

Validated Brief Cognitive Assessment Tools: An Overview



INTRODUCTION

Early detection of cognitive impairment is central to high-quality dementia care. While primary care clinicians play a vital role in this process, the wide variety of available cognitive assessment tools can create inconsistency in practice and diagnostic workflows.

To support primary care teams, the Alzheimer's Association developed this at-a-glance reference, outlining characteristics of several brief validated cognitive assessments, including administration times, validated cut-offs, equity considerations and licensing requirements.

INDEX TEST	5-Cog <i>5-Cog Paradigm^{1,2}</i>	AD8 <i>Eight-item Interview to Differentiate Aging and Dementia/Ascertain Dementia 8 (AD8)⁵</i>	GPCOG <i>General Practitioner Assessment of Cognition⁸</i>	IQCODE <i>Informant Questionnaire on Cognitive Decline in the Elderly⁹</i>	s-IQCODE <i>Short Informant Questionnaire on Cognitive Decline in the Elderly (s-IQCODE)¹¹</i>	Mini-Cog^{12,13}
Administration Time	5 minutes	3 minutes	4 minutes (patient section) 2 minutes (informant section)	10 minutes	5-7 minutes	3 minutes
Items	3 tests	8 subjective items based on cognitive, behavioral and functional changes in the last several years	4 cognitive test items (patient section) 6 subjective items (informant section)	26 subjective items based on change in everyday cognition over the past 10 years	16 subjective items based on change in everyday cognition over the past 10 years	Clock drawing task and 3-item word recall test
Domains Assessed	<ul style="list-style-type: none"> ◦ Attention ◦ Cognitive complaints ◦ Gait ◦ Memory ◦ Processing speed ◦ Speed ◦ Visual scanning 	<ul style="list-style-type: none"> ◦ Apathy ◦ Function ◦ Judgment ◦ Memory ◦ Temporal orientation 	<ul style="list-style-type: none"> ◦ Memory ◦ Temporal orientation ◦ Visuospatial function 	<ul style="list-style-type: none"> ◦ Arithmetic ◦ Executive function ◦ Function ◦ Intelligence ◦ Language ◦ Learning ◦ Memory 	<ul style="list-style-type: none"> ◦ Arithmetic ◦ Executive function ◦ Function ◦ Intelligence ◦ Language ◦ Learning ◦ Memory 	<ul style="list-style-type: none"> ◦ Executive function ◦ Memory ◦ Visuospatial function
Mode(s) of Administration	In-person, staff-administered (verbal, motor and paper-based). No validated telephone/remote options available.	Informant-administered questionnaire. Validated in-person and telephone options available. ⁷	In-person, staff-administered (paper-based). Two-stage procedure (informant section administered only if patient section scores below cutoff). No validated telephone/remote options available.	Informant-administered questionnaire. No validated telephone/remote options available.	Informant-administered questionnaire. No validated telephone/remote options available.	In-person, staff-administered (paper-based). No validated telephone/remote options available.
Scoring	PMIS (4 items) MCR (gait speed + cognitive complaints) Symbol/Paper-Match (timed task)	Each item rated "yes, a change," "no, no change" or "N/A, don't know." Total score is calculated as the number of "yes" responses.	Each item in patient section scored "correct" or "incorrect." Total patient section scored 0-9 based on number of correct responses. Each item in informant section scored "yes," "no," "don't know" or "N/A." Total informant section scored 0-6 based on number of "no" responses. Total score is the sum of patient and informant section scores.	Each item scored "1 – much better," "2 – a bit better," "3 – not much change," "4 – a bit worse" or "5 – much worse." Total score is average of all 26 items.	Each item scored "1 – much improved," "2 – a bit improved," "3 – not much change," "4 – a bit worse" or "5 – much worse." Total score is average of all 16 items.	Clock drawing task scored "2 – normal" if all numbers are present in the correct sequence and position and both hands are in the correct position, otherwise "0 – abnormal." Word recall scored according to the number of correctly recalled words without cueing (0-3). Total score is sum of clock drawing task and word recall scores (0-5).
Scoring Interpretation	Not applicable	Higher scores indicate worse cognition	Lower scores indicate worse cognition	Higher scores indicate worse cognition	Higher scores indicate worse cognition	Lower scores indicate worse cognition

