



Longitudinal Investigation for the Enhancement of Down Syndrome Research (LIFE-DSR)

# ASSESSMENT PACKET

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Participant ID

Date of Test

- ---

\_\_\_\_\_

Rater Name

## LIFE-DSR Cognitive and Caregiver Assessments

Provided in this individual participant packet are all of the assessments needed for participants and their caregivers for the LIFE-DSR study visits.

## How can I prepare for the study visits?

Before your scheduled visit with the subject and their caregiver, please review the assessments and associated manuals.

## What is the timing and order of the assessments?

Every effort should be made to conduct phlebotomy or any invasive study related procedure **after** these assessments are administered. These assessments can be administered at any time during the conduct of the study visit, however, there is a unique order in which the assessments are to be given. Conduct the assessments in the proper order (as follows), beginning with the cognitive assessments and concluding with the caregiver assessments:

## **Cognitive Assessments (administered to Participant):**

1. Severe Impairment Battery (SIB)

**2. Shoebox Memory Test**: The Shoebox Memory Test is integrated into the SIB. When conducting the SIB, please read the instructions carefully to know when to turn to the Shoebox Memory Test.

**3. Down Syndrome Mental Status Examination** (DS-MSE): The DS-MSE is given or not given based on the score of the SIB.

**Caregiver Assessments:** 

- 4. Vineland-3
- 5. Neuropsychiatric Inventory (NPI)

6. Dementia Questionnaire for People with Learning Disabilities (DLD)

## What materials do I need for the assessments?

The rater should take the following to the clinic room:

- 1. The assessment packet (this document)
- 2. The materials for the SIB and Integrated Shoebox assessments.
- 3. The materials for the DS-MSE assessment.
- 4. The iPad or device to access the Vineland-3.

## **SIB SUPPLIES**

- Pen and Plain Unlined Paper
- □ Cup, Plate, Bowl, Measuring Cup
- □ Spoon, Fork, Knife, Measuring Spoons
- Plastic Container with Lid
- Plastic Scoop
- □ (1) Red square block
- □ (2) Blue square blocks
- □ (1) Green square block
- □ (2) Black square blocks
- □ (1) Black triangle block
- □ (1) Black circle block
- □ Stopwatch
- □ Cue Card: "Give me your hand"
- □ Cue Card: Picture of a Cup
- Cue Card: Picture of a Spoon

## **DS-MSE SUPPLIES**

- Ball
- □ Key
- Yellow toy truck
- □ (20) 1" wooden cubes
- White collared button-down shirt
- Cue Card: Picture of a Spoon

## **SHOEBOX SUPPLIES**

- □ Small bar of soap
- □ Cup
- □ Glue
- □ Sponge
- □ Watch
- □ Fork
- Doll
- □ Tire
- □ Ring
- Opaque small box with top

## **VINELAND-3 SUPPLIES**

- □ iPad (issued by Sponsor)
- □ Clipboard
- Black pen

## **Who Administers Which Assessments?**

If there are two raters on site, the Cognitive Measures and Caregiver Measures can be done simultaneously by different raters.

If the assessments are being done by a single rater, the Cognitive Measures are to be done first with the participant, followed by the Caregiver Assessments to be done with the caregiver, all in the abovementioned order. The same rater should conduct each study visit if possible.

## **How Are The Rater Assessments Administered?**

All assessments (with the exception of the Vineland-3) are to be completed on the forms provided in this packet. You will need an iPad, clipboard, and a black pen.

The Vineland-3 is to be completed on the iPad provided to you. In case of any technical errors with the iPad or administration of the Vineland-3 with the iPad, the Vineland 3 can also be administered on another device with access to the internet like a laptop. There is also a paper version of the Vineland-3. The paper version provided can be used as a tool to review the Vineland-3 prior to administration or as a backup in case of technical error.

## **Source Documentation**

This packet is the source documentation for your administration of these assessments. It is critical to document the participant responses verbatim. This gives you the opportunity to verify scoring if a question arises post administration.

## Acknowledgments

- Severe Impairment Battery (SIB), developed by Thames Valley Test Company, © University of Pittsburgh
- Shoebox Memory Test, developed by Burt, D.B. and Aylward, E.H. (1998)
- Down Syndrome Mental Status Examination (DS-MSE), developed by Haxby, J. V. (1989)
- Vineland Adaptive Behavior Scales, Third Edition (Vineland -3), developed by Sparrow, S., Cicchetti, D., and Saulnier, C., © Pearson
- Neuropsychiatric Inventory (NPI), developed and copyright held by Jeffrey L. Cummings, MD
- Dementia Questionnaire for People with Learning Disabilities (DLD), developed by Evenhuis, Kengen, and Eurlings, © Pearson

Participa	ant ID	Site Number	Rater Initials	Date of Test	Visit Number
					ID)
	e seve	ere imp	airment E	Battery (S	IB)
lease	follow the instruc	ctions provided whe	en using this Scoring Shee	et.	
				articipant with #1a, #1b, and	d #1c will be walking towarc
ne tes	ting table (c dire	cting participant to	their seat).		
(SI) a	"Hello, my nam	ne is" [Give	e your name]		
	2 points:	spontaneously shake	es hands		
	1 point: r	aises right hand towa	rds examiner's but doesn't ta	ake examiner's hand	Score 2, 1 or 0
b	"I want you to	answer some que	stions for me."		
		ne (to my office/ov			
			subject's arm: <b>"Come wi</b>	th me." stions for me – can you s	it up /beels/femuend2"
			e subject's arm: <b>"Sit up/ba</b>		
	2 points	s: spontaneously mov	•	pontaneously sits up/back/for	rward
	l point:	after prompt			Score 2, 1 or 0
С	"Please sit here Prompt by taki				
С	Prompt by takin	ng the subject's arr Alternative: If the s	subject is in a wheelchair:	<b>"Come and sit by this tak</b> ubject's shoulder. <b>"Come</b>	
с	Prompt by takin F	ng the subject's arr A <b>lternative:</b> If the s Prompt by pressing A <b>lternative</b> : If the s	subject is in a wheelchair: your arm gently on the s	ubject's shoulder. <b>"Come</b> a onary chair; <b>'Pull your cha</b> i	and sit over here."
с	Prompt by takin F F 2 point	ng the subject's arr Alternative: If the s Prompt by pressing Alternative: If the s Prompt by touching ss: spontaneously sits	subject is in a wheelchair: your arm gently on the s subject is sitting in a static the table while repeating in chair or (alternative) spont	ubject's shoulder. <b>"Come</b> a onary chair; <b>'Pull your cha</b> i	and sit over here." ir towards the table." le
с	Prompt by takin F F 2 point or (alte	ng the subject's arr Alternative: If the s Prompt by pressing Alternative: If the s Prompt by touching ss: spontaneously sits	subject is in a wheelchair: your arm gently on the s subject is sitting in a static the table while repeating	ubject's shoulder. <b>"Come</b> a onary chair; <b>'Pull your cha</b> i g the instructions	and sit over here." ir towards the table."
c	Prompt by takin F F 2 point or (alte	ng the subject's arr Alternative: If the s Prompt by pressing Alternative: If the s Prompt by touching s: spontaneously sits ernative) spontaneous	subject is in a wheelchair: your arm gently on the s subject is sitting in a static the table while repeating in chair or (alternative) spont	ubject's shoulder. <b>"Come</b> a onary chair; <b>'Pull your cha</b> i g the instructions	and sit over here." ir towards the table." le
	Prompt by takin F P 2 point or (alte 1 point:	ng the subject's arr Alternative: If the s Prompt by pressing Alternative: If the s Prompt by touching s: spontaneously sits ernative) spontaneous	subject is in a wheelchair: your arm gently on the s subject is sitting in a static g the table while repeating in chair or (alternative) spont sly pulls table towards chair	ubject's shoulder. <b>"Come</b> a onary chair; <b>'Pull your cha</b> i g the instructions	and sit over here." ir towards the table."
	Prompt by takin F Prompt by takin F 2 point or (alte 1 point: "My name is" "I want you to	ng the subject's arr Alternative: If the s Prompt by pressing Alternative: If the s Prompt by touching ss: spontaneously sits ernative) spontaneous after prompt 	subject is in a wheelchair: your arm gently on the s subject is sitting in a static g the table while repeatin- in chair or (alternative) spont sly pulls table towards chair name] <b>ne because I'm going to</b>	ubject's shoulder. <b>"Come</b> onary chair; <b>'Pull your chai</b> g the instructions taneously wheels chair to tabl	and sit over here." ir towards the table."
	Prompt by takin F 2 point or (alte 1 point:	ng the subject's arr Alternative: If the s Prompt by pressing Alternative: If the s Prompt by touching ss: spontaneously sits ernative) spontaneous after prompt 	subject is in a wheelchair: your arm gently on the s subject is sitting in a static g the table while repeatin in chair or (alternative) spont sly pulls table towards chair name]	ubject's shoulder. <b>"Come</b> onary chair; <b>'Pull your chai</b> g the instructions taneously wheels chair to tabl	and sit over here." ir towards the table." le Score 2, 1 or 0
	Prompt by takin F Prompt by takin F 2 point or (alte 1 point: "My name is" "I want you to "What's my name 2 points	Alternative: If the s Prompt by pressing Alternative: If the s Prompt by touching s: spontaneously sits ernative) spontaneous : after prompt 	subject is in a wheelchair: your arm gently on the s subject is sitting in a static g the table while repeating in chair or (alternative) spont sly pulls table towards chair name] <b>ne because I'm going to</b> <b>name is"</b> [Give you	ubject's shoulder. <b>"Come</b> onary chair; <b>'Pull your chai</b> g the instructions taneously wheels chair to tabl	and sit over here." ir towards the table." le Score 2, 1 or 0
	Prompt by takin F Prompt by takin F 2 point or (alte 1 point: "My name is" "I want you to "What's my name 2 points	Alternative: If the s Prompt by pressing Alternative: If the s Prompt by touching s: spontaneously sits ernative) spontaneous : after prompt 	subject is in a wheelchair: your arm gently on the s subject is sitting in a static g the table while repeating in chair or (alternative) spont sly pulls table towards chair name] <b>ne because I'm going to</b> <b>name is"</b> [Give you	ubject's shoulder. <b>"Come</b> onary chair; <b>'Pull your chai</b> g the instructions taneously wheels chair to tabl	and sit over here." ir towards the table." le Score 2, 1 or 0
2 (M)	Prompt by takin F Prompt by takin F 2 point or (alte 1 point: "My name is" "I want you to "What's my name 2 points	Alternative: If the s Prompt by pressing Alternative: If the s Prompt by touching s: spontaneously sits ernative) spontaneous after prompt 	subject is in a wheelchair: your arm gently on the s subject is sitting in a static g the table while repeating in chair or (alternative) spont sly pulls table towards chair name] <b>ne because I'm going to</b> <b>name is"</b> [Give you	ubject's shoulder. <b>"Come</b> onary chair; <b>'Pull your chai</b> g the instructions taneously wheels chair to tabl	and sit over here." ir towards the table." le Score 2, 1 or 0
2 (M)	Prompt by takin F Prompt by takin F 2 point or (alte 1 point: "My name is" "I want you to "What's my name 2 points 1 point: of "What's your mage	Alternative: If the series of	subject is in a wheelchair: your arm gently on the s subject is sitting in a static g the table while repeating in chair or (alternative) spont sly pulls table towards chair name] <b>ne because I'm going to</b> <b>name is"</b> [Give you	ubject's shoulder. <b>"Come</b> onary chair; <b>'Pull your chai</b> g the instructions taneously wheels chair to table <b>ask what it is."</b> (pause) our name]	and sit over here." ir towards the table." le Score 2, 1 or 0
2 (M)	Prompt by takin F F 2 point or (alte 1 point: "My name is "I want you to "What's my name 2 points 1 point: of "What's your m If the s	Alternative: If the s Prompt by pressing Alternative: If the s Prompt by touching as: spontaneously sits ernative) spontaneously after prompt 	subject is in a wheelchair: your arm gently on the s subject is sitting in a static g the table while repeatin- in chair or (alternative) spont sly pulls table towards chair name] me because I'm going to name is" [Give yo act e.g. Julie for Judy	ubject's shoulder. <b>"Come</b> onary chair; <b>'Pull your chai</b> g the instructions taneously wheels chair to table <b>ask what it is."</b> (pause) our name]	and sit over here." ir towards the table." le Score 2, 1 or 0  Score 2, 1 or 0
2 (M)	Prompt by takin F Prompt by takin F 2 point or (alte 1 point: "My name is" "I want you to "What's my na 2 points 1 point: of "What's your m If the s 2 Point:	Alternative: If the series of	subject is in a wheelchair: your arm gently on the s subject is sitting in a static g the table while repeatin- in chair or (alternative) spont sly pulls table towards chair name] me because I'm going to name is" [Give yo ect e.g. Julie for Judy	ubject's shoulder. <b>"Come</b> onary chair; <b>'Pull your chai</b> g the instructions taneously wheels chair to table <b>ask what it is."</b> (pause) our name]	and sit over here." ir towards the table." le Score 2, 1 or 0
2 (M) 3 (O)	Prompt by takin F Prompt by takin F 2 point or (alte 1 point: "My name is" "I want you to "What's my na 2 points 1 point: of "What's your m If the s 2 Point: f	Alternative: If the s Prompt by pressing Alternative: If the s Prompt by touching s: spontaneously sits ernative) spontaneously after prompt 	subject is in a wheelchair: your arm gently on the s subject is sitting in a static g the table while repeatin- in chair or (alternative) spont sly pulls table towards chair name] me because I'm going to name is" [Give yo ect e.g. Julie for Judy	ubject's shoulder. <b>"Come</b> onary chair; <b>'Pull your chai</b> g the instructions taneously wheels chair to table <b>ask what it is."</b> (pause) our name]	and sit over here." ir towards the table." le
2 (M)	Prompt by takin F Prompt by takin F 2 point or (alta 1 point: "My name is "I want you to "What's my na 2 points 1 point: of "What's your m If the s 2 Point: 1 Point: f a "Please write	Alternative: If the s Prompt by pressing Alternative: If the s Prompt by touching as: spontaneously sits ernative) spontaneously after prompt 	subject is in a wheelchair: your arm gently on the s subject is sitting in a static g the table while repeatin- in chair or (alternative) spont sly pulls table towards chair name] me because I'm going to name is" [Give your at allowed vious name only, prompt: of allowed vious name only	ubject's shoulder. <b>"Come</b> onary chair; <b>'Pull your chai</b> g the instructions taneously wheels chair to table <b>ask what it is."</b> (pause) our name]	and sit over here." ir towards the table." le
2 (M)	Prompt by takin F Prompt by takin F 2 point or (alta 1 point: "My name is" "I want you to "What's my na 2 points 1 point: of "What's your m If the s 2 Point: 1 Point: f a "Please write 2 points: subject	Alternative: If the s Prompt by pressing Alternative: If the s Prompt by touching s: spontaneously sits ernative) spontaneously after prompt 	subject is in a wheelchair: your arm gently on the s subject is sitting in a static g the table while repeatin- in chair or (alternative) spont sly pulls table towards chair name] me because I'm going to name is" [Give yo name is" [Give yo oct e.g. Julie for Judy r last name only, prompt: ot allowed vious name only	ubject's shoulder. <b>"Come a</b> onary chair; <b>'Pull your chai</b> g the instructions taneously wheels chair to table <b>ask what it is."</b> (pause) our name] e.g. <b>"John who?"</b>	and sit over here." ir towards the table." le Score 2, 1 or 0 Score 2, 1 or 0 Score 2, 1 or 0

