

## THE QUICK DEMENTIA RATING SYSTEM (QDRS)

### Purpose of Use

The detection of mild cognitive impairment (MCI), Alzheimer's disease (AD) and related dementias in community samples of older adults may be limited in part due to the lack of brief tests that capture and characterize the earliest signs of impairment and monitor response to therapies and interventions. The average busy clinician does not have 90-120 minutes to examine each patient, yet this is the time required to generally collect the detailed information needed to make a diagnosis of Alzheimer's disease. This may affect eligibility determination for care and services, impede case ascertainment in epidemiologic studies, and inhibit the ability to identify eligible individuals for clinical trial recruitment. We developed the Quick Dementia Rating System (QDRS)—a rapid dementia staging tool to meet these needs. The QDRS provides a brief but valid and reliable assessment of whether a problem is present, and if present how severe it is. The QDRS was tested and validated in 267 patient-caregiver dyads compared with Clinical Dementia Ratings (CDR), neuropsychological testing, and gold standard measures of function, mood, and behavior. Like all brief tests, a positive result should be followed up with a more comprehensive evaluation or a referral to a specialist. However in places where specialist are limited, use of the QDRS could help to more appropriately triage patients for appropriate use of services. It could also be used to follow patients in a succinct way to see how they are responding to therapy or if they have progressed and need more services. In a broader sense, a brief test such as the QDRS can be used to enrol people in research projects, and help determining prevalence of disease in communities in a very quick fashion

### Administration and Scoring Guidelines

The questions are given to the respondent on a clipboard or computer screen for self-administration or can be read aloud to the respondent either in person or over the phone. The QDRS was designed as an informant rating, preferably someone who has frequent long-term contact with the patient, such as a spouse or adult child, in order to provide a rating of the extent and severity of change from prior abilities.

When administered to an informant, specifically ask the respondent to rate change in the patient with emphasis placed on changes due to cognitive problems (not physical problems). If the patient has a physical limitation, ask the informant to rate whether the patient could perform the tasks if the physical limitation were not present.

The QDRS has 10 categories, each with 5 options that characterize changes in the patient's cognitive and functional abilities. The informant is asked to compare the patient now to how they used to be – the key feature is **change** – no specific timeframe for change is required. Have the informant choose **one answer** for each category that best fits the patient – **NOTE**, not all descriptions need to be present to choose an answer

### Interpretation of the QDRS

A screening test in itself is insufficient to diagnose a dementing disorder. The QDRS is, however, quite sensitive to detecting early cognitive changes associated many common dementing illness including Alzheimer disease, vascular dementia, Lewy body dementia and frontotemporal dementia. The QDRS may also capture change in cognitive abilities due to other conditions, including depression, traumatic brain injury, and medication-induced cognitive dysfunction.

The QDRS is scored on a continuous scale with a range of 0-30. Higher scores suggest more impairment. Based on receiver operator characteristic curves from 267 individuals included in the development and validation samples, QDRS scores differentiate with the following cut-points:

Normal	0-1
Mild cognitive impairment	2-5
Mild dementia	6-12
Moderate dementia	13-20
Severe dementia	20-30

Scores in the impaired range indicate a need for further assessment to establish a formal diagnosis. Scores in the "normal" range suggest that a dementing disorder is unlikely, but a very early disease process cannot be ruled out. More advanced assessment may be warranted in cases where other objective evidence of impairment exists.

The QDRS contains two subscales were designed to see whether cognitive (questions 1, 2, 3, and 8) or behavioral (questions 4, 5, 6, 7, 9, 10) symptoms are the predominant features.

The QDRS can also be used to calculate a Clinical Dementia Rating (CDR score) using the first six categories. Note: for the Toileting and Personal Hygiene category the 0 and 0.5 category would be counted as 0 in computing the CDR.

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The following descriptions characterize changes in the patient's cognitive and functional abilities. You are asked to compare the patient now to how they used to be – the key feature is **change**. Choose **one answer** for each category that best fits the patient – **NOTE**, not all descriptions need to be present to choose an answer