MIS <i>Memory Impairment Screen</i> ¹⁵	MMSE <i>Mini Mental State Examination</i> ¹⁷	MoCA <i>Montreal Cognitive Assessment</i> ¹⁹	s-MoCA <i>Short Montreal Cognitive Assessment</i> ^{21,22}	QDRS <i>Quick Dementia Rating System</i> ²³	RUDAS <i>Rowland Universal Dementia Assessment Scale</i> ²⁵	SLUMS <i>Saint Louis University Mental Status Examination</i> ^{27,28}
4 minutes	5–10 minutes	10 minutes	5 minutes	4 minutes	10 minutes	7 minutes
4 -item delayed free and cued recall test	11 items	13 cognitive tests	8 cognitive tests	10 items (4 cognitive, 6 behavioral) comparing the the examinee's cognitive, behavioral and functional abilities now to how they used to be	6 cognitive tests	11 cognitive tests
◦ Memory	◦ Attention ◦ Language ◦ Memory ◦ Orientation ◦ Visuospatial function	◦ Abstraction ◦ Attention ◦ Executive function ◦ Language ◦ Memory ◦ Naming ◦ Orientation ◦ Visuospatial function	◦ Abstraction ◦ Attention ◦ Executive function ◦ Language ◦ Memory ◦ Naming ◦ Orientation ◦ Visuospatial function	◦ Attention ◦ Behavior and personality ◦ Executive function ◦ Function ◦ Language ◦ Memory ◦ Mood ◦ Orientation	◦ Gnosis ◦ Judgment ◦ Language ◦ Memory ◦ Praxis ◦ Visuospatial function	◦ Attention ◦ Executive function ◦ Memory ◦ Orientation ◦ Visuospatial function
In-person, staff-administered (paper-based). Validated telephone option available. ¹⁶	In-person, staff-administered (paper-based). Validated telephone/remote option available.	In-person, staff-administered (paper-based). Validated telephone option available. ²⁰	In-person, staff-administered (paper-based). No validated telephone/remote options available.	Informant-administered questionnaire. Telephone/remote administration formally permitted. ²⁴	In-person, staff-administered (paper-based). Validated remote administration option available. ²⁶	In-person, staff-administered (paper-based). No validated telephone/remote options available.
Each correct free recall is scored 2. If examinees fail the free recall, they attempt category-cued recall, with each correct cued recall scored 1. Total score is sum across all items (0–8).	Each item scored individually: time orientation (0–5), place orientation (0–5), word registration (0–3), attention/calculation (0–5), word recall (0–3), naming (0–2), repetition (0–1), 3-stage command (0–3), reading (0–1), writing (0–1), copying (0–1). Total score is sum across all items (0–30).	Each test individually scored: alternate trail making (0–1), copy cube (0–1), clock drawing (0–3), animal naming (0–3), digit span forward (0–1), digit span backward (0–1), vigilance (0–1), serial 7 subtraction (0–3), sentence repetition (0–2), verbal fluency (0–1), abstraction (0–2), delayed recall (0–5), orientation (0–6). Total score is sum across all tests (0–30). One point is added if examinee has ≤12 years of education for a maximum of 30 points.	Each test individually scored: alternate trail making (0–1), clock drawing test (0–3), animal naming (0–1), serial 7 subtraction (0–3), verbal fluency (0–1), abstraction (0–1), delayed recall (0–5), orientation (0–1). Total score is sum across all tests (0–16).	Each item generally scored: “0 – normal,” “0.5 – mild,” “1 – moderate,” “2 – moderate-to-severe” and “3 – severe,” with more detailed descriptors available. Cognitive subtotal is calculated as the sum of four items (0–12). Behavioral subtotal is calculated as the sum of six items (0–18). Total score is sum across cognitive and behavioral items (0–30).	Each test scored individually: 4-item grocery recall (0–8), body orientation (0–5), praxis (0–2), cube copying (0–3), judgment (0–4), animal generation (0–8). Total score is sum across all tests (0–30).	Each item scored individually: orientation (3 items, each scored 0–1), arithmetic (0–3), animal naming (0–3), delayed recall (0–5), digit span (0–2), clock drawing (0–4), visuospatial function (0–2), story recall (0–8). Total score is sum across all items (0–30).
Lower scores indicate worse cognition	Lower scores indicate worse cognition	Lower scores indicate worse cognition	Lower scores indicate worse cognition	Higher scores indicate worse cognition	Lower scores indicate worse cognition	Lower scores indicate worse cognition