#### b "Can you copy this?"

2 points: spontaneously correct (printed name or signature), or 4a correct 1 point: partially correct

Score 2, 1 or 0

(L)

## **Shoebox Memory Test - integrated with SIB**

## **Shoebox Memory Test: Immediate Memory**

**General Instructions:** Verbal instructions and allowable follow-up prompts are indicated in bold. Record all gestures and responses. For object naming, give credit only for recognizable responses (i.e., so for soap). For recall, give credit for name and appropriate gestures or nonverbal vocalization, if they specify object.

<u>1. Immediate Memory (3 items)</u>	Place obje	ects in single l Soap		ant's left to right Ring					
a. "What is this called?"	Soap	Cup	Ring						
Check objects correctly named. If p (e.g., mug for cup)	Check objects correctly named. If participant incorrectly names object, write their response below the object (e.g., mug for cup)								
create a prompt. If they say	Prompts: <b>"This is a"</b> See how participant describes item, and use their language to create a prompt. If they say, " <i>It's what you wash your hands with</i> ," affirm and say, " <b>Yes, you wash your hands with it, but what is it called?</b> "								
Provide correct name for ea	ach item not named and h	ave them repea	t it.						
<b>b. "Put the in the box."</b> .	Soap	Cup	Ring						
Check objects correctly pla Place the objects in the bo									
Put the lid on the box.									
c. "What is in the box?"	Soap	Cup	Ring						
Prompts: <b>"There's a" "W</b>	hat else is in the box?" o	"and a"		Coord					
Check off each object corre	ectly recalled.			<u>Score</u> 1 pt. each					
If they incorrectly named o use the same name.	bject in 1a, they can still re	ceive credit for	memory of item if t	word they					
Once you move on to next delayed recall from previou		t (no score adju	stment) given for	/3					

Participant ID	Site Nu	mber	Rater Ir	nitials	Date o	f Test	Visit Number	
Shoebox	Memor	y Test: I	mmed	iate Me	mory			
					-			
			Place of	objects in si	ngle line fr	om participant	's left to right	
2. Immedia	te Memory (6	<u>items)</u>		up ring glu				
NEW object as		n the table and	d ask,: <b>"Wha</b>	t is this calle		nen, show the pe t as above. Provic		
<b>a. "What is t</b> Prom	<b>:his called?"</b> apts: <b>"This is a</b> "	Soap "	Cup	Ring	Glue	Sponge	Watch	
	ck objects corre w the object (e	•		t incorrectly	names objec	ct, write their resp	oonse	
	<b>in the box.'</b> ck objects corre		<b>Cup</b> box. Place t	<b>Ring</b> the objects ir	<b>Clue</b> In the box if th	<b>Sponge</b>	] <b>Watch</b> ot.	
Put the lid on t	the box.							
	<b>the box?"</b> opts: <b>"There's a…</b> ck objects corre		Cup	Ring " or "and a"	Glue	Sponge	Score I pt. ea Watch	ich
****	fnarticipant	does pet rec	call all 6 of	niects disc	ontinue im	mediate more	ory************************************	****
	participant	ubes not rec			minue im	mediate memo	Jiy	

Participant ID	Site Number	Rater Initials	Date of Test	Visit	Number
Shoebox	Memory Test	: Immediate Mei	mory		
_		Place objects in sir	ngle line from part	ticipant's left	to right
<u>3. Immedia</u>	ate Memory (9 items)	soap cup ring glue			
as you place it		nd and place in front of partic <b>Vhat is this called?</b> ". Prompt eat it.			
a. "What is	this called?" Prompts:	"This is a"	Watch Fork		Tire
	object correctly named. em (e.g., clock for watch)	if participant incorrectly nam	nes object, write the	ir response	
Check objects	<b>in the box."</b> correctly placed in box. ects in the box if the person	Soap Glue does not.	Cup Sponge	Ring Watch Tire	
Put the lid on t	he box.				
c. "What is i					
	n the box?"	Soap Glue Fork	Cup	Ring Watch	<u>Score</u> 1 pt. each word

Participa	pant ID Site Number Rater Initials Date of Test	Visit Number
5 (O)	"What month is it now?"	
	Prompt: <b>"Is it, or?"</b>	
	(Six months prior to present month, present month, preceding mo	onth)
		]
	2 points: spontaneously correct	(O
	1 point: correct with multiple choice prompt	Score 2, 1 or 0
6 (L)	"Tell me the months of the year"	
	Prompt: <b>"Begin with – January, February, March go on?"</b>	
		]
	2 points: spontaneously correct	(L)
	1 point: if correct following prompt, or misses only one or two month (Up to 2 prompts a	re allowed) Score 2, 1 or 0
7 (0)	"What's the name of this city?"	
(-)	Prompt: <b>"Is it, or?"</b>	
	(Give target city and two alternatives)	
	2 points: spontaneously correct	Score 2, 1 or 0
	1 point: correct following prompt	
8 (L)	a "What do you call the thing you drink coffee from?"	
	Prompt: <b>"What's the (china/thing) you drink coffee/tea/cocoa out of?"</b>	
		1
	2 points: 'cup' or 'mug' 1 point: related alternative, e.g. 'glass' or 'coffee pot', or if correct following prompt	(L)
	0 points: unrelated item, e.g. 'plate'	Score 2, 1 or 0
	b "What do you call the thing you eat soup with?"	
	Prompt: "What do you call the (utensil/piece of silverware/cutlery) used for	soup?"
		1
	2 points: "spoon" 1 point: related alternative, e.g. "soup bowl", or if correct after prompt	(L)
	0 points: unrelated item, e.g. "knife"	Score 2, 1 or 0

Participant ID		Site Nu	Imber	Rater Initials	Date of Test	Visit Number
9 (L) a	Presen	t the "Give me hand to the pa		card: "Read this card a	nd do what it says." with	nout extending your
				tructions, <b>"Read this ca</b>	ard and do what it says."	without extending your
		hand to the participant	•	ard aloud: <b>"Give me you</b>	u <mark>r hand."</mark> and <b>lay your ha</b>	nd in front of the
		2 points: spontar 1 point: close app 0 points: if exam	proximation, e.g	g. holding up hand, or corr	ect after first prompt	(L) Score 2,1 or 0
b	"Now				ur hand to the participan	t
		Prompt: repeat	the instructi	ons and <b>gesture with (</b>	outstretched open hand	
			proximation, e.g	and 9. raising hand but not mo correct after prompt	ving hand towards	(L) Score 2, 1 or 0
С	"What	does this say? Prompt: <b>"Read</b>		oud."		
		2 points: spontar 1 point: partially o after prompt			part of the sentence or correc	t Score 2,1 or 0
10 (M)	"Pardo	<b>n me, what did</b> Prompt <b>: "Wha</b>		?"		
				repetition of what was sa eats only parts of the sente	id in 9c ence or correct after prompt	(M) Score 2,1 or 0
11 (L)	"Now s	<b>ay this: "</b> a <b>"People spe</b>	nd money."			
		2 points: item rep 1 point: partially c			e word, e.g. "There's never en	(L) ough money" Score 2, 1 or 0
		b <b>"Baby."</b>				
		2 points: item rep 1 point: partially c		y on or a comment using th	e word, e.g. "I love babies"	(L) Score 2, 1 or 0

