

Annex 2: Response Pattern Matrices

Key for Response Pattern Matrices

	Clear cells	Patterns with consistent answers to WG Question and all follow-up questions; Cases signified in these patterns are considered not problematic
	Partly shaded cells	Patterns with consistent answers to WG Question and only some follow-up questions; Cases signified in these patterns are considered somewhat problematic
	Fully shaded cells	Patterns with no consistent answers to WG Question and many follow-up questions; Cases signified in these patterns are considered more problematic

VISION

Pattern	Wears Glasses	Functioning Problems	Reports Disability in WG Question	Total: Self-Report	
				%	N=1,071
A	No	No	No	38.10	(408)
B	Yes	No (corrected)	No	13.17	(141)
C	No	Yes	Yes, disability	15.59	(167)
D	Yes	Yes (not corrected)	Yes, disability	15.31	(164)
E	Yes	No (corrected)	Yes, disability	10.92	(117)
F	No	No	Yes, disability	2.99	(32)
G	Yes	Yes (not corrected)	No	1.87	(20)
H	No	Yes	No	2.05	(22)

Criteria for Categories

Wears Glasses

Respondent answers *all of the time* or *only for certain activities* to the question:

Do you wear glasses all of the time, only for certain activities, or none of the time?

Functioning Problems

For those respondents who wear glasses, they respond at least some difficulty (1, 2, 3) to at least one of the two questions:

With your glasses, do you have difficulty seeing the print in a map, newspaper or book?

No difficulty (0)

Some difficulty (1)

A lot of difficulty (2)

Can't do at all (3)

With your glasses, do you have difficulty seeing and recognizing a person you know from 7 meters (20 feet) away?

No difficulty (0)

Some difficulty (1)

A lot of difficulty (2)

Can't do at all (3)

For those respondents who do not wear glasses, they respond at least some difficulty (1, 2, 3) to at least one of the two questions:

Do you have difficulty seeing the print in a map, newspaper or book?

- No difficulty (0)*
- Some difficulty (1)*
- A lot of difficulty (2)*
- Can't do at all (3)*

Do you have difficulty seeing and recognizing a person you know from 7 meters (20 feet) away?

- No difficulty (0)*
- Some difficulty (1)*
- A lot of difficulty (2)*
- Can't do at all (3)*

Reports Disability

Respondent answers yes (1,2,3) to the core question:

Do you have difficulty seeing, even if wearing glasses?

- No, No difficulty (0)*
- Yes, Some difficulty (1)*
- Yes, A lot of difficulty (2)*
- Can not do at all (3)*

HEARING

Pattern	Aid	Reports Disability in WG Question	Missed Words	Functioning Problem	Total: Self-Report	
					%	N=877
A	No	No	No	No	63.28	(555)
B	No	Yes	Yes	Yes	15.39	(135)
C	No	No	Yes	No	4.56	(40)
D	No	No	No	Yes	2.85	(25)
E	No	Yes	No	Yes	1.48	(13)
F	No	Yes	Yes	No	2.05	(18)
G	No	No	Yes	Yes	1.60	(14)
H	No	Yes	No	No	2.05	(18)
I	Yes	No	Yes	Yes	.57	(5)
J	Yes	Yes	Yes	Yes	4.22	(37)
K	Yes	No	No	No	.91	(8)
L	Yes	Yes	No	Yes	.34	(3)
M	Yes	Yes	Yes	No	.46	(4)
N	Yes	No	No	Yes	.11	(1)
O	Yes	No	Yes	No	.11	(1)
P	Yes	Yes	No	No	0	(0)

Criteria for Categories

Aid

Respondent answers *all of the time* or *only for certain activities* to the question:

Do you wear a hearing aid all of the time, only for certain activities, or none of the time?

Disability

Respondent answers yes (1,2,3) to the core question:

Do you have difficulty hearing, even if using a hearing aid?

No, No difficulty (0)

Yes, Some difficulty (1)

Yes, A lot of difficulty (2)

Can not do at all (3)

Missed Words

Respondent answers affirmatively to at least one of the following questions:

How often do you miss words in conversation or on the radio or television because you have difficulty hearing?

Everyday (2) About once a week (1)
Never (0)

Do household or family members often tell you that you have a hearing problem?

