

**Rating of Behavior, Personality
and Compartment
domain #7 and Language #8 of
CDR for UDS**

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Rationale for additional domains

- While standard CDR is excellent for typical amnesic MCI and AD, it is less sensitive to:
 - Behavioral variant FTD
 - Progressive aphasias

How new domains add to informativeness of CDR

- In NACC FTLD study baseline data
 - Among 18 bvFTD patients with standard CDR-SOB <4
 - 7 had BPC domain =1
 - 6 had BPC domain of >1
 - Among 20 PNFA patients with standard CDR-SOB <4
 - 16 had Language >1

Assessment of behavior, comportment and personality

- Should be assessed by a skilled clinician, who is familiar with FTD
- Evaluation should include both interview of knowledgeable informant and interview of patients

Core features for diagnosis of bv-FTD & for CDR rating

- Loss of insight
- Disinhibition
- Apathy
- Restlessness
- Emotional lability
- Easily distracted
- Reduced empathy
- Impulsivity
- Social withdrawal and disengagement
- Poor self-care
- Appetite disturbance or Hyperorality
- Compulsive or stereotypic behaviors

Rating Scheme for Domain of Behavior, Personality and Compartment

0	Socially appropriate behavior
0.5	Questionable changes in compartment, empathy, appropriateness of actions
1	Mild but definite changes in behavior – behaviors of <i>commission or omission</i> (apathy)
2	Moderate behavioral changes, affecting interpersonal relationships & interactions in a significant manner
3	Severe behavioral changes making interpersonal interactions all unidirectional

CDR rating =1

- Behavioral and personality changes occur regularly according to knowledgeable informant
- Behavior and compartment, while definitely abnormal some of the time, not pervasive.
- The patient may be socially appropriate at times.
- In casual, brief interactions with patient, the behavior changes might not be evident.

Catalog of Aberrant Behaviors

- lack of empathy for the feelings of others,
- loss of insight into how one's behavior is perceived by others
- impulsiveness (the tendency to act without regards to consequences),
- mental rigidity and inflexibility,
- loss of interest (apathy) in prior pastimes,
- loss of interest in and indifference to interpersonal relationships causing social withdrawal,
- easy distractability

Catalog of Aberrant Behaviors

- emotional lability such that the patient switches from sadness to elation, or friendliness to hostility rapidly and without warning or provocation,
- laughing or other actions that are incongruent with situation,
- rude or socially inappropriate speaking to strangers,
- socially inappropriate touching of strangers,
- speaking in a caustic or unkind way to family or strangers,
- loss of modesty around family or strangers,

Catalog of Aberrant Behaviors

- stimulus-bound behaviors and utterances such as commenting on the appearance of things or people without regard to the propriety of such comments,
- loss of interest in personal appearance and hygiene such that the patient appears in public in dirty or soiled clothing,
- failure to bathe with attendant body odor, and
- loss of table manners such as using one's hands to eat instead of utensils.

Rating Scheme for Language Domain

0	No Language Difficulty
0.5	Consistent mild word finding difficulties; simplification of word choice; circumlocution; decreased phrase length and/or mild comprehension difficulties
1	Moderate word finding difficulty in speech; cannot name objects in environment; reduced phrase length or agrammatic speech; or reduced comprehension in conversation and reading
2	Moderate to severe impairments in either speech or comprehension; has difficulty communicating thoughts; writing may be slightly more effective
3	Severe comprehension deficits; no intelligible speech

Elements of Language domain assessment

- Should be completed by physicians skilled in language assessment
- Components
 - Spontaneous speech
 - Auditory comprehension
 - Object naming
 - Reading
 - Writing

Spontaneous Speech Evaluation

- articulation and motor speech – may or may not be language deficits
- Words per minute
- Phrase length
- Paraphasic errors
- Grammatical form and content

