



مبادئ توجيهية تحليلية: إنشاء محددات الإعاقة وفق النظم اللغوي لنظام التحليل الإحصائي باستخدام المجموعة القصيرة لتأدية الوظائف الصادرة عن فريق واشنطن

مقدمة

تشمل وثائق التنفيذ الخاصة بفريق واشنطن الأدوات التي استحدثها الفريق بشأن إحصاءات الإعاقة بغية جمع بيانات الإعاقة ذات المقارنة عالمياً بخصوص التعدادات والمسوح. تتناول الوثائق المذكورة أفضل الممارسات في تنفيذ المجموعة القصيرة، والمجموعة الموسعة، والمجموعة القصيرة-المعززة، وكذلك وحدات تأدية الوظائف لدى الطفل الصادرة عن فريق واشنطن / اليونيسف للأطفال في الفئة العمرية بين 2 و4 أعوام والفئة بين 5 و17 عاماً، وكذلك وحدة الإعاقة للدراسات الاستقصائية للقوى العاملة الصادرة عن فريق واشنطن / منظمة العمل الدولية، علاوة على أدوات الفريق الأخرى. تشمل الموضوعات: الترجمة، ومواصفات الأسئلة، والمبادئ التوجيهية التحليلية، ورمز البرمجة للتحليلات، واستخدام الأدوات لأغراض التفصيل، وغير ذلك.

للعثور على وثائق تنفيذ أخرى ومزيد من المعلومات الصادرة عن فريق واشنطن، يرجى زيارة الموقع الإلكتروني للفريق:
<http://www.washingtongroup-disability.com/>

الفهم الأمثل للإعاقة هو اعتبارها حالة مستمرة. فمن حيث صعوبة الأداء يمكن تفعيل "الصعوبة" عبر مجموعة متنوعة من الأدوات الوصفية المترواحة درجاتها بين انعدام الصعوبة تماماً، مروراً بالصعوبة النسبية والصعوبة البالغة، وصولاً إلى التعذر التام للأداء. وتمثل كل أداة وصفية من هذا القبيل حداً أو عتبة لدى تحديد معرف نهائي للإعاقة؛ ومن ذلك مثلاً تحديد من يُعدّ صاحب إعاقة أم لا. كما يتسنى عرض مستويات الأداء تلك في فئات الإجابات على المجموعة القصيرة المقدمة من فريق واشنطن بشأن تأدية الوظائف ("المجموعة القصيرة").

انتشار الإعاقة ليس معياراً إحصائياً منفرداً، بل يمكن حسابه وفق عتبات متنوعة حسب أغراض جمع البيانات وإعداد التقارير. فمثلاً: إذا كان الغرض هو الإتاحة المنصفة للمجالات العامة – فربما كان مستوى الشمول بالنسبة لمعرف الإعاقة عندئذٍ هو "بعض الصعوبة"، لأن ذوي المستويات الدنيا من صعوبة الأداء سيستفيدون على الأرجح من التكييفات المنفذة لإزالة العوائق وتيسير الوصول. وعلى سبيل المثال، يشجع تركيب السلالم الكهربائية بدلاً من العادية بوصفها من عناصر التصميم العالمية التي تفيد الأشخاص المصابين بأنواع مختلفة من صعوبة الحركة. أما إذا كان الغرض هو تقديم إعانات أو بدلات – فربما يكون مستوى الشمول بالنسبة إلى معرف الإعاقة هو "لا يمكنني القيام بذلك على الإطلاق" لأن الوفاء بمعايير الاستحقاق الصارمة سيقصر عندئذٍ على أصحاب المحددات الأدائية الأكثر حدة.

إن النظم اللغوي لمكونات نظام التحليل الإحصائي الوارد وصفه في هذه الوثيقة يتيح حساب أربعة معرفات للإعاقة وفق أربع عتبات. ومن ثم، فإن المصنفين ضمن "دوي الإعاقة" وفق تلك العتبات الأربع المختلفة ينتج عنهم معرفات الإعاقة الأربع الآتي بيانها:

- **الإعاقة 1:** مستوى الشمول لا يقل عن مجال / سؤال واحد يحمل تصنيف "توجد بعض الصعوبة" أو "توجد صعوبة كبيرة" أو "لا يمكنني القيام بذلك على الإطلاق".