Yes (1) No (2)

Functioning Problem

For those respondents who wear a hearing aid, they respond at least some difficulty (1, 2, 3) to at least one of the two questions:

When wearing your hearing aid, do you have difficulty hearing what is said in a conversation with one other person in a crowded room?

No difficulty (0)
Some difficulty (1)
A lot of difficulty (2)
Can't do at all (3)

When wearing your hearing aid, do you have difficulty hearing what is said in a conversation with one other person in a quiet room?

No difficulty (0)
Some difficulty (1)
A lot of difficulty (2)
Can't do at all (3)

For those respondents who do not wear glasses, they respond at least some difficulty (1, 2, 3) to at least one of the two questions:

Do you have difficulty hearing what is said in a conversation with one other person in a crowded room?

- No difficulty (0)*
- Some difficulty (1)*
- A lot of difficulty (2)*
- Can't do at all (3)*

Do you have difficulty hearing what is said in a conversation with one other person in a quiet room?

- No difficulty (0)*
- Some difficulty (1)*
- A lot of difficulty (2)*
- Can't do at all (3)*

COGNITION

Pattern	WG Disability	Functioning Problem						Total: Self-Report	
		Yes/No Questions		Scale Questions TEN/NEW/SOLUT		Combined Questions Yes/No and Scale			
		NAMES/ APPT	TASK/ PLACE	One	2 or 3	2 or 3 (excluding E & L)	4 +	%	N=920
A	No	No	No	No	No	-----	-----	46.63	(429)
B	No	No	No	Yes	-----	-----	-----	5.76	(53)
C	No	Yes	No	No	No	-----	-----	1.96	(18)
D	No	No	No	-----	Yes	-----	-----	2.83	(26)
E	No	Yes	No	Yes	-----	-----	-----	1.09	(10)
F	No	Yes or No	Yes	No	No	-----	-----	2.83	(26)
G	No	-----	-----	-----	-----	Yes	-----	1.63	(15)
H	No	-----	-----	-----	-----	-----	Yes	1.41	(13)
I	Yes	-----	-----	-----	-----	-----	Yes	15.98	(147)
J	Yes	-----	-----	-----	-----	Yes	-----	4.24	(39)
K	Yes	Yes or No	Yes	No	No	-----	-----	2.61	(24)
L	Yes	Yes	No	Yes	-----	-----	-----	1.52	(14)
M	Yes	No	No	-----	Yes	-----	-----	4.02	(37)
N	Yes	Yes	No	No	No	-----	-----	5.33	(19)
O	Yes	No	No	Yes	-----	-----	-----	2.07	(20)
P	Yes	No	No	No	No	-----	-----	3.26	(30)

The cognitive functioning questions in the questionnaire can be divided into two categories: Yes/No questions and Scale questions. The Yes/No questions were designed to capture a wide range of functioning problems. Specifically, the NAMES and APPT variable was designed to capture potentially trivial problems that may occur, not necessarily because someone has a disability, but possibly because they are very busy or have too many responsibilities. The TASK and PLACE variables capture more serious problems that may likely represent a disability. Additionally, the scale questions were designed to capture more detailed dimensions of cognitive functioning problems. However, it is our experience that these questions (because they can be taken too literally by respondents) can be easily misinterpreted, producing false-positive reports. Consequently, if a respondent answers affirmatively to only the NAMES or APPT questions or only one of the scale questions, we surmise that they likely do not have a functioning problem. On the other hand, if a respondent answers affirmatively to a combination of the yes/no questions and the scale questions, we surmise that they likely have more serious functioning problems. Based on this understanding, Patterns A – H are ordered by an incremental increase in functioning problems, with Pattern A representing no functioning problems and with Pattern H representing the most impairment. Patterns A – H correspond to those respondents who answered no to the Core Question. Therefore, Pattern H is characterized as a problematic response pattern (appearing in dark grey) because those respondents likely have a functioning problem, but did not report

the problem in the Core Cognitive Functioning Question. Patterns I – P represent the same incremental patterns, but correspond to those who answered affirmatively to the Core Question. Therefore, Patterns N, O and P (appearing in dark grey) are defined as problematic response patterns because these respondents likely do not have a functioning problem, but did report a problem in the Core Question.

