

# **The Washington Group Extended Set for Functioning: A Review**

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# Development of the WG Extended Set on Functioning (WG ES-F)

## Guiding Principles – The Set Must:

- Adhere to the principles adopted for the Short Set.
- Be congruent and coherent with the Short Set, yet remain a parsimonious set.
- Meet individual country needs (e.g. policy development, advocacy, monitoring and evaluation of interventions).
- Also allow for international reporting (e.g. population health and functioning).

## Additional Principles – Addressed at 7<sup>th</sup> Meeting in 2007 (Ireland):

- Expand measure capturing “population at risk”
- Basic actions continues to be the building block
- Allow for a summary measure and/or individual functional limitation types.
- Meet other data needs and uses?

# Development of the WG Extended Set on Functioning (WG ES-F)

November 2010:

- Adoption at 10<sup>th</sup> WG Meeting in Luxembourg
- For use in general population and health surveys
- An extended set of questions on disability developed to capture:
  1. *more information in existing core domains of functioning, and*
  2. *additional functional domains not originally included in the Short Set*

# The Final WG ES-F

- 10 functioning domains
  - Existing: vision, hearing, mobility, cognition, communication and self care
  - New: upper body, affect, pain and fatigue
- 29 “core” questions
- 8 “optional” questions (vision, hearing, cognition)
- Proxies may be omitted (at each country’s discretion) from:  
affect, pain and fatigue
- Recommended introduction – differs from the WG SS:  
*Text provided in [ ] may be used at the discretion of the country / survey organization:*  
Now I am going to ask you some [additional] questions about your ability to do different activities, and how you have been feeling. [Although some of these questions may seem similar to ones you have already answered, it is important that we ask them all.]

# Vision

VIS\_1. Do you wear glasses?                      a) Yes    b) No

VIS\_2. Do you have difficulty seeing [*even when wearing your glasses*]?

a) No, no difficulty

b) Yes – some difficulty

c) Yes – a lot of difficulty

d) Cannot do at all

Optional:

VIS\_3. Do you have difficulty clearly seeing someone's face across a room [*even when wearing your glasses*]?

VIS\_4. Do you have difficulty clearly seeing the picture on a coin [*even when wearing your glasses*]?

*Countries may choose to replace “the picture on a coin” with an equivalent item.*

# Hearing

HEAR\_1. Do you use a hearing aid?                      a) Yes    b) No

HEAR\_2. Do you have difficulty hearing [*even when using a hearing aid(s)*]?

a) No, no difficulty

b) Yes – some difficulty

c) Yes – a lot of difficulty

d) Cannot do at all

Optional:

HEAR\_3. How often do you use your hearing aid?

HEAR\_4. Do you have difficulty hearing what is said in a conversation with one other person in a quiet room [*even when using your hearing aid*]?

HEAR\_5. Do you have difficulty hearing what is said in a conversation with one other person in a noisier room [*even when using your hearing aid*]?

# Mobility

MOB\_1. Do you have difficulty walking or climbing steps?

a) No, no difficulty

b) Yes – some difficulty

c) Yes – a lot of difficulty

d) Cannot do at all

MOB\_2. Do you use any equipment or receive help for getting around?

MOB\_3. Do you use any of the following [*list of aids*]?

MOB\_4. Do you have difficulty walking 100 meters on level ground, that would be about the length of one football field or one city block [*without the use of your aid*]?

MOB\_5. Do you have difficulty walking a half a kilometer on level ground, that would be about the length of five football fields or five city blocks [*without the use of your aid*]?

*Countries may choose to replace 100m or half a km with equivalent distances.*

# Mobility

MOB\_6. Do you have difficulty walking up or down 12 steps?

a) No, no difficulty

b) Yes – some difficulty

c) Yes – a lot of difficulty

d) Cannot do at all

*If “no to use of equipment”, skip to next section.*

*If “wheelchair”, skip to next section.*

MOB\_7. Do you have difficulty walking 100 meters on level ground, that would be about the length of one football field or one city block *when using your aid?*

MOB\_8. Do you have difficulty walking a half a kilometer on level ground, that would be about the length of five football fields or five city blocks *when using your aid?*

*Countries may choose to replace 100m or half a km with equivalent distances.*

# Communication

COM\_1. Using your usual language, do you have difficulty communicating, for example understanding and being understood?

- a) No, no difficulty
- b) Yes – some difficulty

- c) Yes – a lot of difficulty
- d) Cannot do at all

COM\_2. Do you use sign language?

- a) Yes
- b) No

# Self-Care

SC\_1. Do you have difficulty with self care, such as washing all over or dressing?

