Assessment of Depression in Dementia

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Outline: Depression in Dementia

- Prevalence
- Importance
- Clinical features
- Diagnostic process
- Retarded vs Agitated Depression
  - Sleep patterns

Prevalence of depression in dementia

- (Vida 1994)
- Depressive mood (as a symptom) found in 0-87% of AD patients
- Most frequencies in 40-50% range
- Clinical depression: in 0-86% of AD
- Most frequencies in 10-20% range
- 13.9% if based only on patient reports
- 50% if include reports of family members

Importance of depression in dementia

- Increases cognitive impairment
- Increases suffering of patients and families
- Impairs function
- Hastens institutionalization
- In normal elderly, negative affect interferes with memory (Deptula 1993)
- Depression in AD responds to treatment

Vascular vs Alzheimer's

- 28 pairs of patients matched as to age, education, severity of dementia
- Rated with Neurobehavioral Rating Scale and Hamilton Depression Rating Scale
- Vascular dementia patients had more severe behavioural retardation, depression, & anxiety compared to Alzheimer's disease patients with similar cognitive impairment (Sultzer 1993)

Diagnosing depression in dementia

- History of present illness
  - From the patient
  - From the family or other caregivers
  - From health professionals
  - Loss of appetite or excessive appetite
  - Insomnia or hypersomnia
  - Hopelessness, helplessness, worthlessness
  - Loss of interest, energy, concentration
  - Agitation; refusal to participate
  - Somatic complaints
- Past psychiatric history
  - Depression, manic states, psychosis, hospitalizations, suicides, ECT, alcohol, drugs
- Family psychiatric history