Participant I	D Site	e Number	Rater	Initials	Date of Test	Visit Number
12 (ATT)						
	You are assessing	attention. Do not r	epeat the nur	mber sequences,	but encourage with "ti	ry to remember."
	"2"	"5"	<b>"8-7"</b>	"4-1"		
	<b>"5-8-2"</b>	"6-9-4"	"6-4-3-9"	' "7-2-8-6	"	<b>"7-5-8-3-6"</b>
	Write the number					
	Discontinue after 1	ailure on both seri	es of a given l	ength.		(ATT)
	2 points: correct re 1 point: correct rep					Score 2, 1 or 0
				jit series		
Shoe	ebox Memo	ory Test:	Delaye	d Memor	<b>Y</b>	
Administe	er in full, regardless o	f performance in p	revious sectio	vn.		Score
						1 pt. each
a. "Wha	t is in the box?"		Soap	Cup	Ring	word
5 (	//					
	s: <b>"There's a" "V</b> • box?" or "and a		Glue	Sponge	Watch	
15 m the		•	] Fork	Doll	Tire	/9
						/9
17 (1) 44	Tell and all also also					
13 (L) <b>"1</b>	Tell me all the thi and/or "Tel			to cook/eat for	breakfast/dinner/lu	unch."
		he items named				
						Time for full 60 seconds and record
						everything said
	2 points: four	or more items nar	med			(L)
		wo or three items				Score 2, 1 or 0
14 (M) <b>"[</b>	Do you remembe	r my name?"				
•• (111)		name is				
	2 points: spo	ntaneously correct				
				Karen", or "Ms/Dr	Schmitt" for "Smith"	Score 2, 1 or 0
				11		

Participa	nt ID Site Number Rater Initials Date of Test	Visit Number
15 (L)	Show photograph of cup: "What's this?"	
		(L)
	2 points: "cup" 1 point: alternative, e.g. "mug" or "glass"	Score 2, 1 or 0
16 (PR)	"Show me how you would use it"	
	2 points: a clear demonstration	
	1 point: approximation, e.g. hand moves in upward motion but not clearly towards the mouth	Score 2, 1 or 0
17 (L)	"Take hold of this" (give cup) "What is it (again)?"	
	If the subject received 2 point for Q15 give full credit for this question	
	(2points) but always complete the task	
		(L)
	2 points: "cup," spontaneously correct, or if Q15 was correct 1 point: an approximation, or alternative, "mug" or "glass"	Score 2,1 or 0
18 (PR)	Allow the participant to keep hold of the cup: "Show me (again) how you would use it"	[]
	2 points: a clear demonstration	(PR)
	point: an approximation, e.g. hand moves in upward motion but not clearly towards mouth	Score 2, 1 or 0
19 (L)	Omit this question if either Q15 or Q17 was correct and give full credit (1 point)	
	"Is this a hat or a cup?"	(L)
	l point: "cup", or if Q15 or Q17 was correct	Score 2, 1 or 0
	0 point: 'hat'	
*	"I want you to remember this cup" (hold up cup) "because I'm going to ask you abo minutes, so try to remember it"	ut it in a few
	*Be sure to say this part even if question 19 is omitted!	

Participa	nt ID	Site Number	Rater Initials	Date of Test	Visit Number
20 (L)	Show photo	graph of spoon: "WI	hat's this?"		]
		2 points: " <mark>spoon</mark> " 1 point: approximation, e	e.g. "silverware/cutlery"		(L) Score 2, 1 or 0
21 (PR)	"Show me l	now you would use i	it"		
		2 points: a clear demons 1 point: close approxima mouth movement towa	ation, e.g. hand is raised upwa	ards to the mouth but there is n	o Score 2, 1 or 0
22 (L)			r Q20 give full credit for th <b>ake hold of this" (give s</b>	nis question (2 points) spoon) "what is it (again)?'	"
		points: spontaneously o point: approximation, e.	correct, or of Q20 was correct .g. " <mark>silverware/cutlery</mark> "	t	(L) Score 2, 1 or 0
23 (PR)	Allow the su	ıbject to keep hold o	of the spoon: <mark>"Show me (</mark>	again) how you would use	it"
		2 points: a clear demons 1 point: close approxima mouth movement towa	ation, e.g. hand is raised upwa	ards to the mouth but there is n	o (PR Score 2, 1 or 0
24 (L)		lestion if either Q20 o <mark>ot or a spoon?"</mark>	or Q22 was correct and giv	re full credit (1 point)	
		1 point: <b>"spoon"</b> or if Q20 0 point: 'boot'	0 or Q22 correct		L) Score 1 or 0
<b>*</b> remem	"I want you		ooon" (hold up spoon)"	and also this cup" (hold Take a good look at them,	
	*Be sure to s	ay this part even if o	question 24 is omitted!		

Participant ID	Site Number	Rater Initia	als	Date of Test	Visit Number
25 (M)	Examiner's left	Center	Examine	r's riaht	
	plastic container	plate	cup	-	
"Wł	nich one of these (items/o	bjects/things) did I	ask you to ren	nember?"	
	Examiner's left	Center	Examine	r's right	
	spoon	scoop	fork		
"I al	so asked you to remembe	er one of these (item	ns/objects/thir	ngs), which one was i	t?"
	L 2 points: "cup" and "spoo 1 point: either "cup" or 'sp	n" named boon' named			( Score 2, 1 or 0
Sho	w the subject the cup and	d spoon again			
	ant you to remember this k you about these items l	• • • •	• •		
Joing to asi	k you about these items i		<b>I</b> 4	er to say these lines!	
26 (L) <b>Sho</b>	w the subject a blue bloc	Prompt: " <b>Is it blue</b>			
	2 points: spontaneously c 1 point: color or shade nea		ourple" or navy?")	), or if correct after forced	choice Score 2, 1 or 0
\star Кеер	this blue block for yours	elf.			
27 (VS)	Examiner's left blue	<b>Center Exc</b> green	<b>aminer's right</b> red	:	
"Wł		sture to the blocks) . is my blue block, sh no response: <b>"This is</b>	low me your b	lue block."	
	2 points: spontaneously c 1 point: if correct after pro	mpt			
. Dama	0 points: if examiner iden				Score 2, 1 or 0
	ember to re-arrange orde				
28 (M)	<b>Examiner's left</b> green	Center Exc blue	<b>aminer's right</b> red		
"Giv	<b>re that block back to me</b> - Prompt: <b>"Which block</b> <b>or this one?</b> " If incorrect or no respo	<mark>c did you just give m</mark> " (point to the blocl	ne (did I just sh ks on the boar	how you) - was is this	s one, this one,
	L 2 points: spontaneously c				1)
	1 point: correct after prom 0 points: incorrect or ider				Score 2, 1 or 0
29 (VS) <b>"No</b>	<b>w give me a different blo</b> Prompt: <b>"This is a blu</b>				blored block"
	2 points: spontaneously c	correct			(\ Score 2, 1 or 0
	1 point: if correct after pro		4		Score 2, 1 01 0

Participa	nt ID	Site Number		Rater Initials	Date of Test	Visit Number
30 (L) a	a Show red block Prompt:	a: "What color i "Is it blue or re				
		nts: spontaneous nt: color near to th		"pink" or "orange"), o	r if the subject is correct aft	er forced choice Score 2,1 or 0
	b Show green b	lock: "What co "Is it green or I				
		Is it green of i	Jue:			
	2 poi	ints: spontaneous	ly correct			(L)
		nt: color or shade rrect after forced		original (e.g. "olive" o	or "lemon"), or if the subject	Score 2, 1 or 0
	c <b>Show black sc</b> Prompt:	quare block: "W "Is it a square				
						(L)
		ints: spontaneous nt: if correct after				Score 2, 1 or 0
31 (VS)	<b>Examine</b> triangl		<b>Center</b> circle	<b>Examiner's</b> square	right	
	"Which of these	blocks (gest	ure to the	whiteboard) is th	e same shape as this o	ne?"
				a, show me your se s it-this is the squ		
					er prompt, 0 points: if exam	ner identifies block (VS)
*	Remember to re	e-arrange ordei	of the blo	ocks here		Score 2, 1 or 0
32 (M)	<b>Examine</b> circle		<i>Center</i> square	<b>Examiner's</b> triangle	right	
	Prompt <b>:</b> or this o	"Which block one?" (point to t	<mark>did you ju</mark> he blocks:	st give me (I did I	me (I showed you)" just show you) - was it "	this one, this one,
	1 poi	ints: spontaneous nt: correct after p ints: incorrect or e	rompt	entifies block		Score 2,1 or 0
33 (VS)					ed you - a different one. show me a different sh	
		ts: spontaneously t: if correct after p				
34 (L)	a <b>Show round b</b> Prompt:	lock: "What sh "Is this a squar				
		its: spontaneously t: if correct after p		ther "circle" or "round	" is acceptable)	
	b Show triangu	^				Score 2, 1 or 0
		"Is this a triang				
		ts: spontaneously t: if correct after p		oyramid" <b>15</b>		(L) Score 2, 1 or 0

Participant ID	Site Number	Rater Initial	s	Date of Test	Visit	Number
35 (C) a " <b>D</b> r	r <mark>aw a circle."</mark> Prompt by presentir	ng a drawing of a circl	e: "Copy this	. 27		
	2 points: circle, oval or e 1 point: an approximatic	llipse drawn spontaneous on e.g. a shape that forms a e prompt or if the subject	y at least half a c	ircle or if the subj	ect draws	(C Score 2, 1 or 0
b <b>"D</b> I	<mark>raw a square."</mark> Prompt by presentiı	ng a drawing of a squa	re: "Copy th	is."		
	1 point: an approximation	gle or oblong (the figure r n e.g. a shape that is open hape after the prompt or i lot etc.	at one end but	if closed would fo		Score 2, 1 or 0
36 (ATT) <b>"l'm s</b>	going to tap the table a Tap the table three t	and count the number times, and count out le				
	nuckles to knock on ta				d while counting	g.
"Now	<mark>/ you count when I tap</mark> , Tap five times, only	remember to keep co one prompt allowed	unting, don	't stop"		
	2 points: if the subject c 1 point: if the subject co	ounts to five without pron unts to five with one prom equires more than one pro	ipt	't count to five		(AT Score 2, 1 or 0
	Be sure to demonstrat	e ALL the examples, <b>befo</b> i	<b>e</b> starting the	scoring portion		
37 (ATT) Ask all five samples, even if answered	Then hold up 1st fir Then hold up 1st an Then hold up 1st fir If the subject doesn't s	d 3rd fingers: "Look at oger: "Now I'm holding d 4th: "Now you count oger only pontaneously count your f yed throughout the preser	up one fing t my fingers	jer" " "(yes) two t you to count my	fingers"	
incorrectly, BEFORE	lst & 4th	lst lst, 2nd	1 & 3rd	4th finger	all 4 fingers	
starting the scoring	2	]	3	1	4	
portion.	1 point: if the subject cou	unts to five presentations nts all five presentations b the subject requires more	out stops once	and received one		(AT Score 2, 1 or 0
38 (M) <b>"Whi</b>	<i>Examiner's left</i> measuring cup (jug) <b>ch one of these (items</b> ,		bowl	er's right member?"		
			-			
	<b>Examiner's left</b> knife	<b>Center</b> measuring spoon(s)	<b>Examine</b> spoo	er's right n		
"I als	o asked you to remem	ber one of these (item	s/objects/thi	ngs), which on	e was it?"	
1 poin	nts: "cup" and "spoon" name t: either "cup" or "spoon" na cate that you should no	amed				Score 2, 1 or 0
	"I'm just going to grab walk behind the partici			back"		

Participant ID	Site Number	Rater Initials	Date of Test	Visit Number
. ,	walking back to the waiting bject and call his/her name 2 points: a spontaneous respon 1 point: some reaction (verbal o 0 points: no response	se i.e. the subject turns arou		sound)
Now return to	your seat and engage parti	cipant in #40		
40 (L) <b>If the s</b>	subject responds to Q39, en	gage the subject in con	versation: "How have you b	een?"