Patterns

A & P	Respondent answers no to all functioning questions
B & O	Respondent answers no to all functioning questions except one scale question
C & N	Respondent answers no to all functioning questions except the NAMES and/or the APPT questions
D & M	Respondent answers no to all functioning questions except 2 or 3 of the scale questions
E & L	Respondent answers no to all functioning questions except the NAMES and/or the APPT question and only one scale question
F & K	Respondent answers no to all scale questions. However, respondent answers yes to the TASK and/or PLACE questions; they may have answered yes to a NAMES/APPT question, but not necessarily.
G & J	Respondent answers yes to two or three items and those items occur in both the yes/no and scaled question sets. Note that Patterns E & L could be considered a subset of this pattern, in that Patterns E & L represent two items from the combined yes/no and scale question sets. However, because the specific terms of Patterns E & L signify a lesser impairment status, those cases should not be considered with Patterns G & J.
H & I	Respondent answers yes to four or more items and those items occur in both the yes/no and scaled question sets.

Criteria for Categories

Disability

Respondent answers yes (1,2,3) to the core question:

Do you have difficulty remembering or concentrating?

No, No difficulty (0)

Yes, Some difficulty (1)

Yes, A lot of difficulty (2)

Can not do at all (3)

NAMES/APPT

Respondent answers affirmatively to one of the two following yes/no questions:

Do you have difficulty remembering the names of people or places?

Yes (1)

No (2)

Do you have difficulty remembering appointments?

Yes (1)

No (2)

TASK/PLACE

Respondent answers affirmatively to one of the two following yes/no questions:

Do you have difficulty remembering how to get to familiar places?

Yes (1)

No (2)

Do you have difficulty remembering important tasks, like taking medications or paying bills?

Yes (1)

No (2)

TEN/NEW/SOLUT

Respondent answers affirmatively to the number of the following scale questions listed in the categories (i.e. One, 2 or 3):

Do you have difficulty concentrating on doing something for ten minutes?

- No difficulty (0)*
- Some difficulty (1)*
- A lot of difficulty (2)*
- Can't do at all (3)*

Do you have difficulty learning a new task, for example, learning how to get to a new place?

- No difficulty (0)*
- Some difficulty (1)*
- A lot of difficulty (2)*
- Can't do at all (3)*

Do you have difficulty finding solutions to problems in day to day life?

- No difficulty (0)*
- Some difficulty (1)*
- A lot of difficulty (2)*
- Can't do at all (3)*

Combined Questions

Respondent answers affirmatively to at least one yes/no and one scale question. The specific category corresponds to the number of combined yes/no and scale questions (i.e. 2 or 3, 4+) that the respondent answered affirmatively.

MOBILITY

Pattern	WG Disability	Aid	Problem Walking Distance	Problem Step, Stand, Sit, OR Stoop	Total: Self-Report	
					%	N=852
A	No	No	No	No	10.92	(93)
B	Yes	Yes	Yes	Yes	26.29	(224)
C	Yes	No	Yes	Yes	24.65	(210)
D	No	No	Yes	No	5.52	(47)
E	No	No	No	Yes	12.56	(107)
F	Yes	No	No	Yes	4.46	(38)
G	Yes	No	Yes	No	1.76	(15)
H	Yes	No	No	No	2.35	(20)
I	No	No	Yes	Yes	5.63	(48)
J	No	Yes	Yes	Yes	1.17	(10)
K	Yes	Yes	No	No	.35	(3)
L	No	Yes	No	Yes	.59	(5)
M	Yes	Yes	No	Yes	.94	(8)
N	Yes	Yes	Yes	No	1.64	(14)
O	No	Yes	No	No	1.17	(10)
P	No	Yes	Yes	No	0	(0)

Criteria for Categories

Disability

Respondent answers yes (1,2,3) to the core question:

Do you have difficulty walking or climbing steps?

No, No difficulty (0)

Yes, Some difficulty (1)

Yes, A lot of difficulty (2)

Can not do at all (3)

Aid

Respondent answers affirmatively to the question:

Do you use any kind of equipment, such as a wheelchair, walker or cane, to help you get around?

Problem Walking Distance

Respondent answers affirmatively to at least one of the following questions:

Do you have difficulty going outside of your home?

Can't do at all (3)

A lot of difficulty (2)

Some difficulty (1)

No difficulty (0)

Do you have difficulty walking a long distance such as a kilometer (or a mile)?