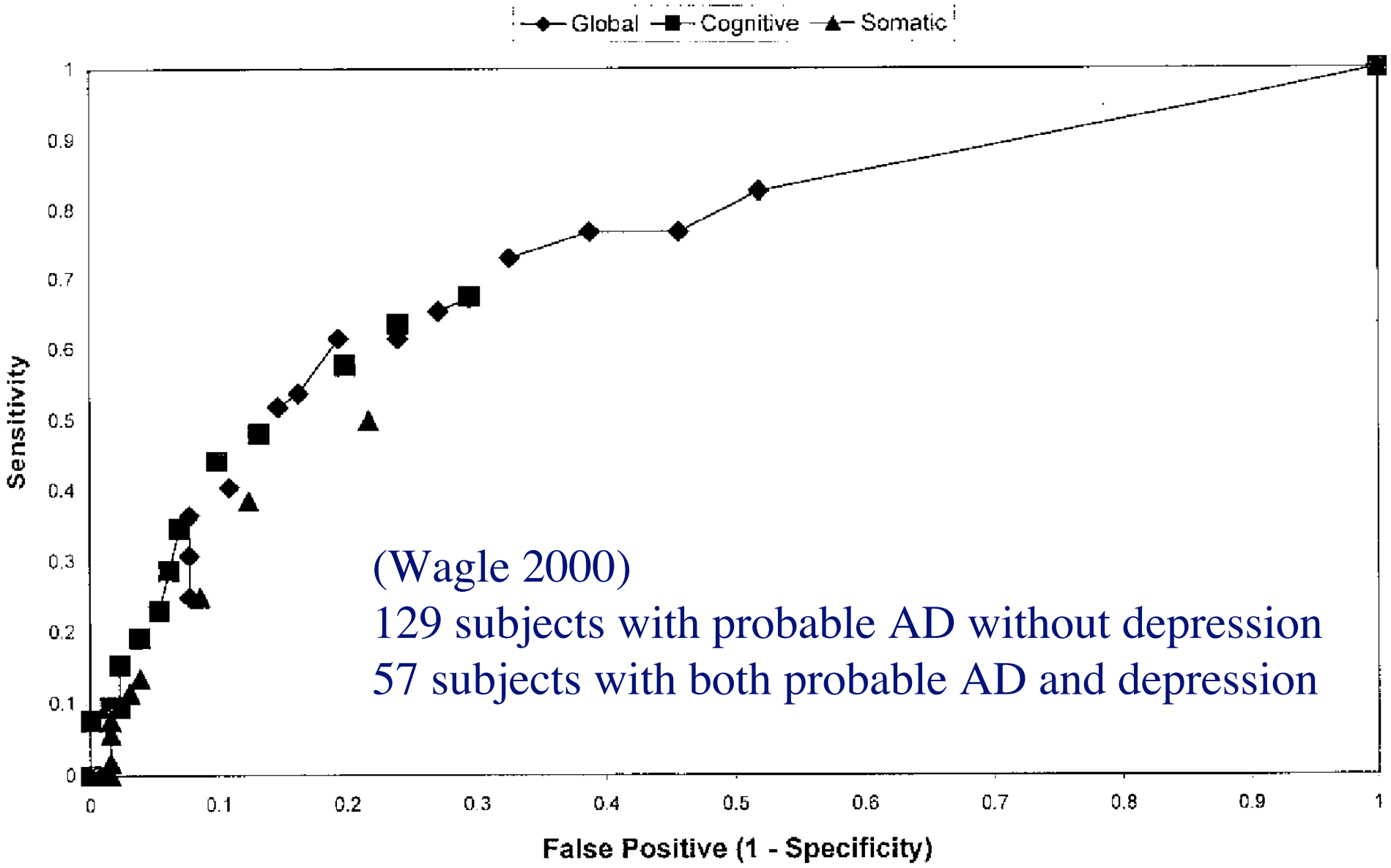
Diagnosing depression in dementia

- Past medical history
  - Serious medical illness, neurologic disease (eg Parkinson's), stroke increase risk for depression
- Habits
  - Alcohol or drug use
  - Avoidance of fish consumption
- Medications
  - Benzos, beta-blockers (including timolol eye drops)
  - Previous Rx's for antidepressants
- Sleep pattern
  - Excessive sleep, late rising (includes insomnia)
  - Too early bedtimes

Diagnosing depression in dementia

- Mental status
  - Depressed facies, body habitus
  - Somatic complaints
  - Psychomotor slowing or agitation
  - Irritability
  - Pressured speech
  - Wish to be dead
  - “Are you depressed?”
- Instruments
- Imaging
- Therapeutic probes

Why not use the BDI?



(Wagle 2000)
129 subjects with probable AD without depression
57 subjects with both probable AD and depression

Why not use the CES-D?

- Centre for Epidemiologic Studies - Depression Scale
- Dementia patients tend to score high
- Thus, cannot distinguish depression from dementia (Papassotiropoulos 1999)

So what's the problem?

- Dementia produces symptoms of depression
- Depression in the elderly produces symptoms of dementia

Instruments

- Geriatric Depression Scale (GDS)
- Brief Carrol Depression Rating Scale (BCDRS)
- Columbia University Scale for Psychopathology in Alzheimer's Disease (CUSPAD)
- Nurses' Observation Scale for Geriatric Patients (NOSGER)
- Informant Interview for the Diagnosis of Depression and Dementia in Older Adults (IDD-GMS)

Instruments

- Canberra Interview for the Elderly
- Neurobehavioral Rating Scale (NRS)
- SHORT-CARE (short version of the Comprehensive Assessment and Referral Evaluation (CARE)
- Cornell Scale for Depression in Dementia (CSDD)
- Dementia Mood Assessment Scale (DMAS)
- Minimum Data Set Depression Rating Scale (MDS-DRS)
- Psychogeriatric Assessment Scales (PAS)

Geriatric Depression Scale (GDS)

- 30 items re 1-week time frame, yes/no responses
- 134 randomly selected nursing home residents (5 homes), with mild cognitive impairment (Gerety 1994)
- 35 (26%) had DSM-IIIR depression (SCID)
- GDS sensitivity 0.89, specificity 0.68
- Has been shown sensitive to change
- Useful in nursing homes for both case-finding and severity

THE GERIATRIC DEPRESSION SCALE

Note: Shaded items count as one point, score >15 indicates depression. The fifteen items marked with an * indicate the abbreviated version of the GDS.