- **الإعاقة 2:** مستوى الشمول لا يقل عن مجالين / سؤالين يحملان تصنيف "بعض الصعوبة" أو عن مجال / سؤال واحد يحمل تصنيف "توجد صعوبة كبيرة" أو "لا يمكنني القيام بذلك على الإطلاق".

- **الإعاقه 3:** مستوى الشمول هو وجود أي مجال / سؤال واحد يحمل تصنيف "توجد صعوبة كبيرة" أو "لا يمكنني القيام بذلك على الإطلاق".

ملاحظة: **الإعاقه 3** هو الحد الموصى به من فريق واشنطن.

- **الإعاقه 4:** مستوى الشمول هو أي مجال واحد يحمل تصنيف "لا يمكنني القيام بذلك على الإطلاق" (4).

ملاحظة: يستند النظم اللغوي لمكونات نظام التحليل الإحصائي إلى *علامات المتغيرات* و*علامات القيمة* الموضحة في الجداول أدناه. تأكد من استخدام *علامات المتغيرات* و*القيم* نفسها أو راجع النظم اللغوي للمكونات الإحصائية حتى تُظهر *العلامات* المستخدمة في قاعدة بيانات.

تُدار "المجموعة القصيرة" بوصفها جزءاً من استقصاء للمقابلات المتبعة لدى هيئة الصحة الوطنية الأمريكية. البيانات المستخدمة في إعداد هذه المبادئ التوجيهية مأخوذة من إصدار الهيئة في 2013.

ملاحظة لمستخدمي استقصاء الهيئة: من الوارد أن تختلف أسماء المتغيرات في ملف بيانات الهيئة ووثائقها عن الأسماء المستخدمة في هذه الوثيقة؛ ومن ذلك مثلاً متغير مجال الاعتناء بنفسك المشار إليه بالاختصار (SC-SS) في هذه الوثيقة لأنه أشار إليه بالاختصار (UB_SS) في ملف بيانات الهيئة ووثائقها.

ضوابط نظام التحليل الإحصائي المستخدمة في إنتاج المخرجات المبينة في هذه الوثيقة مدرجة بالكامل في الملحق.

أُسئلة / مجالات المجموعة القصيرة لفريق واشنطن	علامة المتغير
1- هل تواجه صعوبة في النظر حتى وأنت تضع النظارات الطبية؟	VIS_SS
2- هل تواجه صعوبة في السمع حتى مع استخدام معينات سمعية؟	HEAR_SS
3- "هل تواجه صعوبة في المشي أو صعود الدَرَج؟	MOB_SS
4- هل تواجه صعوبة في التذكر أو التركيز؟	COG_SS
5- هل تواجه صعوبة في الاعتناء بنفسك مثل الاستحمام أو ارتداء الملابس؟	SC_SS
6- هل تواجه صعوبة في التواصل مع الآخرين باستخدام لغتك المعتادة (كأن يصعب عليك فهم الآخرين أو أن يصعب عليهم فهمك؟)	COM_SS

علامات القيمة المستخدمة في كل سؤال من أسئلة المجموعة القصيرة للفريق هي:

1. لا توجد صعوبة
2. نعم، توجد بعض الصعوبة
3. نعم، توجد صعوبة كبيرة
4. لا يمكنني القيام بذلك على الإطلاق
7. أرفض الإجابة
8. غير متأكد
9. لا أعرف

SAS WG Short Set Syntax Annotated with Output Tables

Actual SAS syntax is indented and are in **Bold text**.

NOTE: For data analysis, use your standard weighting and estimation techniques.

The syntax below produces frequency distributions on each the six domains. Codes 7 (REFUSED), 8 (NOT ASCERTAINED) and 9 (DON'T KNOW) are RECODED as **MISSING**.

Step 1: Generate frequency distributions on each of the six domain variables.

VIS_SS is the WG-SS Vision question.

```
If VIS_SS in (1, 2, 3, 4) then Vision=VIS_SS;  
Else If VIS_SS in (7, 8, 9) then Vision=.;
```

```
Proc Freq Data=SS.Funcdisb13;  
Tables Vision;  
Run;
```

NOTE: *SS.Funcdisb13* is the name of the SAS file used for these analyses. When preparing your SAS code, replace this SAS file with the name of your SAS file.