#### Prompt: "Got any plans for the weekend?" or "Had any visitors today?"

Alternative: If the subject did not respond to Q39 simply ask this question (or these questions) prior to the point of departure.

2 points: a coherent and appropriate answer to one of the question, it must be one complete sentence Score 2, 1 or 0 1 point: an appropriate answer but not a complete sentence, e.g. "ok" or only two or three words, e.g. "I'm alright" or "Yes, I have"

## Social interaction (SI) -

1a Shake hands	2,1,0
1b Follow directions	2,1,0
1c Sit/move to table/pull tray	2,1,0
Total (Maximu	ım 6)
Memory (M)	
2 Examiner's name immediate	2,1,0
14 Examiner's name delayed	2,1,0
10 Sentence	2,1,0
25 Object immediate	2,1,0
38 Object delayed	2,1,0
28 Colored block	2,1,0
32 Shape	2,1,0
Total (Maximul	m 14)
Orientation (O)	
3 Subject's name	2,1,0
5 Month	2,1,0
7 City	2,1,0
Total (Maximu	ım 6)

#### SIB Scoring Summary Chart \_

Language (L)		Attention (ATT)	
4a Write name	2,1,0	12 Digit span	2,1,0
4b Copy name	2,1,0	36 Auditory span	2,1,0
6 Months of year	2,1,0	37 Visual span	2,1,0
8a Responsive naming-cup	2,1,0	Total (Maximu	um 6) ——
8b Responsive naming-spoon	2,1,0	Praxis (PR)	
9a Reading comprehension	2,1,0	16 Using cup-photograph	2,1,0
9b Verbal comprehension	2,1,0	18 Using cup-cup	2,1,0
9c Reading	2,1,0	21 Using spoon-photograph	2,1,0
11a Repetition-spend money	2,1,0	23 Using spoon-spoon	2,1,0
11b Repetition-baby	2,1,0	Total (Maximu	m 8)
13 Fluency	2,1,0	Visuospatial ability (VS) —	
15 Confrontational naming-cup	2,1,0	27 Color matching	2,1,0
17 Object naming-cup	2,1,0	29 Color discrimination	2,1,0
19 Forced-choice naming-cup	1,0	31 Shape matching	2,1,0
20 Confrontational naming-spoon	2,1,0	33 Shape discrimination	2,1,0
22 Object naming-spoon	2,1,0	Total (Maximu	ım 8) ——
24 Forced-choice naming-spoon	1,0	Construction (C)	
26 Color naming-blue	2,1,0	35a Drawing-circle	2,1,0
30a Color naming-red	2,1,0	35b Drawing-square	2,1,0
30b Color naming-green	2,1,0	Total (Maximu	m 4)
30c Shape identification-square	2,1,0	Orienting to name (ON) ——	
34a Shape identification-circle	2,1,0	39 Orienting to name	2,1,0
34b Shape identification-triangle	2,1,0	Total (Maximu	m 2)
40 Free discourse	2,1,0		
Total (Maximur	n 46)	Total Score	

Maximum Total = 100



#### If score is <60, STOP. Do not administer DS-MSE. Skip to page 27.

## **Down Syndrome Mental Status Examination (DS-MSE)**

Please Note: The Down Syndrome Mental Status Examination (DS-MSE) should be completed for those individuals who have achieved a score of > 60 on the Severe Impairment Battery (SIB).

If a participant has not achieved > 60 on the SIB, skip the DSMSE and proceed to the next study assessment.

#### Was the assessment performed?

- \_\_\_\_ Yes
- \_\_\_\_ No
- \_\_\_\_ N/A (participant did not score > 60 on the SIB)

#### If yes, please check the best description of behavior during test administration:

- \_\_\_\_ Participant was cooperative and engaged
- \_\_\_\_ Participant was cooperative but distracted
- \_\_\_\_ Participant was uncooperative

#### Please explain behavior during test administration:

#### If no, reason not done:

- \_\_\_\_ Participant unable for cognitive reasons
- \_\_\_\_\_ Participant unable for other reasons (physical, auditory, etc.)
- \_\_\_\_ Participant or study partner refused
- \_\_\_\_ Oversight
- \_\_\_\_ Other reason
- \_\_\_\_ Unknown

If other, please explain:

Date of Test

(2)

## I. Introduction

#### A. "What is your name?"

Score: 1 point for the correct first name and 1 point for the correct last name.

Prompt: Say "Hello, my name is [state your name]. Alternative Prompt: "You already know this, but my name is [state your name].

If the participant offers only first or last name, ask for the other. **Repeat this question and all others as often as necessary.** Remember to make sure they state their first AND last name. Prompt for their last name if they do not say their last name.

**"My name is..."** and have the participant repeat it. Prompt: "**And my name is?"**, and have the participant repeat it.

Participants Response:

## **II.** Orientation

А.	"How old are you?"	(2)				
	Score: 2 points for correct answer, 1 point if within 5 years.					
B.	"When is your birthday?"	(3)				
	Score: 1 point each for correct month, date, and year.					
	Correct Month? Correct Day? Correct Year?					
C.	"What season is it?"	(2)				
	Prompt: "Is it summer, fall, winter, or spring?"					
	Score: 2 points for correct answer if multiple choice is not given, 1 poin Remember: Dates of the seasons change.	nt if it is.				
D.	"What day of the week is it?"	(2)				
	Ask as a multiple choice question if participant cannot state day of week spontaneously.					
	Score: 2 points for correct answer if multiple choice is not given, 1 poin	nt if it is.				
E.	"What is my name?"	_(1)				
	Score: 1 point for correct name.					
F.	"What kind of work do I do?"	(2)				
	Note: For this item, examples of acceptable responses include: doctor, counselor, teacher, social worker, researcher, and scientist. Accept any correct. <b>If a correct answer is not given ask, "Am I a waiter, a doctor,</b> (Substitute correct profession for doctor if necessary and say policewo	thing that is close to or a policeman?"				

Score: 2 points for correct answer if multiple choice is not given, 1 point if it is.

Rater Initials

Date of Test

## **III. Verbal Repetition**

#### "Say exactly what I say."

Score as correct if all words are in the correct order and recognizable, despite articulation errors. Score: 1 point per item (Give no credit if you have to repeat the phrase, OR the words are out of order. Reminder: **Administer ALL items.** 

Α.	Record Response Verbatim:
Ball	
House	
Apple Juice	
Come with me	
The cat ran home.	
I bought cookies at the store.	
There is a vegetable garden in the backyard.	
The car broke down before we even left the city limit	ts

Scoring: Two methods will be used to score response on this item.

**Method 1:** One point (1) for each completely correct response with the single exception that for the response "I bought cookies at the store," the participant will be given credit if she/he substitutes "in" for "at". With this method, the highest possible score for this item is 8.

**Method 2:** provides alternate scoring that allows partial credit for partial completion of a response. Rather than only one point for a completely stated response, the participant receives one point for each correctly stated word. They may receive a score from one to nine, depending on the length of the response. Articles (a, an, the) receive no credit and if omitted no credit is deducted. No substitutions are permitted. With this method the highest possible score for this item is 30.

Note: For ease of scoring, words that do not count for scoring Method 2 are circled.

Score:

Method 1: \_\_\_\_/8 Method 2: \_\_\_\_/30

Participant I	ID	Site Number		Rater Initials		Date of Test		Visit Number	
	-	for Ident	-	•			/, tru	ıck)	
Ρ	Prompt: <b>If no</b>	response is giv	ven, as	k, "This is a	?"				
Record	all gestures	and responses	using	phonetic all	phabet.				
A. R	esponses:	ball	key	tru	ıck				
									_(3)

**Provide name for each object not named by participant and have participant repeat it.** Score: 1 point per correct word. Give credit only for recognizable responses (e.g., /ba/ for ball).

## V. Verbal Comprehension

Place the ball, key, and truck in front of the participant, spaced about 1 foot apart. Repeat all commands after incorrect response or nonresponse. Record all responses.

**Discontinue after 3 consecutive failures to respond correctly or to correct wrong response.** i.e., if participant responds correctly to the 2nd presentation of command, a score of 0 is given, but it does not count towards discontinuation.

On items 4, 11, and 12, when making the request "Give me..." the **examiner must not offer his/her hand to receive the object** before the participant has moved the object toward the examiner.

		Trial 1	Trial 2	Score
1	"Touch the ball"			1, 1/2, or 0
2	"Touch the truck"			1, 1/2, or 0
3	"Touch the key"			1, 1/2, or 0
4	"Give me the truck"			1, 1/2, or 0
5	"Touch the key then the ball"			1, 1/2, or 0
6	"Touch the truck then the key"			1, 1/2, or 0
7	"Put the ball in the truck"			1, 1/2, or 0
8	"Put the key next to the ball"			1, 1/2, or 0
9	"Touch the truck with the key"			1, 1/2, or 0
10	"Touch the ball, then the truck, then the ball again"			1, 1/2, or 0
11	"Put the key in the truck and give me the ball"			1, 1/2, or 0
12	"Touch the truck then give me the key and the ball"			1, 1/2, or 0

#### TOTAL SCORE

(12)

Score: 1 point if correct on first command; ½ point if correct after repetition for nonresponse; O points if correct after repetition for incorrect response.

For items 1, 2, and 3, no credit is deducted for picking up the object.

On item 5, no credit is deducted for carrying the key over to the ball or, on item 6, for carrying the truck over to the key.

On item 9, no credit is deducted for putting the key in the truck. All other responses must be made exactly as requested, e.g., when told "Put the key next to the ball", credit is not given for putting the ball next to the key, even though by doing so that participant gets the key next to the ball.

## **VI. Immediate Memory for Location**

"I'm going to put the key in my pocket (or lap), like this... and the truck under my chair, like this... And the ball behind the box, like this...."

"Where is the truck?"

Remember: If incorrect, show participant the truck again. Remind participant of the location of each object if he or she cannot indicate it to you.

#### "Where is the key?" "Where is the ball?"

Repeat this procedure up to 3 times or until the participant correctly indicates location of all 3 objects.

Α.	Trial:	Truck	Кеу	Ball	
		1			
		2			
		3.			(3)

Score: 1 point for either naming or pointing to location. **Give credit only for 1st trial.** Credit is given if the participant locates the object either verbally or nonverbally, e.g., by pointing.

## VII. Naming

Α.	Record	response	usina	nhonetic	alphabet
	I CCOI G	response	asing	priorietie	uipriuset.

Watch		 _	
Pencil	-		
Finger	_		
Elbow	_		
Shirt	-		
Collar	-		
Sleeve	_		
Cuff	_	 	(8)

Scoring: 1 point each if utterance is recognizable (e.g., /bo/ for elbow or /sli/ for sleeve). Note: If the participant had made an incorrect response or no response to sleeve, but then responds to cuff with "sleeve", give credit for the previously incorrect response, but give no credit for cuff. Give credit for identifying collar as "neckline."