		Yes	No
*1	Are you basically satisfied with your life?		
*2	Have you dropped many of your activities and interests?		
*3	Do you feel that your life is empty?		
*4	Do you often get bored?		
5	Are you hopeful about the future?		
6	Are you bothered by thoughts you cannot get out of your head?		
*7	Are you in good spirits most of the time?		
*8	Are you afraid that something bad will happen to you?		
*9	Do you feel happy most of the time?		
*10	Do you often feel helpless?		
11	Do you often get restless and fidgety?		
*12	Do you prefer to stay home, rather than going out and doing new things?		

13	Do you frequently worry about the future?		
*14	Do you feel you have more problems with memory than most?		
*15	Do you think it's wonderful to be alive now?		
16	Do you often feel downhearted and blue?		
*17	Do you feel pretty worthless the way you are now?		
18	Do you worry a lot about the past?		
19	Do you find life very exciting?		
20	Is it hard for you to get started on new projects?		
*21	Do you feel full of energy?		
*22	Do you feel that your situation is hopeless?		
*23	Do you think that most people are better off than you are?		
24	Do you frequently get upset over things?		
25	Do you frequently feel like crying?		
26	Do you have trouble concentrating?		
27	Do you enjoy getting up in the morning?		
28	Do you prefer to avoid social gatherings?		
29	Is it easy for you to make decisions?		
30	Is your mind as clear as it used to be?		
	TOTAL:		

Brief Carrol Depression Rating Scale (BCDRS) (Gerety 1994)

- 12 items re 1-week time frame, yes/no responses
- In the same study as for the GDS:
- BCDRS sensitivity 0.85, specificity 0.77
- Useful for case-finding

Columbia University Scale for Psychopathology in Alzheimer's Disease (CUSPAD) (Devanand 1992, 1997)

- Short, semi-structured interview of an informant
- Can be administered by a trained lay interviewer
- Takes 10-25 min.
- Focuses on symptoms during past month: psychosis, behavioural disturbance, depression
- Primarily a screening instrument
- For depression, 5-point scales for frequency and severity:
  - Depressed mood
  - Difficulty sleeping
  - Change in appetite
- Lacks quantitative ratings for many components, thus unsuitable for clinical trials

Columbia University Scale for Psychopathology in Alzheimer's Disease (CUSPAD) (Devanand 1992)

Depression

Ratings are described for each item below

Has he/she been sad, depressed, blue, or down in the dumps? No, 0; yes, 1

If "yes", is he/she depressed occasionally (score = 1), some of the time (2), most of the time (3), all the time (4), or not applicable (0).

Has he/she had difficulty sleeping? No, 0; yes, 1

If "yes", is there slight difficulty (1), at least 2 hours sleep per night (2), less than 2 hours sleep per night (3), or excessive sleepiness (4)

Has his/her appetite changed? No, 0; yes, 1

If "yes", is it slightly decreased (1), there is no appetite and food is tasteless (2), needs persuasion to eat at all (3), or excessive appetite (4)

Nurses' Observation Scale for Geriatric Patients (NOSGER)

- (Spiegel 1991)
- Goals:
  - Assess behaviours relevant to patients in everyday life and to persons living with patients
  - For community or institutionalized patients
  - Easy to use for untrained raters, including family members
  - Assess observable behaviours, avoid interpretations and inferences
  - Assess areas which may change over time
- 30 items, 6 dimensions:
  - Memory, IADLs, self-care, mood, social behaviour, disturbing behaviour

Nurses' Observation Scale for Geriatric Patients (NOSGER II)

Instructions: We are interested in finding out how this patient has been doing in the last 2 weeks. For this purpose there are 30 statements which you should grade according to your own observations. Read each statement and assess the patient's behaviour by marking the box which corresponds the best.