- a) No, no difficulty
- b) Yes – some difficulty

- c) Yes – a lot of difficulty
- d) Cannot do at all

# Upper Body

UB\_1. Do you have difficulty raising a 2 liter bottle of water or soda from waist to eye level?

a) No, no difficulty  
b) Yes – some difficulty

c) Yes – a lot of difficulty  
d) Cannot do at all

UB\_2. Do you have difficulty using your hands and fingers, such as picking up small objects, for example, a button or pencil, or opening or closing containers or bottles?

# Cognition

COG\_1. Do you have difficulty remembering or concentrating?

- a) No, no difficulty
- b) Yes – some difficulty
- c) Yes – a lot of difficulty
- d) Cannot do at all

Optional:

COG\_3. Do you have difficulty remembering or concentrating, or both?

COG\_4. How often do you have difficulty remembering?

- a) Sometimes
- b) Often
- c) All of the time

COG\_5. Do you have difficulty remembering a few things, a lot of things, or almost everything?

- a) A few things
- b) A lot of things
- c) Almost everything

# Affect

*If R asks about medications, “Please answer according to whatever medication you were taking.”*

ANX\_1. How often do you feel worried, nervous or anxious?

- a) Daily
- b) Weekly
- c) Monthly
- d) A few times a year
- e) Never

ANX\_2. Do you take medications for these feelings?

- a) Yes
- b) No

*If “Never” to ANX\_1 and “No” to ANX\_2, skip to DEP\_1.*

ANX\_3. Thinking about the last time you felt worried, nervous or anxious, how would you describe the level of these feelings? Would you say...

- a) A little
- b) A lot
- c) Somewhere in between a little and a lot

# Affect

DEP\_1. How often do you feel depressed?

- a) Daily
- b) Weekly
- c) Monthly
- d) A few times a year
- e) Never

DEP\_2. Do you take medications for depression?

- a) Yes
- b) No

*If “Never” to DEP\_1 and “No” to DEP\_2, skip to next section.*

DEP\_3. Thinking about the last time you felt depressed, how depressed did you feel? Would you say...

- a) A little
- b) A lot
- c) Somewhere in between a little and a lot

# Pain

*If R asks about medications, “Please answer according to whatever medication you were taking.”*

PAIN\_1. In the past three months, how often did you have pain?

- a) Never
- b) Some days
- c) Most days
- d) Every day

*If “Never” to PAIN\_1, skip to next section.*

PAIN\_2. Thinking about the last time you had pain, how much pain did you have?

- a) A little
- b) A lot
- c) Somewhere in between a little and a lot

# Fatigue

TIRED\_1. In the past three months, how often did you feel very tired or exhausted?

- a) Never
- b) Some days
- c) Most days
- d) Every day

*If “Never” to TIRED\_1, skip to next section.*

TIRED\_2. Thinking about the last time you felt very tired or exhausted, how long did it last?

- a) Some of the day
- b) Most of the day
- c) All of the day

TIRED\_3. Thinking about the last time you felt this way, how would you describe the level of tiredness?

- a) A little
- b) A lot
- c) Somewhere in between a little and a lot

# U.S. National Health Interview Survey

**Survey context:** Health survey, continuous since 1957

**Survey scope:** Civilian, noninstitutionalized population

**Survey mode:** In-person, some telephone

**Annual sample:** Approx. 35,000 HHs, 87,500 persons

**WG disability question set administered:**

- Beginning in 2010:
  - To random  $\frac{1}{4}$  sample of all adults (WG test version)
- In 2011:
  - To random  $\frac{1}{2}$  sample of all adults (WG E-S)

# Examining Preliminary Results from the 2010 NHIS

*More information in existing core domains of functioning:*

1. Are we capturing more information in domains where we have added additional questions?

Vision – additional questions optional

Hearing – extended domain

Mobility – extended domain

2. *additional functional domains* not originally included in the Short Set

Upper Body – 3 separate questions

# 2010 NHIS: Vision

**Decision:** Retain only the VIS\_SS question, making the next two optional (*see face across room and see picture of a coin*) where more information about vision functioning is desired. SS question captures most of the “at risk” vision population.

**Question:** Do we miss additional persons at risk by excluding these questions from the measure?

**Answer:** Of those who have *No* or *Some Difficulty* seeing – how many people say *A Lot of Difficulty* or *Cannot Do* to seeing someone’s face across a room or the picture on a coin?

- 32 persons or 0.5% of the sample (someone’s face)
- 61 persons or 1.0% of the sample (picture on a coin)

# 2010 NHIS: Hearing

**Decision:** Retain additional questions. In addition to *Difficulty hearing*, also ask about difficulty hearing conversations in *quiet* and *noisier* rooms. Provides a gradient of information about the functioning.

**Question:** Do we add additional persons at risk by including these questions from the measure?

**Answer:** Of those who have *No* or *Some Difficulty* hearing – how many people say *A Lot of Difficulty* or *Cannot Do* to hearing a conversation in a quiet and noisier room?

