised.

Insert attachment here of the copy

## **Carer Questionnaires**

### **AD8 Dementia Screening Interview:**

The AD8 is a brief dementia screening interview that is widely used and validated. It is quick and easy to use. It takes approximately 5-10 minutes to administer. There are 8 questions that are either given to the respondent for self-administration or can be read aloud to the respondent either in person or over the phone. The assessment asks the informant; a family member, close friend or carer, to rate if there has been a change in various aspects of the person's cognitive ability over time. Although it is preferable to administer the AD8 to an informant, the AD8 may be administered to the patient if there is no informant available. The AD8 is scored by calculating the number of items marked "Yes, A change." A score of 2 or

more indicates that cognitive impairment is likely to be present however, there are no subscales for impairment. The AD8 is freely available online and does not require training.

Reference:

- <https://www.alz.org/media/Documents/ad8-dementia-screening.pdf>

### **Caregiver Strain Index (CSI)**

The Caregiver Strain Index (CSI) is a tool that can be used to quickly identify families with potential caregiving concerns. It is a 13-question tool that measures strain related to care provision. There is at least one item for each of the following major domains: Employment, Financial, Physical, Social and Time. Positive responses to seven or more items on the index indicate a greater level of strain. It is quick to administer (5-10minutes) and can be administered by any health professional. The tool effectively identifies families who may benefit from more in-depth assessment and follow-up. It is free to download.

Reference:

- [http://www.npcrc.org/files/news/caregiver\\_strain\\_index.pdf](http://www.npcrc.org/files/news/caregiver_strain_index.pdf)

### **Useful links/signposting**

“Helping you to assess cognition A practical toolkit for clinicians” developed by Alzheimer Society UK.

Reference:

- [https://www.alzheimers.org.uk/sites/default/files/migrate/downloads/alzheimers\\_society\\_cognitive\\_assessment\\_toolkit.pdf](https://www.alzheimers.org.uk/sites/default/files/migrate/downloads/alzheimers_society_cognitive_assessment_toolkit.pdf)

### **Down Syndrome and Dementia**

Assessment and Diagnosis of Dementia in Individuals with Intellectual Disability: A Toolkit for Clinicians and Caseworkers Gregory D. Prichett, Psy.D.

Refence:

- <http://www.wai.wisc.edu/pdf/IDDtoolkit.pdf>
- <https://www.idstilda.tcd.ie/>
- <https://idstilda.tcd.ie/>