	All the time	Most of the time	Often	Some-times	Never
1. Shaves or puts on makeup, combs hair without help.	☐	☐	☐	☐	☐
2. Follows favourite radio or TV programmes.	☐	☐	☐	☐	☐
3. Reports he / she feels sad.	☐	☐	☐	☐	☐
4. Is restless during the night.	☐	☐	☐	☐	☐
5. Is interested in what is going on around him / her.	☐	☐	☐	☐	☐
6. Tries to keep his / her room tidy.	☐	☐	☐	☐	☐
7. Is able to control bowels.	☐	☐	☐	☐	☐
8. Remembers a point in conversation after interruption.	☐	☐	☐	☐	☐
9. Goes shopping for small items (newspaper, groceries).	☐	☐	☐	☐	☐
10. Reports feeling worthless.	☐	☐	☐	☐	☐
11. Continues with some favourite hobby.	☐	☐	☐	☐	☐
12. Repeats the same point in conversation over and over.	☐	☐	☐	☐	☐
13. Appears sad or tearful.	☐	☐	☐	☐	☐
14. Clean and tidy in appearance.	☐	☐	☐	☐	☐
15. Runs away.	☐	☐	☐	☐	☐

Nurses' Observation Scale for Geriatric Patients (NOSGER II)

	All the time	Most of the time	Often	Some-times	Never
16. Remembers names of close friends.	☐	☐	☐	☐	☐
17. Helps others as far as physically able.	☐	☐	☐	☐	☐
18. Goes out inappropriately dressed.	☐	☐	☐	☐	☐
19. Is orientated when in usual surroundings.	☐	☐	☐	☐	☐
20. When asked questions, seems quarrelsome and irritable.	☐	☐	☐	☐	☐
21. Makes contact with people around.	☐	☐	☐	☐	☐
22. Remembers where clothes and other things are placed.	☐	☐	☐	☐	☐
23. Is aggressive (verbally or physically).	☐	☐	☐	☐	☐
24. Is able to control bladder function (urine).	☐	☐	☐	☐	☐
25. Appears to be cheerful.	☐	☐	☐	☐	☐
26. Maintains contact with friends or family.	☐	☐	☐	☐	☐
27. Confuses the identity of some people with others.	☐	☐	☐	☐	☐
28. Enjoys certain events (visits, parties).	☐	☐	☐	☐	☐
29. Appears friendly and positive in conversation with family members or friends.	☐	☐	☐	☐	☐
30. Behaves stubbornly, does not follow instructions or rules.	☐	☐	☐	☐	☐

Informant Interview for the Diagnosis of Depression and Dementia in Older Adults (IDD-GMS)

- Based on the Geriatric Mental State Schedule (GMS), modified to obtain answers from an informant instead of the patient
- Reduced to 36 items by excluding other disorders (eg schizophrenia, dissociative disorders, etc.)
- Takes 15 minutes
- Study of 30 patients, comparing IDD-GMS to ICD-10 diagnoses by experienced clinicians (Lewis 1998)