<b>1. MEMORY AND RECALL</b>	
0	No obvious memory loss or inconsistent forgetfulness that does not interfere with function in everyday activities
0.5	Consistent mild forgetfulness or partial recollection of events that may interfere with performing everyday activities; repeats questions/statements, misplaces items, forgets appointments
1	Mild to moderate memory loss; more noticeable for recent events; interferes with performing everyday activities
2	Moderate to severe memory loss; only highly learned information remembered; new information rapidly forgotten
3	Severe memory loss, almost impossible to recall new information; long-term memory may be affected
<b>2. ORIENTATION</b>	
0	Fully oriented to person, place, and time nearly all the time
0.5	Slight difficulty keeping track of time; may forget day or date more frequently than in the past
1	Mild to moderate difficulty keeping track of time and sequence of events; forgets month or year; oriented to familiar places but gets confused outside of familiar areas; gets lost or wanders
2	Moderate to severe difficulty, usually disoriented to time and place (familiar and unfamiliar); frequently dwells in past
3	Only oriented to their name, although may recognize family members
<b>3. DECISION MAKING AND PROBLEM SOLVING ABILITIES</b>	
0	Solves everyday problems without difficulty; handles personal business and financial matters well; decision-making abilities consistent with past performance
0.5	Slight impairment or takes longer to solve problems; trouble with abstract concepts; decisions still sound
1	Moderate difficulty with handling problems and making decisions; defers many decisions to others; social judgment and behavior may be slightly impaired; loss of insight
2	Severely impaired in handling problems, making only simple personal decisions; social judgment and behavior often impaired; lacks insight
3	Unable to make decisions or solve problems; others make nearly all decisions for patient
<b>4. ACTIVITIES OUTSIDE THE HOME</b>	
0	Independent in function at usual level of performance in profession, shopping, community and religious activities, volunteering, or social groups
0.5	Slight impairment in these activities compared to previous performance; slight change in driving skills; still able to handle emergency situations
1	Unable to function independently but still may attend and be engaged; appears "normal" to others; notable changes in driving skills; concern about ability to handle emergency situations
2	No pretense of independent function outside the home; appears well enough to be taken to activities outside the family home but generally needs to be accompanied
3	No independent function or activities; appear too ill to be taken to activities outside the home
<b>5. FUNCTION AT HOME AND HOBBY ACTIVITIES</b>	
0	Chores at home, hobbies and personal interests are well maintained compared to past performance
0.5	Slight impairment or less interest in these activities; trouble operating appliances (particularly new purchases)
1	Mild but definite impairment in home and hobby function; more difficult chores or tasks abandoned; more complicated hobbies and interests given up
2	Only simple chores preserved, very restricted interest in hobbies which are poorly maintained
3	No meaningful function in household chores or with prior hobbies

<b>6. TOILETING AND PERSONAL HYGEINE</b>	
0	Fully capable of self-care (dressing, grooming, washing, bathing, toileting)
0.5	Slight changes in abilities and attention to these activities
1	Needs prompting to complete these activities but may still complete independently
2	Requires some assistance in dressing, hygiene, keeping of personal items; occasionally incontinent
3	Requires significant help with personal care and hygiene; frequent incontinence
<b>7. BEHAVIOR AND PERSONALITY CHANGES</b>	
0	Socially appropriate behavior in public and private; no changes in personality
0.5	Questionable or very mild changes in behavior, personality, emotional control, appropriateness of choices
1	Mild changes in behavior or personality
2	Moderate behavior or personality changes, affects interactions with others; may be avoided by friends, neighbors, or distant relatives
3	Severe behavior or personality changes; making interactions with others often unpleasant or avoided
<b>8. LANGUAGE AND COMMUNICATION ABILITIES</b>	
0	No language difficulty or occasional word searching; reads and writes as well as in past
0.5	Consistent mild word finding difficulties, using descriptive terms or takes longer to get point across, mild problems with comprehension, decreased conversation; may affect reading and writing
1	Moderate word finding difficulty in speech, cannot name objects, marked reduction in word production; reduced comprehension, conversation, writing and/or reading
2	Moderate to severe impairments in speech production or comprehension; has difficulty communicating thoughts to others; limited ability to read or write
3	Severe deficits in language and communication; little to no understandable speech is produced
<b>9. MOOD</b>	
0	No changes in mood, interest or motivation level
0.5	Occasional sadness, depression, anxiety, nervousness or loss of interest/motivation
1	Daily mild issues with sadness, depression, anxiety, nervousness or loss of interest/motivation
2	Moderate issues with sadness, depression, anxiety, nervousness or loss of interest/motivation
3	Severe issues with sadness, depression, anxiety, nervousness or loss of interest/motivation
<b>10. ATTENTION AND CONCENTRATION</b>	
0	Normal attention, concentration and interaction with his/her environment and surroundings
0.5	Mild problems with attention, concentration, and interaction with environment and surroundings, may appear drowsy during day
1	Moderate problems with attention and concentration, may have staring spells or spend time with eyes closed, increased daytime sleepiness
2	Significant portion of the day is spent sleeping, not paying attention to environment, when having a conversation may say things that are illogical or not consistent with topic
3	Limited to no ability to pay attention to external environment or surroundings
<b>COGNITIVE SUBTOTAL (QUESTIONS 1, 2, 3, 8)</b>	
<b>BEHAVIORAL SUBTOTAL (QUESTIONS 4, 5, 6, 7, 9, 10)</b>	
<b>TOTAL QDRS SCORE</b>	