## VIII. Visuospatial Construction

A. Item 1 – Stacking Blocks

Put a block on the table in front of the participant and hand the participant another block.

#### Say, "Put this on top of this one here."

After participant has stacked first block, give him or her another block and indicate that he or she should put that on top of the other two. Then give the participant a fourth block.

Score: 1 point for each block stacked by participant.

\_\_\_(3)

B. Items 2-6 - Constructing 3-D patterns to model

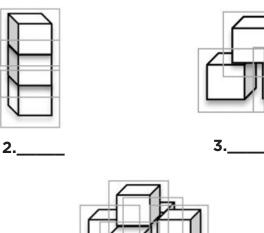
Give participant the correct number of blocks for each design. Construct design in front of participant and indicate that he or she should make one just like it.

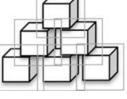
#### Time limit: 1 minute per design.

#### Discontinue after 2 consecutive failures.

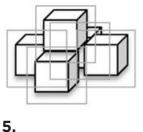
#### Say, "Make yours look just like mine"

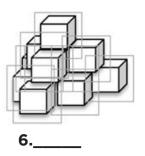
Score: 1 point for each design. (Give half credit on designs 3-6 if participant doesn't leave gaps in between blocks and correct participant's construction.)





4.\_\_\_\_







Participant ID	Site Number	Rater Initials	Date of Test	Visit Number
IX. Delaye	ed Memory for	Location		
Α.				
"W	here is the truck?"			
"W	here is the key?"			
"W	here is the ball?"			
	each location correctly bally or nonverbally, e.g		is given if the partio	cipant locates the

	(3)
Х.	Apraxia
A.	Intransitive
	"Show me how you wave goodbye."
	"Show me how you salute."
В.	Transitive:
	<b>"Show me how you throw a ball."</b> If fails: give them ball and say, "Show me how you use this." Give half credit if correc
	<b>"Show me how you lock a door with a key."</b> If fails: give them key and say, <b>"Show me how you use this."</b> Give half credit if correc

Score: 1 point for each item (ideomotor apraxia) \_\_\_\_\_(4)

Participant II	D
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Rater Initials

Date of Test

## **DS-MSE**

FINAL SCORE:

NOTES:







# **NEXT STEPS:**

## 1. Water break\*

Because the participant will have a blood draw at the conclusion of the assessments, it is important they hydrate regularly throughout the day. Please plan to break for water at the conclusion of the participant section.

# **2. Proceed with Vineland on tablet**

**3. At conclusion of the Vineland, carry on with NPI, on next page.** 

## **Neuropsychiatric Inventory (NPI):**

Instructions for Use and Administration

#### I. Purpose of the NPI

The purpose of the Neuropsychiatric Inventory (NPI) is to obtain information on the presence of psychopathology in patients with brain disorders. The NPI was developed for application to patients with Alzheimer's disease and other dementias, but it may be useful in the assessment of behavioral changes in other conditions. Ten behavioral and two neurovegetative areas are included in the NPI:

A. Delusions	G. Apathy/Indifference
B. Hallucinations	H. Disinhibition
C. Agitation/Aggression	I. Irritability
D. Depression	J. Aberrant motor behavior
E. Anxiety	K. Sleep and Nightime Behavior Disorders
F. Elation/Euphoria	L. Appetite and Eating Disorders

#### **II. Administration of the NPI**

#### A. NPI Interview

The NPI is based on responses from an informed caregiver, preferably one living with the patient. If an informed observer is not available, this instrument cannot be used or must be modified. The interview is best conducted with the caregiver in the absence of the patient to facilitate an open discussion of behaviors that may be difficult to describe with the patient present. Several points should be made when you introduce the NPI interview to the caregiver:

- Purpose of the interview
- Ratings frequency, severity, distress (described below)
- Answers apply to behaviors that are new since the onset of the disease and have been present for the past four weeks or other defined period
- Questions can usually be answered with "yes" or "no" and responses should be brief

When beginning the inventory, say to the caregiver **"These questions are designed to evaluate [your loved one's] behavior. They can usually be answered 'yes' or 'no' so please try to be brief in your responses."** If the caregiver lapses into elaborate responses that provide little useful information, he/she may be reminded of the need to be brief. Some of the issues raised with this are very emotionally disturbing to caregivers and the interviewer should reassure the caregiver that they will discuss the problems in more detail after completion of the inventory.

**Questions should be asked exactly as written.** Clarification should be provided if the caregiver does not understand the question. Acceptable clarifications are restatements of the questions in alternate terms.

#### B. Changes in Behavior

The questions pertain to <u>changes</u> in the patient's behavior that have appeared since the onset of the illness. Behaviors that have been present throughout the patient's life and have not changed in the course of the illness are not scored even if they are abnormal (e.g., anxiety, depression). Behaviors that have been present throughout life but have <u>changed</u> since the illness are scored (e.g., the patient has always been apathetic but there has been a notable increase in apathy during the period of inquiry).

The NPI is typically used to assess <u>changes</u> in the patient's behavior that have appeared in a defined period of time (e.g., in the past four weeks or other defined interval). In some studies, the NPI may be used to address changes occurring in response to treatment or that have changed since the last clinic visit. The time frame of the question would then be revised to reflect this interest in recent changes. For example, the questions might be phrased "Since he/she began treatment with the new medications..." or "Since the dosage of \_\_\_\_\_\_ was increased ...."

#### C. Screening Questions

The screening question is asked to determine if the behavioral change is present or absent. If the answer to the screening question is negative, mark NO and proceed to the next screening question without asking the subquestions. If the answer to the screening question is positive or if there are any uncertainties in the caregiver's response or any inconsistencies between the response and other information known by the clinician (e.g., the caregiver responds negatively to the euphoria screening question but the patient appears euphoric to the clinician), the category is marked YES and is explored in more depth with the subquestions. If the subquestions confirm the screening question, the severity and frequency of the behavior are determined according to the criteria provided with each behavior.

In some cases, the caregiver will provide a positive response to the screening question and a negative reply to all subquestions. If this happens, ask the caregiver to expand on why he/she responded affirmatively to the screen. If he/she provides information relevant to the behavioral domain but in different terms, the behavior should be scored for severity and frequency as usual. If the original affirmative response was erroneous, leading to a failure to endorse any subquestions, then the behavior is changed to "NO" on the screen.

Some sections such as the questions pertaining to appetite are framed so as to capture whether there is an increase or decrease in the behavior (increased or decreased appetite or weight). If the caregiver answers "yes" to the first member of the paired questions (such as has the patient's weight decreased?), do not ask the second question (has the patient's weight increased?) since the answer to the second question is contained in the answer to the first. If the caregiver answers "no" to the first member of the pair of questions, then the second question must be asked.

Participant	ID
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#### **D. Frequency and Severity Ratings**

When determining frequency and severity, use the behaviors identified by the subquestions as most aberrant. For example, if the caregiver indicates that resistive behavior is particularly problematic when you are asking the subquestions of the agitation section, then use resistive behavior to prompt judgments regarding the frequency and severity of agitation. If two behaviors are very problematic, use the frequency and severity of both behaviors to score the item. For example, if the patient has two or more types of delusions, then use the severity and the frequency of all delusional behaviors to phrase the questions regarding severity and frequency.

When determining frequency, say to the person being interviewed: "Now I want to find out how often these things [define using the description of the behaviors noted as most problematic on the subquestions] occur. Would you say that they occur less than once per week, about once per week, several times per week but not every day, or every day?" Some behaviors such as apathy eventually become continuously present, and then "are constantly present" can be substituted for "every day."

When determining severity, tell the person being interviewed "Now I would like to find out how severe these behaviors are. By severity, I mean how disturbing or disabling they are for the patient. Would you say that [the behaviors] are mild, moderate, or severe?" Additional descriptors are provided in each section that may be used to help the interviewer clarify each grade of severity.

In each case, be sure that the caregiver provides you with a definite answer as to the frequency and severity of the behaviors. Do not guess what you think the caregiver would say based on your discussion.

We have found it helpful to provide the caregiver with a piece of paper on which is written the frequency and severity descriptions (less than once per week, about once per week, several times per week and daily or continuously for frequency; and mild, moderate, and severe for severity) to allow him her to visualize the response alternatives. This also saves the examiner from reiterating the alternatives with each question.

#### **E. Not Applicable Designations**

In very impaired patients or in patients with special medical circumstances, a set of questions may not be applicable. For example, bed-bound patients may exhibit hallucinations or agitation but are unable to exhibit aberrant motor behavior. If the clinician or the caregiver believes that the questions are inappropriate, then the section should be marked NA (upper right corner of each section), and no further data are recorded for that section. Likewise, if the clinician feels that the responses are invalid (e.g., the caregiver did not seem to understand the particular set of questions asked), NA should also be marked.

Participant I	D
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#### F. Neurovegetative Changes

Items 11 (sleep) and 12 (appetite) were added after the original publication of the NPI (Cummings et al, 1994). They were included because they are common problem areas in Alzheimer's disease and other dementias. They form part of the depression syndrome in some patients and were specifically excluded from the dysphoria subscale of the NPI in order to allow that subscale to focus on mood symptoms. These two symptoms are usually not included in the total NPI score and may not be included in all protocols.

#### **G. Caregiver Distress (NPI-D)**

When each domain is completed and the caregiver has completed the frequency and severity rating, you may want to ask the associated caregiver distress question if your protocol includes the distress assessment. To do this, ask the caregiver how much, if any, "emotional or psychological" distress the behavior he or she just discussed causes him or her (the caregiver). The caregiver must rate his or her own distress on a five point scale from 0 - no distress, 1- minimal, 2 - mild, 3 - moderate, 4 - moderately severe, 5 - very severe or extreme.

#### II. Scoring the NPI

#### FREQUENCY is rated as:

- 1 Occasionally less than once per week
- 2 Often about once per week
- 3 Frequently several times per week but less than every day
- 4 Very frequently daily or essentially continuously present

#### **SEVERITY** is rated as:

- 1 Mild produces little distress in the patient
- 2 Moderate more disturbing to the patient but can be redirected by the caregiver
- 3 Severe very disturbing to the patient and difficult to redirect

#### The score for each domain = FREQUENCY x SEVERITY.

#### **DISTRESS** is scored as:

- 0 no distress
- 1 minimal
- 2 mild
- 3 moderate
- 4 moderately severe
- 5 very severe or extreme.

A <u>total NPI score</u> can be calculated by adding the scores of the first 10 domain scores together.

In most cases, the two neurovegetative items are not included in the NPI total score. If they are included, specify that the 12 item score is being used rather than the 10 item score.

The distress score is not included in the total NPI score. The total distress score is generated by adding together the scores of the first 10 or all 12 items of the NPI distress questions; specify specifically whether the 10 or 12 item score is being used.

Thus, for each behavioral domain there are four scores:

- Frequency
- Severity
- Total (frequency x severity)
- Caregiver distress

Participant ID	Site Number	Rater Initials	Date of Test	Visit Number
A. Delusions			(NA	()

#### A. Delusions

Does the patient have beliefs that you know are not true (for example, insisting that people are trying to harm him/her or steal from him/her)? Has he/she said that family members are not who they say they are or that the house is not their home? I'm not asking about mere suspiciousness; I am interested if the patient is convinced that these things are happening to him/her.

NO (If no, proceed to next screening question). YES (If yes, proceed to subquestions).