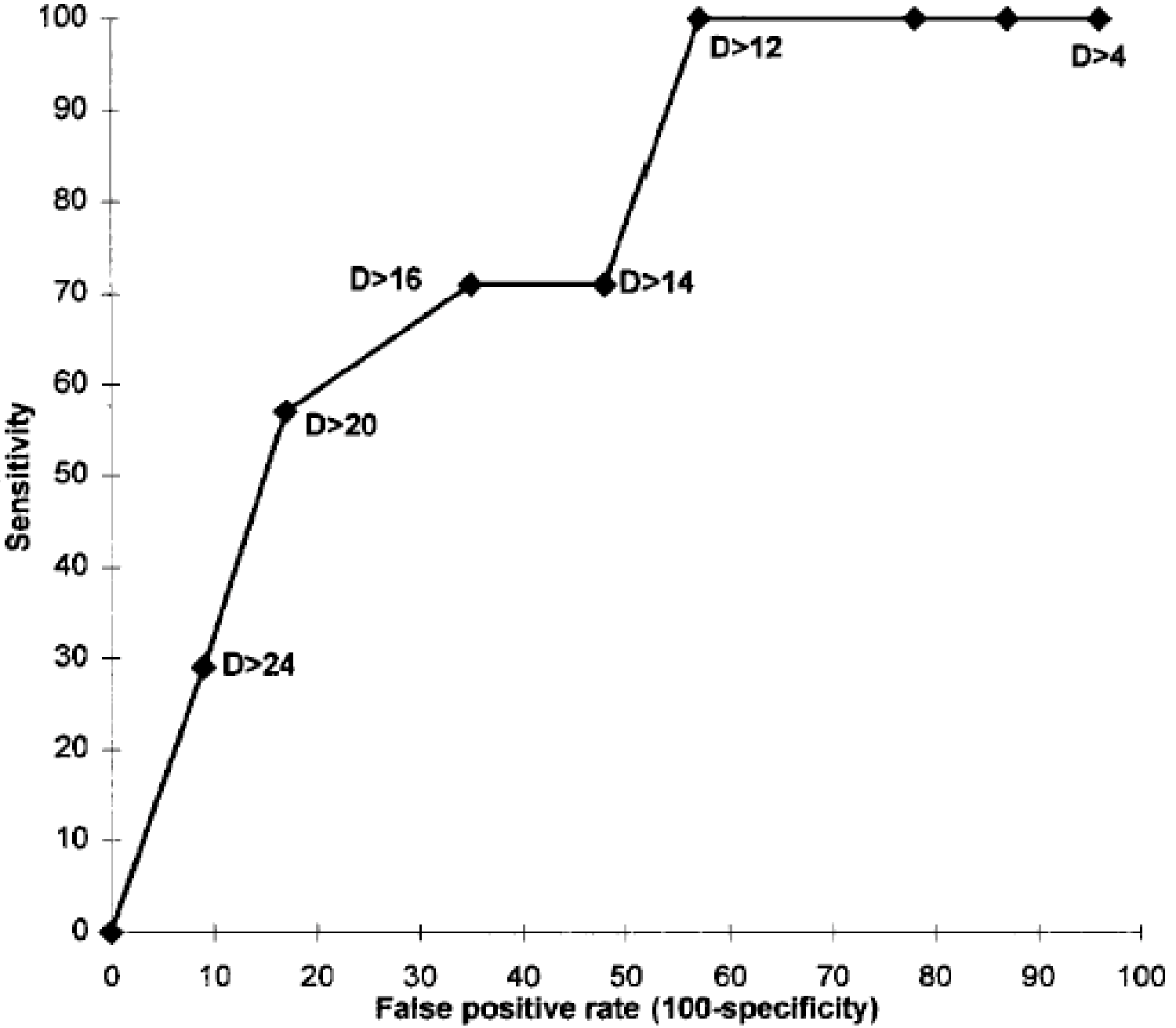


Fig. 2. ROC curve: IDD-GMS depression data illustrating cutpoints for depression (D)

Canberra Interview for the Elderly (Mackinnon 1993)

- Intended to tap all ICD-10 and DSM-IIIR criteria
- Uses a computer algorithm to arrive at diagnoses of dementia & depression separately for the two diagnostic systems
- Designed for research
- Lay interviewers with brief training
- Has been superseded by PAS

Neurobehavioral Rating Scale (NRS) (Sultzer 1992)

- 27 items; observer ratings
- Includes most of Brief Psychiatric Rating Scale (BPRS)
- Adds items to measure behavioural disturbances and cognitive impairments
- 6 factors:
  - Cognition/insight
  - Agitation/disinhibition
  - Behavioural retardation
  - Anxiety/depression
  - Verbal output disturbance
  - Psychosis

SHORT-CARE

- (Gurland 1984)
- Comprehensive Assessment and Referral Evaluation (CARE): 1500 items
- CORE-CARE: 314 items, 22 indicator scales
- SHORT-CARE: 143 items, 6 indicator scales
  - Depression/demoralization
  - Dementia
  - Subjective memory impairment
  - Sleep disorders
  - Somatic symptoms
  - Disability
  - Interview takes > 30 min.
  - Appears to be of client only

Cornell Scale for Depression in Dementia (CSDD)

- Designed to rate depression quantitatively
- Brief, easy-to-use
- Explicit provisions for collection & integration of information from subjects & from their caregivers

PRELIMINARY DEPRESSION ASSESSMENT

In your opinion has the resident been depressed over the last week?