Vision: Degree of difficulty seeing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No difficulty	13690	79.0	81.6	81.6
	Some difficulty	2708	15.6	16.2	97.8
	A lot of difficulty	333	1.9	2.0	99.8
	Cannot do at all	36	.2	.2	100.0
	Total	16767	96.8	100.0	
Missing		559	3.2		
Total		17326	100.0		

HEAR_SS is the WG-SS Hearing question.

```
If HEAR_SS in (1, 2, 3, 4) then Hearing =HEAR_SS;  
Else If HEAR_SS in (7, 8, 9 ) then Hearing =.;
```

```
Proc Freq Data=SS.Funcdisb13;  
Tables Hearing;
```

Run;

Hearing: Degree of difficulty hearing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No difficulty	13680	79.0	81.6	81.6
	Some difficulty	2753	15.9	16.4	98.0
	A lot of difficulty	310	1.8	1.8	99.9
	Cannot do at all	23	.1	.1	100.0
	Total	16766	96.8	100.0	
Missing		560	3.2		
Total		17326	100.0		

MOB_SS is the WG-SS Mobility question.

If MOB_SS in (1, 2, 3, 4) **then** Mobility=MOB_SS;
Else If MOB_SS in (7, 8, 9) **then** Mobility=.;

Proc Freq Data=SS.Funcdisb13;
Tables Mobility;
Run;

Mobility: Degree of difficulty walking or climbing steps

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No difficulty	13424	77.5	80.1	80.1
	Some difficulty	2165	12.5	12.9	93.0
	A lot of difficulty	792	4.6	4.7	97.7
	Cannot do at all	380	2.2	2.3	100.0
	Total	16761	96.7	100.0	
Missing		565	3.3		
Total		17326	100.0		

COM_SS is the WG-SS Communication question.

If COM_SS in (1, 2, 3,4) **then** Communication =COM_SS;
Else If COM_SS in (7, 8, 9) **then** Communication =.;

Proc Freq Data=SS.Funcdisb13;
Tables Communication;
Run;

Communication: Degree of difficulty communicating using usual language

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No difficulty	15874	91.6	94.7	94.7
	Some difficulty	745	4.3	4.4	99.2
	A lot of difficulty	94	.5	.6	99.7
	Cannot do at all	43	.2	.3	100.0
	Total	16756	96.7	100.0	
Missing		570	3.3		
Total		17326	100.0		

SC_SS is the WG-SS Self-care question.

If SC_SS in (1, 2, 3, 4) **then** Self_Care=SC_SS;
Else If SC_SS in (7, 8, 9) **then** Self_Care=.;

Proc Freq Data=SS.Funcdisb13;
Tables Self_Care;
Run;

Self_Care Degree of difficulty with self-care

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No difficulty	16029	92.5	95.7	95.7
	Some difficulty	544	3.1	3.2	98.9
	A lot of difficulty	114	.7	.7	99.6
	Cannot do at all	68	.4	.4	100.0
	Total	16755	96.7	100.0	
Missing		571	3.3		
Total		17326	100.0		

COG_SS is the WG-SS Cognition question.

If COG_SS in (1, 2, 3, 4) **then** Cognition=COG_SS;
Else If COG_SS in (7, 8, 9) **then** Cognition=.;

Proc Freq Data=SS.Funcdisb13;
Tables Cognition;
Run;

Cognition: Degree of difficulty remembering or concentrating

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No difficulty	13719	79.2	81.9	81.9
	Some difficulty	2632	15.2	15.7	97.6
	A lot of difficulty	382	2.2	2.3	99.9
	Cannot do at all	20	.1	.1	100.0
	Total	16753	96.7	100.0	
Missing		573	3.3		
Total		17326	100.0		

Step 2: Calculate a variable, SUM_234

SUM_234 summates the number of domains coded SOME DIFFICULTY (2) or A LOT OF DIFFICULTY (3) or CANNOT DO AT ALL (4) for each person. This new variable is used in the determination of disability identifiers: **DISABILITY1** and **DISABILITY2**.

The syntax below **counts** the number of domains/questions a person has that are coded SOME DIFFICULTY (2) or A LOT OF DIFFICULTY (3) or CANNOT DO AT ALL (4).