Auditory Comprehension

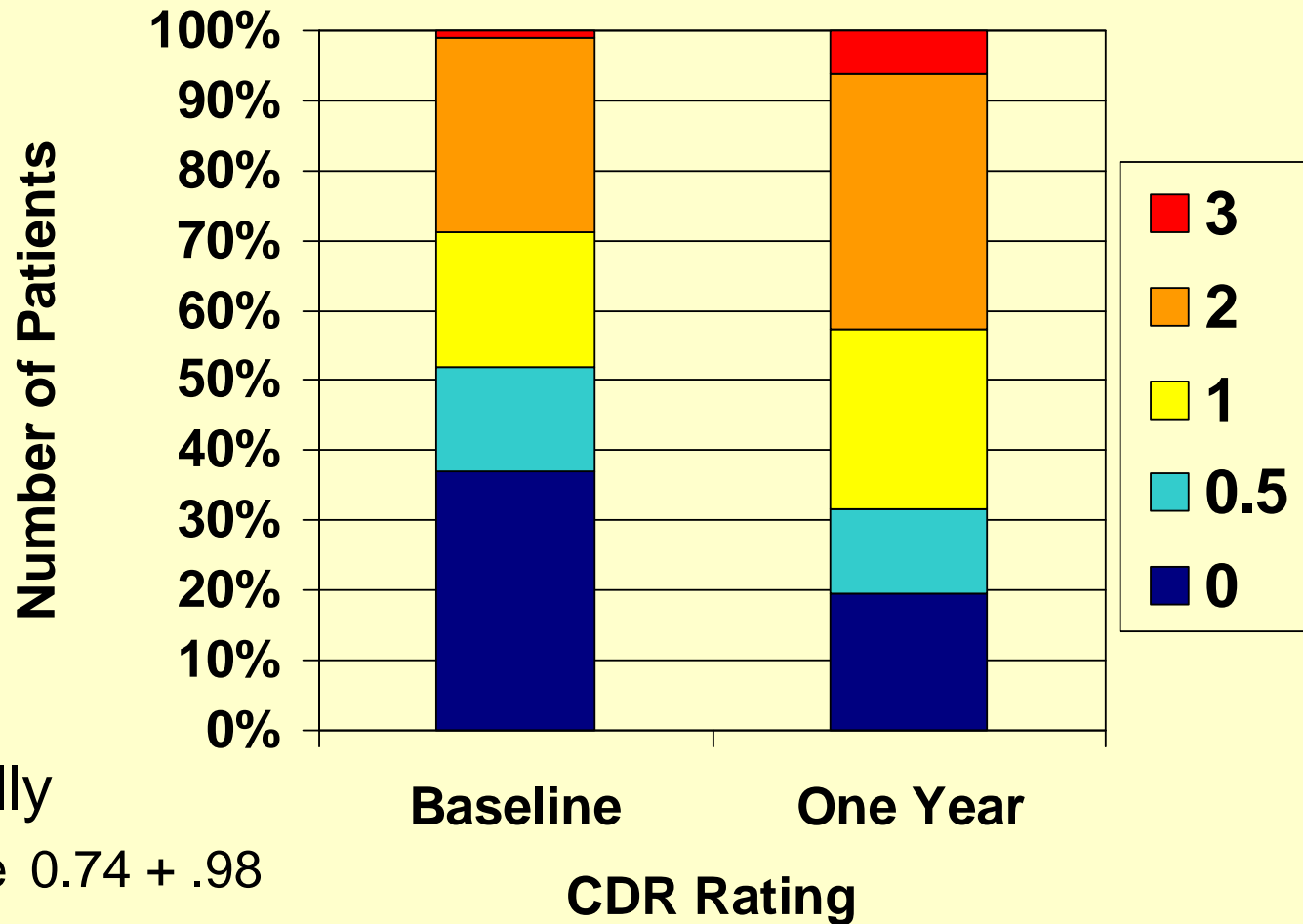
- Ability to understand questions during interview
- Impairment of single word comprehension
- Impairment of sentence comprehension
- Inability to follow commands

Correlations between CDR 7, 8 and other measures at baseline NACC FTLD study

	CDR7	CDR8	CDRSOB (6 item)
FAQSUM	.51	.04	.84
FBISUM	.71	.08	.76
MMSE	-.00	-.39	-.40
Boston Nam	-.05	-.44	-.08
Digit Sym S	.12	-.16	-.19

Focus on BPC Domain in NACC study

Distribution of Ratings



- Numerically

- Baseline 0.74 + .98

- One Yr 1.23 + .89

Matrix of score changes from baseline to year 1

One Year CDR

	0	0.5	1	2	3	Drop-out
0	14	8	8	2	0	10
0.5	0	1	6	6	0	3
1	1	3	6	6	2	3
2	1	0	1	15	3	10
3	0	0	0	1	0	0