(Please circle answer)

No Mildly Moderately Severely

	Answer the questions by putting a tick in the appropriate box:	Yes	No
1	Did any of the resident's relatives describe him/her as being depressed before they were admitted?		
2	Did the resident have any problems settling in, particularly with establishing good relationships?		
3	Did the resident seem to avoid people during the first 4 weeks after their admission?		
4	Is the resident having any problems with the staff?		
5	Is the resident grieving over the loss of opportunities, or abilities, to take part in activities they value?		
6	Does the resident take an active part in activities when he/she attends them?		
7	Is the resident grieving over the loss of their own home?		
8	Is the resident grieving over the loss of their privacy or dignity?		
9	Is the resident grieving over separation from a spouse or child?		
10	Is the resident in pain?		
11	Does the resident have a visit from a friend or a relative at least once a week?		
12	Does the resident regularly help another resident or staff member?		

If you have described the resident as being mildly, moderately or severely depressed or if you have put ticks in 3 or more of the shaded boxes in the table above, you should continue your assessment of the resident by either:

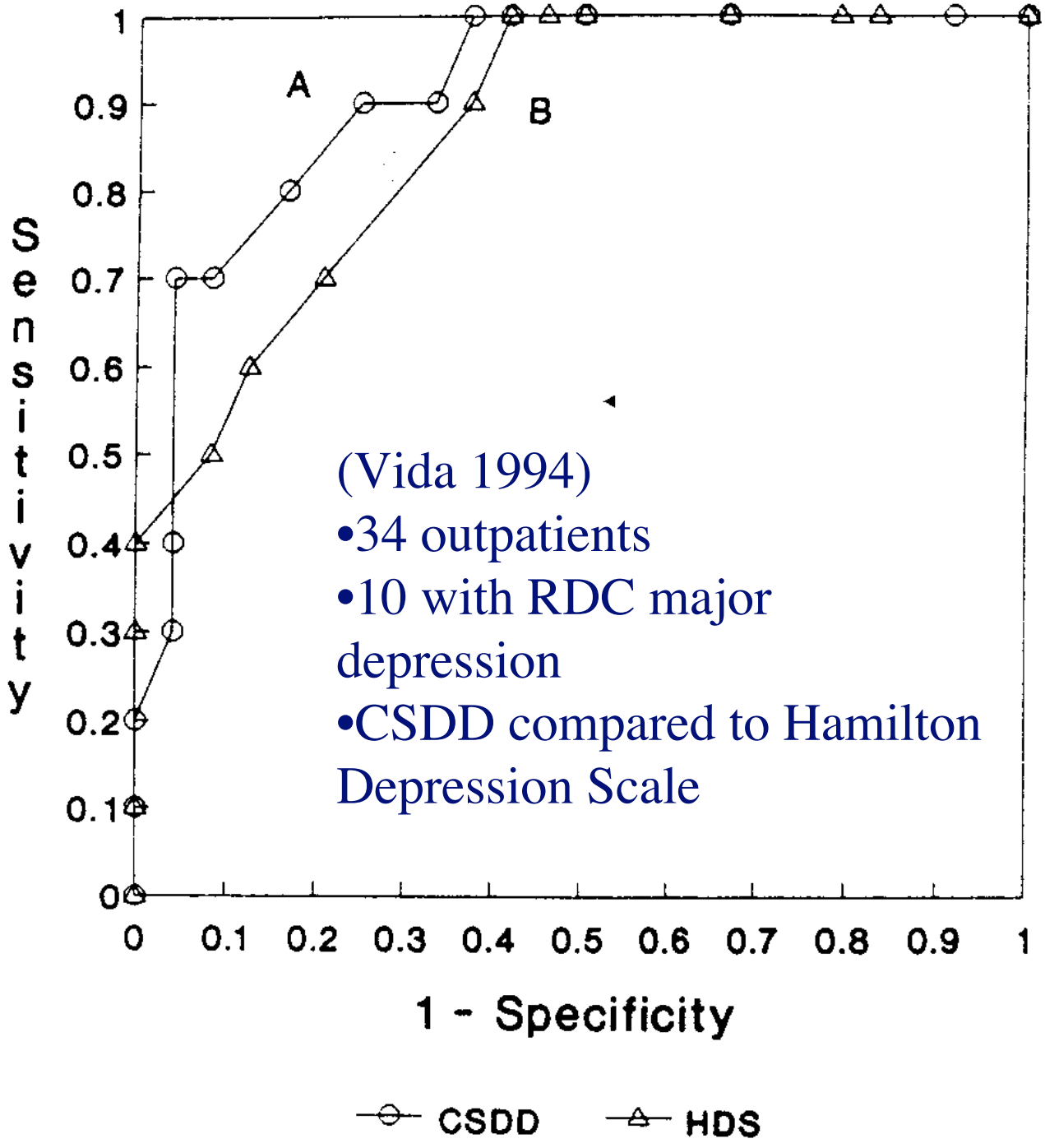
- Asking them to complete the Geriatric Depression Scale, or if they cannot do this
- Completing the Cornell Scale