- 1. Does the patient believe that he/she is in danger that others are planning to hurt him/her?
- 2. Does the patient believe that others are stealing from him/her?
- 3. Does the patient believe that his/her spouse is having an affair?
- 4. Does the patient believe that unwelcome guests are living in his/her house?
- 5. Does the patient believe that his/her spouse or others are not who they claim to be?
- 6. Does the patient believe that his/her house is not his/her home?
- 7. Does the patient believe that family members plan to abandon him/her?
- 8. Does the patient believe that television or magazine figures are actually present in the home? [Does he/she try to talk or interact with them?]
- 9. Does the patient believe any other unusual things that I haven't asked about?

If the screening question is confirmed, determine the frequency and severity of the delusions.

Frequency:	1. Occasionally - less than once per week.					
	2. Often - about once per week.					
	3. Frequently - several times per week but less than every day.					
	4. Very frequently - once or more per day.					
<u>Severity:</u>	1. Mild - delusions present but seem harmless and produce little distress in the patient.					
	2. Moderate - delusions are distressing and disruptive.					
	3. Marked - delusions are very disruptive and are a major source of behavioral					
	disruption. [If PRN medications are prescribed, their use signals that the					
	delusions are of marked severity.]					
Distress:	How emotionally distressing do you find this behavior?					
	O. Not at all					
	1. Minimally					
	2. Mildly					
	3. Moderately					
	4. Severely					
	5. Very severely or extremely 32					

Participant ID	Site Number	Rater Initials	Date of Test	Visit Number

#### **B. Hallucinations**

(NA)

Does the patient have hallucinations such as seeing false visions or hearing imaginary voices? Does he/she seem to see, hear or experience things that are not present? By this question we do not mean just mistaken beliefs such as stating that someone who has died is still alive; rather we are asking if the patient actually has abnormal experiences of sounds or visions.

**NO** (If no, proceed to next screening question). **YES** (If yes, proceed to subquestions).

- 1. Does the patient describe hearing voices or act as if he/she hears voices?
- 2. Does the patient talk to people who are not there?

3. Does the patient describe seeing things not seen by others or behave as if he/she is seeing things not seen by others (people, animals, lights, etc)?

4. Does the patient report smelling odors not smelled by others?

5. Does the patient describe feeling things on his/her skin or otherwise appear tobe feeling things crawling or touching him/her?

6. Does the patient describe tastes that are without any known cause?

7. Does the patient describe any other unusual sensory experiences?

If the screening question is confirmed, determine the frequency and severity of the hallucinations.

<u>Frequency:</u>	1. Occasionally - less than once per week.
	2. Often - about once per week.
	3. Frequently - several times per week but less than every day.
	4. Very frequently - once or more per day.
<u>Severity:</u>	1. Mild - hallucinations are present but harmless and cause little distress for the patient.
	2. Moderate - hallucinations are distressing and are disruptive to the patient.
	3. Marked - hallucinations are very disruptive and are a major source of behavioral
	disturbance. PRN medications may be required to control them.
<u>Distress:</u>	How emotionally distressing do you find this behavior?
	0. Not at all
	1. Minimally
	2. Mildly
	3. Moderately
	4. Severely
	5. Very severely or extremely

Participant ID	Site Number	Rater Initials	Date of Test	Visit Number

#### C. Agitation/Aggression

(NA)

Does the patient have periods when he/she refuses to cooperate or won't let people help him/her? Is he/she hard to handle?

NO (If no, proceed to next screening question). YES (If yes, proceed to subquestions).

1. Does the patient get upset with those trying to care for him/her or resist activities such as bathing or changing clothes?

- 2. Is the patient stubborn, having to have things his/her way?
- 3. Is the patient uncooperative, resistive to help from others?
- 4. Does the patient have any other behaviors that make him hard to handle?
- 5. Does the patient shout or curse angrily?
- 6. Does the patient slam doors, kick furniture, throw things?
- 7. Does the patient attempt to hurt or hit others?
- 8. Does the patient have any other aggressive or agitated behaviors?

If the screening question is confirmed, determine the frequency and severity of the agitation.

- <u>Frequency:</u> 1. Occasionally less than once per week.
  - 2. Often about once per week.
  - 3. Frequently several times per week but less than daily.
  - 4. Very frequently once or more per day.
- Severity: 1. Mild behavior is disruptive but can be managed with redirection or reassurance.
   2. Moderate behaviors are disruptive and difficult to redirect or control.
   3. Marked agitation is very disruptive and a major source of difficulty; there may be a threat of personal harm. Medications are often required.
- <u>Distress:</u> How emotionally distressing do you find this behavior? O. Not at all
  - 1. Minimally

  - 2. Mildly
  - 3. Moderately
  - 4. Severely
  - 5. Very severely or extremely

Participant ID	Site Number	Rater Initials	Date of Test	Visit Number
D. Depression/D	ysphoria		1)	NA)
Does the patient see	em sad or depressed? D	oes he/she say that he	e/she feels sad or depre	ssed?
NO (If no, proceed to	o next screening questic	on). <b>YES</b> (If yes, procee	ed to subquestions).	
1. Does the pat	ient have periods of tea	rfulness or sobbing the	at seem to indicate sad	ness?
2. Does the pat	tient say or act as if he/s	she is sad or in low spi	rits?	
3. Does the pat	tient put him/herself do	wn or say that he/she	feels like a failure?	
4. Does the pat	tient say that he/she is a	a bad person or deserv	ves to be punished?	
5. Does the pat	tient seem very discoura	aged or say that he/she	e has no future?	
6. Does the pat him/her?	tient say he/she is a bur	den to the family or th	at the family would be	better off without
7. Does the pat	ient express a wish for o	death or talk about kill	ing him/herself?	
8. Does the pat	tient show any other sig	ns of depression or sa	dness?	
If the screening ques	stion is confirmed, deter	rmine the frequency ar	nd severity of the depre	ession.
Frequency:	1. Occasionally - less th	han once per week.		
	2. Often - about once	per week.		
	3. Frequently - several	l times per week but le	ess than every day.	
	4. Very frequently - es	ssentially continuously	present.	
Severity:	1. Mild - depression is a	distressing but usually	responds to redirection	n or reassurance.
	ontaneously voiced			
	by the patient and diff	ficult to alleviate.		
	3. Marked - depressior	n is very distressing an	d a major source of suf	fering for the patient
Distress:	How emotionally distr	ressing do you find this	behavior?	
	0. Not at all			
	1. Minimally			

- 2. Mildly
- 3. Moderately
- 4. Severely
- 5. Very severely or extremely

Participant ID	Site Number	Rater Initials	Date of Test	Visit Number
E. Anxiety		(N	IA)	

Is the patient very nervous, worried, or frightened for no apparent reason? Does he/she seem very tense or fidgety? Is the patient afraid to be apart from you?

NO (If no, proceed to next screening question). YES (If yes, proceed to subquestions).

- 1. Does the patient say that he/she is worried about planned events?
- 2. Does the patient have periods of feeling shaky, unable to relax, or feeling excessively tense?
- 3. Does the patient have periods of [or complain of] shortness of breath, gasping, or sighing for no apparent reason other than nervousness?
- 4. Does the patient complain of butterflies in his/her stomach, or of racing or pounding of the heart in association with nervousness? [Symptoms not explained by ill health]
- 5. Does the patient avoid certain places or situations that make him/her more nervous such as riding in the car, meeting with friends, or being in crowds?
- 6. Does the patient become nervous and upset when separated from you [or his/her caregiver]? [Does he/she cling to you to keep from being separated?]
- 7. Does the patient show any other signs of anxiety?

If the screening question is confirmed, determine the frequency and severity of the anxiety.

- <u>Frequency:</u> 1. Occasionally less than once per week.
  - 2. Often about once per week.
  - 3. Frequently several times per week but less than every day.
  - 4. Very frequently once or more per day.
- Severity: 1. Mild anxiety is distressing but usually responds to redirection or reassurance.
   2. Moderate anxiety is distressing, anxiety symptoms are spontaneously voiced by the patient and difficult to alleviate.
   3. Marked anxiety is very distressing and a major source of suffering for the patient.
- <u>Distress:</u> How emotionally distressing do you find this behavior?
  - 0. Not at all
  - 1. Minimally
  - 2. Mildly
  - 3. Moderately
  - 4. Severely
  - 5. Very severely or extremely

Participant ID	Site Number	Rater Initials	Date of Test	Visit Number

# F. Elation/Euphoria

(NA)

Does the patient seem too cheerful or too happy for no reason? I don't mean the normal happiness that comes from seeing friends, receiving presents, or spending time with family members. I am asking if the patient has a persistent and abnormally good mood or finds humor where others do not.

**NO** (If no, proceed to next screening question). **YES** (If yes, proceed to subquestions).

- 1. Does the patient appear to feel too good or to be too happy, different from his/her usual self? \_\_\_\_
- 2. Does the patient find humor and laugh at things that others do not find funny?
- 3. Does the patient seem to have a childish sense of humor with a tendency to giggle or laugh inappropriately (such as when something unfortunate happens to others)?
- 4. Does the patient tell jokes or make remarks that have little humor for others but seem funny to him/her?
- 5. Does he/she play childish pranks such as pinching or playing "keep away" for the fun of it?
- 6. Does the patient "talk big" or claim to have more abilities or wealth than is true?
- 7. Does the patient show any other signs of feeling too good or being too happy?

If the screening question is confirmed, determine the frequency and severity of the elation/euphoria.

- <u>Frequency:</u> 1. Occasionally less than once per week.
  - 2. Often about once per week.
  - 3. Frequently several times per week but less than every day.
  - 4. Very frequently essentially continuously present.
- Severity: 1. Mild elation is notable to friends and family but is not disruptive.
   2. Moderate elation is notably abnormal.
   3. Marked elation is very pronounced; patient is euphoric and finds nearly everything to be humorous.
- <u>Distress:</u> How emotionally distressing do you find this behavior?
  - 0. Not at all
  - 1. Minimally
  - 2. Mildly
  - 3. Moderately
  - 4. Severely
  - 5. Very severely or extremely

Participant ID	Site Number	Rater Initials	Date of Test	Visit Number
·	L			

# G. Apathy/Indifference

(NA)

Has the patient lost interest in the world around him/her? Has he/she lost interest in doing things or does he/ she lack motivation for starting new activities? Is he/she more difficult to engage in conversation or in doing chores? Is the patient apathetic or indifferent?

**NO** (If no, proceed to next screening question). **YES** (If yes, proceed to subquestions).

- 1. Does the patient seem less spontaneous and less active than usual?
- 2. Is the patient less likely to initiate a conversation?
- 3. Is the patient less affectionate or lacking in emotions when compared to his/her usual self?
- 4. Does the patient contribute less to household chores?
- 5. Does the patient seem less interested in the activities and plans of others?
- 6. Has the patient lost interest in friends and family members?
- 7. Is the patient less enthusiastic about his/her usual interests?
- 8. Does the patient show any other signs that he/she doesn't care about doing new things?

If the screening question is confirmed, determine the frequency and severity of the apathy/indifference.

<u>Frequency:</u> 1. Occasionally - less than once per week.

- 2. Often about once per week.
- 3. Frequently several times per week but less than every day.
- 4. Very frequently nearly always present.
- <u>Severity:</u> 1. Mild apathy is notable but produces little interference with daily routines; only mildly different from patient's usual behavior; patient responds to suggestions to engage in activities.

2. Moderate - apathy is very evident; may be overcome by the caregiver with coaxing and encouragement; responds spontaneously only to powerful events such as visits from close relatives or family members.