Possible range 0: no difficulties in any domain, to 6: all six domains coded SOME DIFFICULTY (2) or A LOT OF DIFFICULTY (3) or CANNOT DO AT ALL (4).

MISSING (9) are those who have coded 7, 8 or 9 on all six domains.

```
If missing(Vision) and missing(Hearing) and missing(Mobility) and missing(Cognition) and
missing(Self_Care) and missing(Communication) then SumPoints=.;
Else If (Vision =1) and (Hearing =1) and (Mobility =1) and (Cognition =1) and (Self_Care =1)
and (Communication =1) then SumPoints=0;
Else SumPoints=SUM( (Vision in(2,3,4)),(Hearing in(2,3,4)),(Mobility in(2,3,4)),(Cognition
in(2,3,4)),(Self_Care in(2,3,4)),(Communication in(2,3,4)) );
```

```
If SumPoints =. then SUM_234 =.;
Else If SumPoints = 1 then SUM_234=1;
Else If SumPoints = 2 then SUM_234=2;
Else If SumPoints = 3 then SUM_234=3;
Else If SumPoints = 4 then SUM_234=4;
Else If SumPoints = 5 then SUM_234=5;
Else If SumPoints = 6 then SUM_234=6;
Else If SumPoints = 0 then SUM_234=0;
```

```
Proc Freq Data=SS.Funcdisb13;
Tables SUM_234;
Run;
```

		SUM_234			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	9266	53.5	55.2	55.2
	1.00	3839	22.2	22.9	78.1
	2.00	1892	10.9	11.3	89.4
	3.00	989	5.7	5.9	95.3
	4.00	481	2.8	2.9	98.2
	5.00	232	1.3	1.4	99.5
	6.00	78	.5	.5	100.0
	Total	16777	96.8	100.0	
Missing		549	3.2		
Total		17326	100.0		

Step 3: Calculate a variable, SUM_34

SUM_34 summates the number of domains coded A LOT OF DIFFICULTY (3) or CANNOT DO AT ALL (4) for each person. This new variable is used in the determination of disability identifier: **DISABILITY2**.

The syntax below counts the number of domains/questions a person has that are coded A LOT OF DIFFICULTY (3) or CANNOT DO AT ALL (4)

Possible range 0: no difficulties coded A LOT OF DIFFICULTY (3) or CANNOT DO AT ALL (4) in any domain, to 6: all six domains coded A LOT OF DIFFICULTY (3) or CANNOT DO AT ALL (4). MISSING (9) are those who have coded 7, 8 or 9 on all six domains.

```
If missing(Vision) and missing(Hearing) and missing(Mobility) and missing(Cognition) and
missing(Self_Care) and missing(Communication) then SumPoints2=.;
Else If (Vision in(1,2)) and (Hearing in(1,2)) and (Mobility in(1,2)) and (Cognition in(1,2)) and
(Self_Care in(1,2)) and (Communication in(1,2)) then SumPoints2=0;
Else SumPoints2=SUM( (Vision in(3,4)),(Hearing in(3,4)),(Mobility in(3,4)),(Cognition
in(3,4)),(Self_Care in(3,4)),(Communication in(3,4)) );
```

```
If SumPoints2 =. then SUM_34 =.;
Else If SumPoints2 = 1 then SUM_34=1;
Else If SumPoints2 = 2 then SUM_34=2;
Else If SumPoints2 = 3 then SUM_34=3;
Else If SumPoints2 = 4 then SUM_34=4;
Else If SumPoints2 = 5 then SUM_34=5;
Else If SumPoints2 = 6 then SUM_34=6;
Else If SumPoints2 = 0 then SUM_34=0;
```

```
Proc Freq Data=SS.Funcdisb13;
```

```
Tables SUM_34;
```

```
Run;
```


SUM_34					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	14905	86.0	88.8	88.8
	1.00	1367	7.9	8.1	97.0
	2.00	345	2.0	2.1	99.0
	3.00	117	.7	.7	99.7
	4.00	31	.2	.2	99.9
	5.00	9	.1	.1	100.0
	6.00	3	.0	.0	100.0
	Total	16777	96.8	100.0	
Missing		549	3.2		
Total		17326	100.0		

*Step 4: Calculate Disability Identifier: **DISABILITY1***

The syntax below calculates the first disability identifier: **DISABILITY1** where the level of inclusion is at least one domain/question is coded SOME DIFFICULTY or A LOT OF DIFFICULTY or CANNOT DO AT ALL.