THE CORNELL SCALE

Instructions:
The ratings should be based on symptoms and signs occurring during the week prior to completion. No score should be given if symptoms result from physical disability or illness.

Please circle your responses	Unable to rate	Absent	Mild or only happens from time to time	Severe
Mood				
• **Anxiety:** anxious expression, ruminations, worrying	A	0	1	2
• **Sadness:** sad expression, sad voice, tearfulness	A	0	1	2
• **Lack of reactivity to pleasant events:** does not cheer up when offered pleasant activities	A	0	1	2
• **Irritability:** easily annoyed, short tempered	A	0	1	2
Behavioural Disturbance.				
• **Agitation:** restlessness, handwringing, hair-pulling	A	0	1	2
• **Slowness:** slow movements, slow speech, slow reactions	A	0	1	2
• **Multiple physical complaints:** complains about physical health more than is reasonable (score 0 if gastro-intestinal symptoms only)	A	0	1	2
• **Loss of interest:** less involved in usual activities (score 1 or 2 only if change occurred acutely, ie in less than 1 month)	A	0	1	2

Physical signs				
• **Appetite loss:** eating less than usual	A	0	1	2
• **Weight loss:** score 2 if greater than 2.5 kg in 1 month	A	0	1	2
• **Lack of energy:** fatigues easily, unable to sustain activities	A	0	1	2
(score only if change occurred acutely, ie in less than 1 month)				
Changes in daily/night mood and behaviours				
• **Changes of mood:** mood changes as the day progresses with symptoms worse in morning	A	0	1	2
• **Difficulty falling asleep:** later than usual for this individual	A	0	1	2
• **Multiple awakenings during sleep:** wakes up more often than is usual for this individual.	A	0	1	2
• **Early morning awaking:** earlier than usual for this person	A	0	1	2
Ideational Disturbance				
• **Suicide:** feels life is not worth living, has suicidal wishes or makes suicide attempt	A	0	1	2
• **Poor self esteem:** self-blame, self depreciation, feelings of failure	A	0	1	2
• **Pessimism:** anticipation of the worst, thinks things are always going to go wrong	A	0	1	2
• **Depressing delusions:** delusions of poverty, illness or loss. Cannot be convinced that they are not poor or ill, or that they have not lost something or somebody.	A	0	1	2
Total = Add all 1s + 2s in the shaded area				



(Vida 1994)

- 34 outpatients
- 10 with RDC major depression
- CSDD compared to Hamilton Depression Scale

Dementia Mood Assessment Scale (DMAS) (Sunderland 1988; Onega 1997)