3. Marked - apathy is very evident and usually fails to respond to any encouragement or external events.

- <u>Distress:</u> How emotionally distressing do you find this behavior? O. Not at all
  - 1. Minimally
  - 2. Mildly
  - 3. Moderately
  - 4. Severely
  - 5. Very severely or extremely **38**

Participant ID	Site Number	Rater Initials	Date of Test	Visit Number	
H. Disinhibition			(NA	)	

Does the patient seem to act impulsively without thinking? Does he/she do or say things that are not usually done or said in public? Does he/she do things that are embarrassing to you or others?

**NO** (If no, proceed to next screening question). **YES** (If yes, proceed to subquestions).

- 1. Does the patient act impulsively without appearing to consider the consequences?
- 2. Does the patient talk to total strangers as if he/she knew them?
- 3. Does the patient say things to people that are insensitive or hurt their feelings?
- 4. Does the patient say crude things or make sexual remarks that he/she would not usually have said?
- 5. Does the patient talk openly about very personal or private matters not usually discussed in public?
- 6. Does the patient take liberties or touch or hug others in way that is out of character for him/her?
- 7. Does the patient show any other signs of loss of control of his/her impulses?

If the screening question is confirmed, determine the frequency and severity of the disinhibition.

<u>Frequency:</u> 1. Occasionally - less than once per week.

- 2. Often about once per week.
- 3. Frequently several times per week but less than every day.
- 4. Very frequently essentially continuously present.
- Severity: 1. Mild disinhibition is notable but usually responds to redirection and guidance.
   2. Moderate disinhibition is very evident and difficult to overcome by the caregiver.
   3. Marked disinhibition usually fails to respond to any intervention by the caregiver, and is a source of embarrassment or social distress.
- <u>Distress:</u> How emotionally distressing do you find this behavior?
  - 0. Not at all
  - 1. Minimally
  - 2. Mildly
  - 3. Moderately
  - 4. Severely
  - 5. Very severely or extremely

Participant ID	Site Number	Rater Initials	Date of Test	Visit Number
L				

# I. Irritability/Lability

(NA)

Does the patient get irritated and easily disturbed? Are his/her moods very changeable? Is he/she abnormally impatient? We do not mean frustration over memory loss or inability to perform usual tasks; we are interested to know if the patient has abnormal irritability, impatience, or rapid emotional changes different from his/her usual self.

**NO** (If no, proceed to next screening question). **YES** (If yes, proceed to subquestions).

- 1. Does the patient have a bad temper, flying "off the handle" easily over little things?
- 2. Does the patient rapidly change moods from one to another, being fine one minute and angry the next?
- 3. Does the patient have sudden flashes of anger?
- 4. Is the patient impatient, having trouble coping with delays or waiting for planned activities?
- 5. Is the patient cranky and irritable?
- 6. Is the patient argumentative and difficult to get along with?
- 7. Does the patient show any other signs of irritability?

If the screening question is confirmed, determine the frequency and severity of the irritability/lability.

Frequency:	1. Occasionally - less than once per week.
	2. Often - about once per week.
	3. Frequently - several times per week but less than every day.
	4. Very frequently - essentially continuously present.
<u>Severity:</u>	1. Mild - irritability or lability is notable but usually responds to redirection and reassurance.
	2. Moderate - irritability and lability are very evident and difficult to overcome by the caregiver.
	3. Marked - irritability and lability are very evident, they usually fail to respond to any
	intervention by the caregiver, and they are a major source of distress.
Distress:	How emotionally distressing do you find this behavior?
	O. Not at all
	1. Minimally
	2. Mildly
	3. Moderately
	4. Severely

Participant ID Site Number	Rater Initials	Date of Test	Visit Number			
5. Very severely or extr	remely					
J. Aberrant Motor Behavior		(NA)				
Does the patient pace, do things over and over such as opening closets or drawers, or repeatedly pick at things or wind string or threads?						
<b>NO</b> (If no, proceed to next screening questio	n). <b>TES</b> (II yes, proce	ed to subquestions).				
1. Does the patient pace around the ho	use without apparent	t nurnose?				
2. Does the patient rummage around o	pening and unpackin	g drawers or closets?				
3. Does the patient repeatedly put on a	and take off clothing?					
4. Does the patient have repetitive acti	vities or "habits" that	t he/she performs over a	and over?			
5. Does the patient engage in repetitive activities such as handling buttons, picking, wrapping string, etc?						
6. Does the patient fidget excessively, s or tap his/her fingers a lot?	seem unable to sit sti	ll, or bounce his/her fee	t			
7. Does the patient do any other activit	ies over and over?					

If the screening question is confirmed, determine the frequency and severity of the aberrant motor activity:

Frequency:	<ol> <li>Occasionally - less than once per week.</li> <li>Often - about once per week.</li> <li>Frequently - several times per week but less than every day.</li> <li>Very frequently - essentially continuously present.</li> </ol>
<u>Severity:</u>	1. Mild - abnormal motor activity is notable but produces little interference with daily routines.
	2. Moderate - abnormal motor activity is very evident; can be overcome by the caregiver.
	3. Marked - abnormal motor activity is very evident, usually fails to respond
	to any intervention by the caregiver, and is a major source of distress.
<u>Distress:</u>	How emotionally distressing do you find this behavior?
	O. Not at all
	1. Minimally
	2. Mildly
	3. Moderately
	4. Severely
	5. Very severely or extremely <b>41</b>

Participant ID	Site Number	Rater Initials	Date of Test	Visit Number
K. Sleep			(NA)	

#### K. Sleep

Does the patient have difficulty sleeping (do not count as present if the patient simply gets up once or twice per night only to go to the bathroom and falls back asleep immediately)? Is he/she up at night? Does he/she wander at night, get dressed, or disturb your sleep?

NO (If no, proceed to next screening question). YES (If yes, proceed to subquestions).

- 1. Does the patient have difficulty falling asleep?
- 2. Does the patient get up during the night (do not count if the patient gets up once or twice per night only to go to the bathroom and falls back asleep immediately)?
- 3. Does the patient wander, pace, or get involved in inappropriate activities at night?
- 4. Does the patient awaken you during the night?
- 5. Does the patient awaken at night, dress, and plan to go out thinking that it is morning and time to start the day?
- 6. Does the patient awaken too early in the morning (earlier that was his/her habit)?
- 7. Does the patient sleep excessively during the day?
- 8. Does the patient have any other nighttime behaviors that bother you that we haven't talked about?

If the screening question is confirmed, determine the frequency and severity of the nighttime behavior.

- Frequency: 1. Occasionally less than once per week.
  - 2. Often about once per week.
  - 3. Frequently several times per week but less than every day.
  - 4. Very frequently once or more per day (every night)
- Severity: 1. Mild - nighttime behaviors occur but they are not particularly disruptive.
  - 2. Moderate nighttime behaviors occur and disturb the patient and the sleep of the caregiver; more than one type of nighttime behavior may be present.

3. Marked - nighttime behaviors occur; several types of nighttime behavior may be present; the patient is very distressed during the night and the caregiver's sleep is markedly disturbed.

- Distress: How emotionally distressing do you find this behavior?
  - O. Not at all
  - 1. Minimally
  - 2. Mildly
  - 3. Moderately
  - 4. Severely
  - 5. Very severely or extremely 42

Participant ID	Site Number	Rater Initials	Date of Test	Visit Number	
I Appetite and	eating disorders		(NA)		

Has he/she had any change in appetite, weight, or eating habits (count as NA if the patient is incapacitated and has to be fed)? Has there been any change in type of food he/she prefers?

**NO** (If no, proceed to next screening question). **YES** (If yes, proceed to subquestions).

1. Has he/she had a loss of appetite?
2. Has he/she had an increase in appetite?
3. Has he/she had a loss of weight?
4. Has he/she gained weight?
5. Has he/she had a change in eating behavior such as putting too much food in his/her mouth at once?
6. Has he/she had a change in the kind of food he/she likes such as eating too many sweets or other specific types of food?
7. Has he/she developed eating behaviors such as eating exactly the same types of food each day or eating the food in exactly the same order?
8. Have there been any other changes in appetite or eating that I haven't asked about?

If the screening question is confirmed, determine the frequency and severity of the changes in eating habits or appetite.

Frequency:	1. Occasionally - less than once per week.
	2. Often - about once per week.
	3. Frequently - several times per week but less than every day.
	4. Very frequently - once or more per day or continuously
<u>Severity:</u>	1. Mild - changes in appetite or eating are present but have not led to changes in
	weight and are not disturbing.
	2. Moderate - changes in appetite or eating are present and cause minor
	fluctuations in weight.
	3. Marked - obvious changes in appetite or eating are present and cause
	fluctuations in weight, are embarrassing, or otherwise disturb the patient.
Distress:	How emotionally distressing do you find this behavior?
	O. Not at all
	1. Minimally
	2. Mildly
	3. Moderately
	4. Severely
	5. Very severely or extremely <b>43</b>

Participant ID	Site Number	Rater Initials	Date of Test	Visit Number

### NPI

TOTAL SCORE: \_\_\_\_\_

CAREGIVER DISTRESS SCORE: \_\_\_\_\_

Participant ID	Site Number	Rater Initials	Date of Test	Visit Number			
-	UESTIONNAIR	E FOR PEOPLE IES		DLD			
Pearson							
	Screening I	nstrument for Dia	anosis of Deme	ntia			
	-		_				
	in Pe	eople with Learnin	ng Disabilites				
	H.M. E	venhuis, M.M.F. Kenge	en, H.A.L. Eurlings				
Name:				Gender: M/F			
Birth Date:							
Completed b	×						
	y.						
Date of completion:							
Address:							
Other inform	ation:						

**Instructions:** The questionnaire has to be completed by a caregiver who is familiar with the observed person. Behavior during approximately the last two months has to be observed and scored. Score the behaviour carefully, by circling '0', '1' or '2'.

Some of the items (e.g.those about the past or family members) are probably not spoken about regularly. It is advised to ask them incidentally, before completion of the DLD.

If the observed person is not able to move independently, items about 'where to go' (nos. 15 and 46) are to be scored '0' if he/she clearly know where to go (e.g by pointing).

Some items require verbal skills. If he/she is not able to engage in verbal tasks, e.g. due to a low functional level of hearing impairment, the item is scored as '2'.

The scores of the subscales (last page) are to be completed and added up afterwards by the psychologist or physician.