INDEX TEST	5-Cog <i>5-Cog Paradigm</i> ^{1,2}	AD8 <i>Eight-item Interview to Differentiate Aging and Dementia/Ascertain Dementia 8 (AD8)</i> ⁵	GPCOG <i>General Practitioner Assessment of Cognition</i> ⁸	IQCODE <i>Informant Questionnaire on Cognitive Decline in the Elderly</i> ⁹	s-IQCODE <i>Short Informant Questionnaire on Cognitive Decline in the Elderly (s-IQCODE)</i> ¹¹	Mini-Cog ^{12,13}
Recommended Cutoff for Cognitive Impairment	Abnormality on any test in the battery: <ul style="list-style-type: none"> ◦ PMIS $\leq 5$³ ◦ MCR diagnosis⁴ ◦ Symbol/Paper-Match task completion by 90 seconds⁵ 	≥ 6 ⁶	Patient section score ≤ 7 Informant section score ≤ 4 Total score ≤ 10 ⁸	≥ 3.3 ¹⁰	≥ 3.3 ¹⁰	≤ 2 ^{14,a}
Equity Considerations	Designed to be non-literacy biased and culturally fair by using a picture/symbol-based cognitive test and a stopwatch-timed gait test. No scoring modification recommended based on education.	Requires language proficiency. No scoring modification recommended based on education.	Requires language proficiency and may be influenced by cultural and socioeconomic factors. No scoring modification recommended based on education.	Requires language proficiency. May be influenced by education but to a lesser extent due to comparison to the examinee's previous level of functioning. No scoring modification recommended based on education.	Requires language proficiency. May be influenced by education but to a lesser extent due to comparison to the examinee's previous level of functioning. No scoring modification recommended based on education.	Reduced language and education bias due to visual component. No scoring modification recommended based on education.
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^aA scoring algorithm can be used instead of a single numeric cutoff. Cognitive impairment is ruled out if all three words are correctly recalled, regardless of clock drawing task performance, or if 1–2 words are recalled and clock drawing task performance is normal.

MIS <i>Memory Impairment Screen</i> ¹⁵	MMSE <i>Mini Mental State Examination</i> ¹⁷	MoCA <i>Montreal Cognitive Assessment</i> ¹⁹	s-MoCA <i>Short Montreal Cognitive Assessment</i> ^{21,22}	QDRS <i>Quick Dementia Rating System</i> ²³	RUDAS <i>Rowland Universal Dementia Assessment Scale</i> ²⁵	SLUMS <i>Saint Louis University Mental Status Examination</i> ^{27,28}
≤ 4 ¹⁵	≤ 23 ¹⁸	≤ 25 ¹⁹	≤ 11 ²¹	≥ 2 ²³	≤ 22 ²⁵	≤ 26 for examinees with high school education ²⁷ ≤ 24 for examinees with less than high school education ²⁷
Requires language proficiency. No scoring modification recommended based on education.	Requires language proficiency. Affected by age, education, literacy and cultural background. ¹⁸	Requires language proficiency. May be influenced by education and cultural factors. Scoring modification recommended based on education.	Requires language proficiency. May be influenced by education and cultural factors. No scoring modification recommended based on education.	Requires language proficiency. Minimal cultural bias. May be influenced by education but to a lesser extent due to comparison to the examinee's previous level of functioning. No scoring modification recommended based on education.	Requires language proficiency. Items were designed for culturally and linguistically diverse populations. No scoring modification recommended based on education.	Requires language proficiency. Interpretation modification recommended based on education.
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Cognitive impairment is indicated if no words are correctly recalled, regardless of clock drawing task performance, or if 1–2 words are recalled and clock drawing task performance is abnormal.¹³

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