- 22 persons or 0.4% of the sample (hearing a quiet room)
- 198 persons or 3.2% of the sample (in a noisier room)

# 2010 NHIS: Mobility

**Decision:** Retain additional questions. In addition to *Difficulty walking or climbing*, also ask about difficulty walking 100 and 500 yards on level ground. Provides a gradient of information about the functioning.

**Question:** Do we add additional persons at risk by including these questions from the measure?

**Answer:** Of those who have *No* or *Some Difficulty* walking – how many people say *A Lot of Difficulty* or *Cannot Do* to walking 100 or 500 yards?

- 127 persons or 2.1% of the sample (100 yards)
- 246 persons or 4.2% of the sample (500 yards)

# MOB\_1 \* MOB\_4

Who would we miss if we *only* ask the short set question?  
n=127 (2.1%) are “100 yards” disabled.

Do you have difficulty walking or climbing steps?	Do you have difficulty walking 100 yards?			
	No difficulty	Some difficulty	A lot of difficulty	Cannot do at all
No difficulty	4,798	191	14	15
Some difficulty	375	268	58	40
A lot of difficulty	36	70	118	77
Cannot do at all	7	3	8	52

# MOB\_1 \* MOB\_5

Who would we miss if we *only* ask the short set question?  
N=246 (4.2%) are “500 yards” disabled.

Do you have difficulty walking or climbing steps?	Do you have difficulty walking 500 yards?			
	No difficulty	Some difficulty	A lot of difficulty	Cannot do at all
No difficulty	4,601	277	41	19
Some difficulty	230	286	120	66
A lot of difficulty	15	41	100	68
Cannot do at all	3	5	6	4

# 2010 NHIS: Communication

**Decision:** Ask *Do you use sign language?*

**Question:** Do those who use sign language differ from those who do not when answering about difficulty communicating?

Have difficulty communicating using your usual language?	Do you use sign language?	
	Yes	No
No difficulty	94.6%	94.6%
Some difficulty	4.1%	4.8%

# 2010 NHIS: Upper Body

**Decision:** Two unique questions: difficulty raising a 2 liter bottle, and difficulty using hands and fingers. The two provide more information about functioning in the upper body domain.

**Question:** Do we capture *additional* information, or do these questions capture *similar* functioning?

**Answer:** \*\*56 persons (0.9%) who have *A lot of diff* with self care *Cannot do at all*. An additional -

- 58 persons (1.0%) have diff using hands/fingers
- 58 persons (1.0%) have diff raising a 2L bottle

Each of the three questions capture different people.

# UB\_1 \* UB\_2

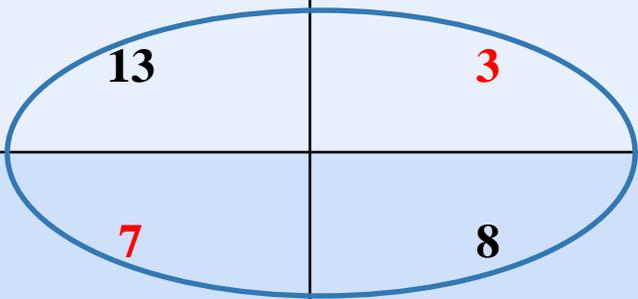
Are our two questions measuring the same functioning?  
n=231 (3.8%) fall on the “off-diagonals”.

Do you have difficulty raising a 2 liter bottle?	Do you have difficulty using your hands and fingers...?			
	No difficulty	Some difficulty	A lot of difficulty	Cannot do at all
No difficulty	5,523	281	30	3
Some difficulty	123	106	13	2
A lot of difficulty	18	18	13	3
Cannot do at all	10	4	7	8

# UB\_1 \* UB\_2

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A lot of difficulty	18	18	13	3
Cannot do at all	10	4	7	8



# Comparison of Short and ‘Extended’ Set

<b>Disability Item</b>	<b>SS</b>	<b>ES</b>
<b>Vision</b>	<b>1.7%</b>	<b>1.7%</b>
<b>Hearing</b>	<b>1.4%</b>	<b>1.4%</b>
<b>Mobility</b>	<b>5.8%</b>	<b>5.8%</b>
<b>Communication</b>	<b>0.7%</b>	<b>0.7%</b>
<b>Cognition</b>	<b>1.6%</b>	<b>1.6%</b>
<b>Upper body: self-care</b>	<b>0.8%</b>	<b>0.8%</b>
<b>Anxiety</b>		<b>8.5%</b>
<b>Depression</b>		<b>4.1%</b>
<b>Fatigue</b>		<b>3.6%</b>
<b>Any disability</b>	<b>9.0%</b>	<b>17.2%</b>