MISSING (.) are those who have coded 7, 8 or 9 on all six domains.

If missing(Vision) and missing(Hearing) and missing(Mobility) and missing(Cognition) and missing(Self_Care) and missing(Communication) **then** Disability1=.;
Else If SUM_234 >=1 **then** Disability1=1;
Else Disability1=2;

NOTE: SUM_234 >= 1 means that at least one of the six domains is coded at least SOME DIFFICULTY (2).

Proc Freq Data=SS.Funcdisb13;
Tables Disability1;
Run;

DISABILITY1						
		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted Percent*
Valid	without disability	9266	53.5	55.2	55.2	58.1
	with disability	7511	43.4	44.8	100.0	41.9
	Total	16777	96.8	100.0		100.0
Missing		549	3.2			
Total		17326	100.0			

*Weighted estimate provided – but is not part of the SAS syntax.

Step 5: Calculate Disability Identifier: **DISABILITY2**

The syntax below calculates the second disability identifier: **DISABILITY2** where the level of inclusion is: at least 2 domains/questions are coded SOME DIFFICULTY or any 1 domain/question is coded A LOT OF DIFFICULTY or CANNOT DO AT ALL.

MISSING (9) are those who have coded 7, 8 or 9 on all six domains.

```
If missing(Vision) and missing(Hearing) and missing(Mobility) and missing(Cognition) and  
missing(Self_Care) and missing(Communication) then Disability2=.;  
Else If (SUM_234 >=2 OR SUM_34=1) then Disability2=1;  
Else Disability2=2;
```

NOTE: The above syntax identifies those with at least two of the six domains coded as at least SOME DIFFICULTY (2): SUM_234 >= 2, OR those who have one domain that is coded A LOT OF DIFFICULTY (3) or CANNOT DO AT ALL (4): SUM_34 = 1.

```
Proc Freq Data=SS.Funcdisb13;  
Tables Disability2;  
Run;
```

		DISABILITY2				
		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted Percent*
Valid	without disability	12707	73.3	75.7	75.7	78.3
	with disability	4070	23.5	24.3	100.0	21.7
	Total	16777	96.8	100.0		100.0
Missing		549	3.2			
Total		17326	100.0			

*Weighted estimate provided – but is not part of the SAS syntax.

Step 6: Calculate Disability Identifier: **DISABILITY3**

The syntax below calculates the third disability identifier: **DISABILITY3** where the level of inclusion is: any 1 domain/question is coded A LOT OF DIFFICULTY or CANNOT DO AT ALL.

MISSING (9) are those who have coded 7, 8 or 9 on all six domains.

THIS IS THE CUT-OFF RECOMMENDED BY THE WG.

```
If missing(Vision) and missing(Hearing) and missing(Mobility) and missing(Cognition) and  
missing(Self_Care) and missing(Communication) then Disability3=.;  
Else If ((Vision = 3 OR Vision = 4) OR (Hearing = 3 OR Hearing = 4) OR (Mobility = 3 OR  
Mobility = 4) OR (Communication = 3 OR Communication = 4) OR (Self_Care = 3 OR  
Self_Care = 4) OR (Cognition = 3 OR Cognition = 4)) then Disability3=1;  
Else Disability3 = 2;
```

```
Proc Freq Data=SS.Funcdisb13;  
Tables Disability3;  
Run;
```

DISABILITY3

		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted Percent*
Valid	without disability	14905	86.0	88.8	88.8	90.5
	with disability	1872	10.8	11.2	100.0	9.5
	Total	16777	96.8	100.0		100.0
Missing		549	3.2			
Total		17326	100.0			

*Weighted estimate provided – but is not part of the SAS syntax.

Step 7: Calculate Disability Identifier: **DISABILITY4**

The syntax below calculates the fourth disability identifier: **DISABILITY4** where the level of inclusion is any one domain is coded CANNOT DO AT ALL (4).

MISSING (.) are those who have coded 7, 8 or 9 on all six domains.