				<b>D</b>	<b>-</b> .			e 1		
Parti	cipant ID Site Number	Rater Initials		Date of	Test			/isit Num	1ber	
	DEMENTIA QUESTIONNAIRE FO	R PEOPLE							L	7
,	WITH LEARNING DISABILITIES									
			Deco	rd scor	o in a	ray ho	~			
		Category	1	2	3	4	5	6	7	8
1.	Understands what you want to communicate	to him/her								
	(by means of speaking, writing or gesticulatio	n):								
	0 = normally yes									
	1 = sometimes									
	2 = normally no									
2.	Remembers where he/she put something aw	av								
	as short time ago (no longer than half an hou									
	0 = normally yes									
	1 = sometimes									
	2 = normally no									
	2 110111019110									
3.	Remembers an important event that took pla	ice								
0.	during the last few weeks (talks about it or rec									
	is apparent from behaviour when it is spoken									
	0 = normally yes	,								
	l = sometimes									
	2 = normally no									
4.	Know which month it is (if it is the first week o	of the month								
	you can accept the previous month as the cor									
	0 = yes	,								
	1 = sometimes									
	2 = no									
5.	Remembers family members or friends whon	n he/she has								
	not seen for a long time or who are deceased:									
	0 = yes									
	l = sometimes									
	2 = no									
		Total Page 2								

						-			a		
Participant ID	Site Number		Rater Initials		Date of	Test			/isit Num	nber	
			R PEOPLE								
WITH LEARN	IING DISABILI	IIE5									
				Recor	d scor	e in gr	ay bo	X			
			Category	1	2	3	4	5	6	7	8
			Category		2		-+		0	/	0
6. Know whether it	is spring, summer, a	utumn d	or winter:								
0 = yes											
1 = somet	times										
2 = no											
7. Knows what year	it is (a mistake of on	e year is	permitted):								
0 = yes											
1 = somet	times										
2 = no											
8. Is interested in ou	utdoor activities *e.g.	clubs, fa	amily parties,								
trips):											
0 = norm	ally yes										
1 = somet											
2 = norma	ally no										
-											
9. Hits or kicks othe	er people or shows ag	ggressio	n in any other								
way:											
0 = never											
1 = somet											
2 = often											
10											
10. Remembers ever	mbers a lot	.n:									
	mbers a little										
2 - Terrier	mbers nothing										
11. Is able to undress	s (can be with some h	heln or s	timulus):								
0 = never											
l = somet											
2 = often											
2 0.001											
			Total Page 3								
			47								

Participant ID Site Number Ra	ater Initials	Date of Test					Visit Number				
DEMENTIA QUESTIONNAIRE FOR	PEOPLE										
WITH LEARNING DISABILITIES		Decer	decor	o in ar		~					
		Recor									
	Category	1	2	3	4	5	6	7	8		
12. During the day is:											
0 = continent											
1 = only continent with the help of other	S										
2 = incontinent (always or several times											
13. Speaks (to an unknown person) integlligibly and	sensibly (for										
individuals who only speak some stereotyped w	ords, score										
'no'):											
0 = normally yes											
1 = sometimes											
2 = normally no											
14. Remembers an instruction given just a moment	t ago										
(up to five minutes ago):											
0 = normally yes											
1 = sometimes											
2 = normally no											
15. Can find his/her way to familiar places in his/her											
residential environment:											
0 = normally yes											
1 = sometimes											
2 = normally no											
16. Keeps his/her cothes and belongings tidy:											
0 = normally yes											
1 = sometimes											
2 = normally no											
77											
17. Is able to wash him/herself under the shower or	at the sink										
(may require some help):											
0 = always											
1 = sometimes											
2 = never											
Т	otal Page 4				1		L				
	48										

Participant ID	Site Number	Rater Initials	Date of Test				Visit Number			
WITH LEARN	NING DISABILIT	TIES	Recor	d score	e in gi	ay bo	x			
		Category	1	2	3	4	5	6	7	8
18. Can talk about a	ı holiday or trip (by wo	ords and gestures)								
to those who sta										
0 = norn	nally yes									
1 = some	etimes									
2 = norm	hally no									
19. Is able to dress (	can be with some hel	p or equipment):								
0 = alwa	ys									
1 = some	etimes									
2 = neve	r									
20. Is interested in v	vhat is going on in the	e home:								
0 = norn	nally yes									
1 = some	etimes									
2 = norm	hally no									
2]. Is interested in p	papers and /or TV:									
0 = norn	nally yes									
1 = some	etimes									
2 = norm	hally no									
22. Speaks:										
0 = yes										
1 = only s	some stereotyped wor	rds								
2 = no										
23. Recognises pers	ons whom he/she car	ne to know during the								
last few weeks (o	calls them by name of	recognition								
is apparent from	n behaviour):									
0 = norn	nally yes									
1 = some	etimes									
2 = norm	hally no									
		Total Page 5								
		49								

Participant ID Site Number	Rater Initials		Date o	fToct			Visit Nu	mbor	
			Date o	Tiest				mper	
DEMENTIA QUESTIONNAIRE FOR	PEOPLE								
WITH LEARNING DISABILITIES		Decer							
			d score						
	Category	1	2	3	4	5	6	7	8
24. Is on familiar terms with one or more persons									
living in the home:									
0 = often									
l = sometimes									
2 = never									
25. Understands simple instructions:									
0 = normally yes									
1 = sometimes									
2 = normally no									
26. Recognizes staff members whom he/she has	known for								
more than a year (calls them by name or reco	gnition								
is apparent from behaviour):									
0 = normally yes									
l = sometimes									
2 = normally no									
27. Gets angry easily:									
0 = never									
1 = sometimes									
2 = often									
28. Knows that today is a weekend or a week day:									
0 = normally yes									
1 = sometimes									
2 = normally no									
29 Contally about what had he had a second									
29. Can talk about what he/she has been doing to	oday:								
0 = normally yes									
1 = sometimes									
2 = normally no									
Тс	otal Page 6								

Parti	cipant ID Site Number	Rater Initials		Date o	of Test			Visit Nu	mber	
	MENTIA QUESTIONNAIRE FOR	PEOPLE								
WI	TH LEARNING DISABILITIES		Recor	d score	e in gr	ay box	<			
		Category	1	2	3	4	5	6	7	8
		Category		-					,	
30.	Keeps him/herself busy at home on his/her or (e.g. with hobbies, playing games, reading or									
	others):									
	0 = always									
	l = sometimes									
	2 = never									
31.	Threatens others by words or gestures (witho	out a clear								
	motive):									
	0 = never									
	1 = sometimes									
	2 = often									
32	Accuses other people of harming him/her in	any way (e.g.								
JZ.	hitting or stealing), when this is not true:	any way (e.g.								
	0 = never									
	1 = sometimes									
	2 = often									
33.	Remembers something that has been said (c	or communicat-								
	ed in any other way) recently (no longer than	an hour ago):								
	0 = normally yes									
	1 = sometimes									
	2 = normally no									
7 /										
34.	Cries at the slightest provocation:									
	0 = never									
	1 = sometimes									
	2 = often									
		T. 10 7								
		Total Page 7								

Participant ID		Site Number	Rater Initials		Date o	f Test		_	Visit Nu	mber	
DEMENITIA											
		STIONNAIRE   DISABILITIE		Recor	rd scor	e in ai	rav bo	х			
			_	1	2	3	4	5	6	7	8
			Category		<u>ک</u>		4		0	/	0
35. Knows whic	h week	day it is today:									
O = 1	normally	y yes									
] = s	ometim	nes									
2 = r	normally	/ no									
<b>36.</b> Is able to ge	t into ar	nd out of his/her bea	d:								
	always										
	ometim	ies									
2 = r	never										
37. Is spontane	ously he	elpful (e.g. washing t	he dishes or setting the								
table):											
	often										
	ometim	ies									
2 = r	never										
38. Is restless or	awake	during the night:									
O =	never										
1 = s	ometim	ies									
2 = a	always										
39. Is gloomy o	!.										
	sau. never										
	ometim										
	always										
2	invayo										
40. Knows what	: was the	e profession of his/h	er father or mother:								
O = 2	/es										
] = s	ometim	nes									
2 = r	10										
41. Is incontine	at durin	a the night:									
	never	y the hight.									
	ometim	les									
	always										
	· J -		Total Page 8								
			_								
			52								

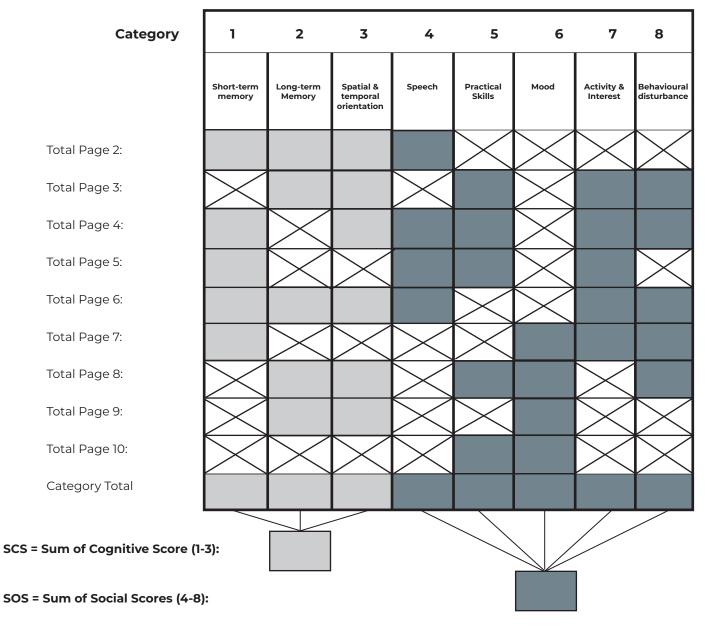
Participant ID Site Number	Rater Initials		Date o	f Test			Visit Nu	mber	
				i iest					
DEMENTIA QUESTIONNAIRE FO	R PEOPLE								
WITH LEARNING DISABILITIES		Record	d scor	e in gr	ay bo	<			
	Category	1	2	3	4	5	6	7	8
42. Knows his/her age (a mistake up to five yea	ars is parmitted):								
0 = yes	ars is permitted).								
1 = sometimes									
2 = no									
43. Knows name of his/her residence, or street	address:								
0 = yes									
1 = sometimes									
2 = no									
44. Is readily upset:									
0 = never									
1 = sometimes									
2 = often									
45. Remembers where he/she was born or live	d								
0 = yes	u.								
1 = sometimes									
2 = no									
46. Can find his/her way around the home (e.g	. to the bedroom,								
toilet or his/her place at the table):									
0 = normally yes									
1 = sometimes									
2 = normally no									
47. Knows the name of the president (the prec	ceding prime minis-								
ter is permitted): 0 = yes									
1 = sometimes									
2 = no									
2 - 110									
	Total Page 9								

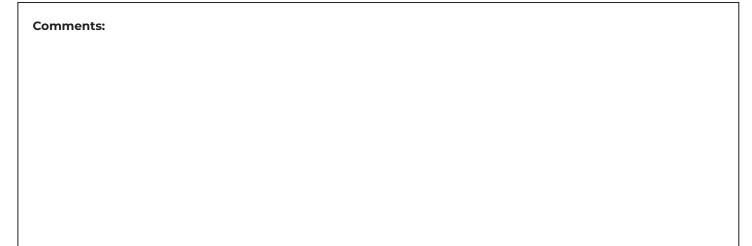
Participant ID	1	Site Number		Rater Initials		Date o	of Test			Visit Nu	mber	
DEMENTIA QU	JES	TIONNAIRE	FOR	PEOPLE								
WITH LEARNI					Record	d score	e in ar	ay box				
	_	_	_									-
				Category	1	2	3	4	5	6	7	8
48. Makes commer	nts ab	out physical com	nplaints (	excessive atten-								
tion to phycical	com	plaints is meant h	nere):									
0 = neve	er											
1 = some	etime	25										
2 = ofter	า											
49. Uses familiar ob	jects	in the correct ma	anner (e.	g. comb, scissors							1	
or toothbrush):											1	
0 = norr	nally	yes										
1 = some	etime	es									1	
2 = norr	nally	no										
50. Performs acts th	hat ar	re necessary in th	ne toilet re	easonably well								
(can be with sor	elp):											
0 = alwa	ays											
1 = some												
2 = neve	er											
Total Page 10												

Participant ID	Site Number	Rater Initials	Date of Test	Visit

Number

# DEMENTIA QUESTIONNAIRE FOR PEOPLE WITH LEARNING DISABILITIES





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SIB/Shoebox Quick Set-up Guide

Months of the year Cities