- Intended to measure degree or intensity of depressed mood in cognitively impaired pts
- Not intended for diagnosis of depression
- 28 items
  - 17 core depressive symptoms, based on HRS-D
  - Additional items to help with differential Dx
- Rated by trained observers
- Scoring procedures for inpatients and outpatients
- Evaluation process in outpatients took about 2 hours, done in two sessions

Minimum Data Set Depression Rating Scale (MDS-DRS) (Burrows 2000)

- To screen for depression in nursing home residents
- Wish to avoid reliance on trained staff
- Purpose is to have a screening tool that draws upon the routine, daily observations of licensed care staff
- Starting point was the 16 mood & behaviour items in the Minimum Data Set of the Resident Assessment Instrument
- The 7 items which correlated best with the Hamilton Depression Scale and the Cornell Scale for Depression in Dementia were retained

Psychogeriatric Assessment Scales (PAS)

- Replaces the Canberra Interview for the Elderly - shorter, manual scoring
- Assesses disorders on a continuum rather than categories
- Interviews are highly scripted - the user is told exactly what to do or say
- Can be administered by lay interviewers with some training
- Available on the web:
- http://www.mhri.edu.au/pas/index.htm

Psychogeriatric Assessment Scales (PAS)

Subject Interview	
Stroke	This scale assesses 6 symptoms of cerebrovascular disease. It gives an indication of whether cognitive impairment might be due to vascular dementia or to Alzheimer's disease.
Depression	This scale assesses 12 symptoms of depression over the previous 2 weeks.
Cognitive Impairment	This scale consists of 9 questions to test the subject's memory and other cognitive functions.

Informant Interview	
Stroke	This scale assesses 6 symptoms of cerebrovascular disease. It gives an indication of whether cognitive impairment might be due to vascular dementia or to Alzheimer's disease.
Cognitive Decline	This scale asks the informant 10 questions about changes in the subject's everyday cognitive functioning.
Behaviour Change	This scale has 15 questions which assess changes in personality and disturbances in behaviour which may occur in dementia.

Psychogeriatric Assessment Scales (PAS)

Subject Interview	
Stroke	A simple alternative to the Hachinski Ischemic Score.
Depression	Provides similar information to the Geriatric Depression Scale (GDS).
Cognitive	Provides similar information to other brief cognitive tests such as the Mini-Mental State Examination (MMSE) and the Abbreviated Mental Test Score (AMTS).

Psychogeriatric Assessment Scales (PAS)

Informant Interview	
Stroke	As for the Subject Stroke scale.
Cognitive Decline	Provides similar information to the Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE).
Behaviour Change	There are no other scales in wide use which are similar to this scale.

Use of scales depends on

- Setting:
  - Home
  - outpatient clinic
  - nursing home
- Who fills in the scale:
  - The patient
  - Family caregiver
  - Nursing home caregiver (eg licensed practical nurse)
  - Lay interviewer
  - Experienced clinician (eg nurse, physician)
  - Expert (eg geriatric psychiatrist)
- Ease of use
- Time required to use
- Purpose:
  - Screening
  - Diagnosis (category vs continuum)
  - measuring effect of interventions
  - research
- Degree of cognitive impairment
- Availability of informants
- Depression only, other psychopathology

Homework assignment

- Make a table which shows for each instrument:
  - Intended setting(s)
  - Intended users
  - Training required
  - Purpose of instrument
  - Patient, informant, or both
  - Types of pathology
  - Time required
  - Resources required (eg, computer)

Imaging

- AD patients with depression have more locus coeruleus damage than AD patients without depression (Jones 1994)

Therapeutic Probes

- ECT (Stoudemire 1995)
  - 8 depressive dementia patients improved cognitively with ECT
  - Improvements maintained over 4 year f/u
- Sleep deprivation (Williams 1994)
  - 59 y-o male, chronic resistant depression
  - Developed severe cognitive impairment
  - Sleep deprivation: temporary improvement in cognition
  - ECT: long-term improvement in depression & cognition