If missing(Vision) and missing(Hearing) and missing(Mobility) and missing(Cognition) and missing(Self_Care) and missing(Communication) **then** Disability4=.

Else If ((Vision = 4) OR (Hearing = 4) OR (Mobility = 4) OR (Communication = 4) OR (Self_Care = 4) OR (Cognition = 4)) **then** Disability4=1;

Else Disability4 = 2;

Proc Freq Data=SS.Funcdisb13;

Tables Disability4;

Run;

DISABILITY4

		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted Percent*
Valid	without disability	16312	94.1	97.2	97.2	97.8
	with disability	465	2.7	2.8	100.0	2.2
	Total	16777	96.8	100.0		100.0
Missing		549	3.2			
Total		17326	100.0			

*Weighted estimate provided – but is not part of the SAS syntax.

APPENDIX

SAS Code Used with the 2013 NHIS Data File

```
Data SS.Funcdisb13;
    Set NHIS.Funcdisb13 ;

*The syntax below produces frequency distributions on each the six domains. Codes 7
(REFUSED), 8 (NOT ASCERTAINED) and 9 (DON'T KNOW) are INCLUDED as MISSING.;

*Vision;
*Generate frequency distribution for each domain question. Convert 7,8,9 to
missing;
    If VIS_SS2 in (1,2,3,4) then Vision=VIS_SS2;
    Else Vision=.;

*Communication;
*Generate frequency distribution for each domain question. Convert 7,8,9 to
missing;
    If COM_SS in (1,2,3,4) then Communication=COM_SS;
    Else Communication=.;

*Hearing;
*Generate frequency distribution for each domain question. Recode 7,8,9 to .;
    If HEAR_SS2 in (1,2,3,4) then Hearing=HEAR_SS2;
    Else If HEAR_SS2 in (7,8,9 ) then Hearing=.;

*Cognition: Degree of difficulty remembering or concentrating;
*Generate frequency distribution for each domain question. Recode 7,8,9 to .;
    If COG_SS in (1,2,3,4) then Cognition=COG_SS;
    Else If COG_SS in (7,8,9) then Cognition=.;

*Self care;
    If UB_SS in (1,2,3,4) then Self_Care=UB_SS;
    Else Self_Care=.;

*Mobility;
    If MOB_SS2 in (1,2,3,4) then Mobility=MOB_SS2;
    Else Mobility=.;

*Step 1: Generate frequency distributions on each of the six domain variables.;

*Step 2: Calculate a variable, SUM_234. SUM_234 summates the number of domains
coded SOME DIFFICULTY (2) or A LOT OF DIFFICULTY (3) or CANNOT DO AT ALL (4) for
each person. This new variable is used in the determination of disability
identifiers: DISABILITY1 and DISABILITY2.
The syntax below counts the number of domains/questions a person has that are coded
SOME DIFFICULTY (2) or A LOT OF DIFFICULTY (3) or CANNOT DO AT ALL (4).
Possible range 0: no difficulties in any domain, to 6: all six domains coded SOME
DIFFICULTY (2) or A LOT OF DIFFICULTY (3) or CANNOT DO AT ALL (4).
MISSING (9) are those who have coded 7, 8 or 9 on all six domains.;

    If missing(Vision) and missing(Hearing) and missing(Mobility) and
missing(Cognition) and missing(Self_Care) and missing(Communication) then
SumPoints=.;
Else If (Vision =1) and (Hearing =1) and (Mobility =1) and (Cognition =1) and
(Self_Care =1) and (Communication =1) then SumPoints=0;
```

```
Else SumPoints=SUM( (Vision in(2,3,4)), (Hearing in(2,3,4)), (Mobility in(2,3,4)), (Cognition in(2,3,4)), (Self_Care in(2,3,4)), (Communication in(2,3,4)) );
```

```

If SumPoints =. then SUM_234 =.;
Else If SumPoints = 1 then SUM_234=1;
Else If SumPoints = 2 then SUM_234=2;
Else If SumPoints = 3 then SUM_234=3;
Else If SumPoints = 4 then SUM_234=4;
Else If SumPoints = 5 then SUM_234=5;
Else If SumPoints = 6 then SUM_234=6;
Else If SumPoints = 0 then SUM_234=0;
```

***Step 3:** Calculate a variable, SUM_34. SUM_34 summates the number of domains coded A LOT OF DIFFICULTY (3) or CANNOT DO AT ALL (4) for each person.