No difficulty (0)

Some difficulty (1)

A lot of difficulty (2)

Can't do at all (3)

Problem Step, Stand, Sit or Stoop

Respondent answers affirmatively to at least one of the following questions:

By yourself and not using aids, do you have any difficulty...

Walking for a quarter of a mile (about 2 or 3 blocks)?

Yes (1) No (2)

Walking up ten steps without resting?

Yes (1) No (2)

Standing or being on your feet for about 2 hours?

Yes (1) No (2)

Sitting for about 2 hours?

Yes (1) No (2)

Stooping, crouching or kneeling?

Yes (1) No (2)

SELF-CARE

Pattern	WG Disability	1 Functioning Problem	2 Functioning Problems	3 Functioning Problems	Total: Self-Report	
					%	N=1,197
A	No	No	No	No	65.33	(782)
B	No	Yes	No	No	9.61	(115)
C	No	No	Yes	No	3.84	(46)
D	No	No	No	Yes	4.18	(50)
E	Yes	No	No	Yes	7.85	(94)
F	Yes	No	Yes	No	2.34	(28)
G	Yes	Yes	No	No	3.01	(36)
H	Yes	No	No	No	3.84	(46)

Criteria for Categories

Disability

Respondent answers yes (1,2,3) to the core question:

Do you have difficulty with self-care, such as washing all over or dressing?

No, No difficulty (0)
Yes, Some difficulty (1)
Yes, A lot of difficulty (2)
Can not do at all (3)

Functioning Problems

Respondent answers affirmatively to the number of following questions listed in the category (i.e. 1, 2 or 3 +):

By yourself and not using aids, do you have any difficulty...

Reaching up over your head?

Yes (1) No (2)

Reaching out as if to shake someone's hand?

Yes (1) No (2)

Using your fingers to button a shirt or dress?

Yes (1) No (2)

Putting on socks or stockings?

Yes (1) No (2)

Tying your shoelaces?
Yes (1) No (2)

Combing your hair?
Yes (1) No (2)

Feeding your self?
Yes (1) No (2)

COMMUNICATION

Pattern	WG Disability	Functioning					Total: Self-Report	
		SHY	FRIEND	CONVERSE	SAY	Combination of 2 FRIEND/CONVO/SAY	%	N=1165
A	No	No	No	No	No	NA	50.56	(589)
B	No	Yes	No	No	No	NA	10.73	(125)
C	No	Yes or No	Yes	No	No	NA	4.64	(54)
D	No	Yes or No	No	Yes	No	NA	2.32	(27)
E	No	Yes or No	No	No	Yes	NA	2.32	(27)
F	No	Yes or No	NA	NA	NA	Yes	2.49	(29)
G	No	Yes	Yes	Yes	Yes	NA	.43	(5)
H	Yes	Yes	Yes	Yes	Yes	NA	2.83	(33)
I	Yes	Yes or No	NA	NA	NA	Yes	10.30	(120)
J	Yes	Yes or No	No	No	Yes	NA	2.58	(30)
K	Yes	Yes or No	No	Yes	No	NA	3.00	(35)
L	Yes	Yes or No	Yes	No	No	NA	.94	(11)
M	Yes	Yes	No	No	No	NA	1.89	(22)
N	Yes	No	No	No	No	NA	4.98	(58)

Disability

Respondent answers yes (1,2,3) to the core question:

Because of a physical, mental or health condition, do you have difficulty communicating, for example understanding or being understood by others?

*No, No difficulty (0)
 Yes, Some difficulty (1)
 Yes, A lot of difficulty (2)
 Can not do at all (3)*

SHY

Respondent answers affirmatively to the following question:

*Do you feel shy in group or social situations?
 Yes (1) No (2)*

FRIEND

Respondent answers affirmatively to the following question:

Do you have difficulty in making new friends?

Yes (1) No (2)

CONVERSE

Respondent answers affirmatively (1,2,3) to the following question:

Do you have difficulty in starting and maintaining a conversation?

*No difficulty (0)
Some difficulty (1)
A lot of difficulty (2)
Can't do at all (3)*

SAY

Respondent answers affirmatively (1,2,3) to the following question:

Do you have difficulty in generally understanding what people say?

*No difficulty (0)
Some difficulty (1)
A lot of difficulty (2)
Can't do at all (3)*

Combination of 2

Respondent answers affirmatively to two: FRIEND, CONVERSE, and/or SAY