This new variable is used in the determination of disability identifier: DISABILITY2.

The syntax below counts the number of domains/questions a person has that are coded A LOT OF DIFFICULTY (3) or CANNOT DO AT ALL (4)

Possible range 0: no difficulties coded A LOT OF DIFFICULTY (3) or CANNOT DO AT ALL (4) in any domain, to 6: all six domains coded A LOT OF DIFFICULTY (3) or CANNOT DO AT ALL (4). MISSING (9) are those who have coded 7, 8 or 9 on all six domains.;

```

If missing(Vision) and missing(Hearing) and missing(Mobility) and
missing(Cognition) and missing(Self_Care) and missing(Communication) then
SumPoints2=.;
Else If (Vision in(1,2)) and (Hearing in(1,2)) and (Mobility in(1,2)) and
(Cognition in(1,2)) and (Self_Care in(1,2)) and (Communication in(1,2))
then SumPoints2=0;
Else SumPoints2=SUM( (Vision in(3,4)), (Hearing in(3,4)), (Mobility in(3,4)), (Cognition in(3,4)), (Self_Care in(3,4)), (Communication in(3,4)) );
```

```

If SumPoints2 =. then SUM_34 =.;
Else If SumPoints2 = 1 then SUM_34=1;
Else If SumPoints2 = 2 then SUM_34=2;
Else If SumPoints2 = 3 then SUM_34=3;
Else If SumPoints2 = 4 then SUM_34=4;
Else If SumPoints2 = 5 then SUM_34=5;
Else If SumPoints2 = 6 then SUM_34=6;
Else If SumPoints2 = 0 then SUM_34=0;
```

***Step 4:** Calculate Disability Identifier: DISABILITY1. The syntax below calculates the first disability identifier: DISABILITY1 where the level of inclusion is at least one domain/question is coded SOME DIFFICULTY or A LOT OF DIFFICULTY or CANNOT DO AT ALL. MISSING (9) are those who have coded 7, 8 or 9 on all six domains;

```

If missing(Vision) and missing(Hearing) and missing(Mobility) and
missing(Cognition) and missing(Self_Care) and missing(Communication) then
Disability1=.;
Else If SUM_234 >=1 then Disability1=1;
Else Disability1=2;
```

***Step 5:** Calculate Disability Identifier: DISABILITY2. The syntax below calculates the second disability identifier: DISABILITY2 where the level of inclusion is: at least 2 domains/questions are coded SOME DIFFICULTY or any 1 domain/question is coded A LOT OF DIFFICULTY or CANNOT DO AT ALL.

MISSING (9) are those who have coded 7, 8 or 9 on all six domains;

```

If missing(Vision) and missing(Hearing) and missing(Mobility) and
missing(Cognition) and missing(Self_Care) and missing(Communication) then
Disability2=.;
Else If (SUM_234 >=2 OR SUM_34=1 ) then Disability2=1;
Else Disability2=2;

```

***Step 6: Calculate Disability Identifier: DISABILITY3.** The syntax below calculates the third disability identifier: DISABILITY3 where the level of inclusion is: any 1 domain/question is coded A LOT OF DIFFICULTY or CANNOT DO AT ALL. MISSING (9) are those who have coded 7, 8 or 9 on all six domains.
THIS IS THE CUT-OFF RECOMMENDED BY THE WG.;

```

If missing(Vision) and missing(Hearing) and missing(Mobility) and
missing(Cognition) and missing(Self_Care) and missing(Communication) then
Disability3=.;
Else IF ((vision = 3 OR vision = 4) OR (Hearing= 3 OR Hearing = 4) OR
(mobility= 3 OR mobility = 4) OR (Communication= 3 OR Communication = 4) OR
(Self_Care = 3 OR Self_Care = 4) OR (Cognition = 3 OR Cognition = 4)) then
Disability3=1;
Else Disability3 = 2;

```

***Step 7: Calculate Disability Identifier: DISABILITY4.** The syntax below calculates the fourth disability identifier: DISABILITY4 where the level of inclusion is any one domain is coded CANNOT DO AT ALL (4). MISSING (9) are those who have coded 7, 8 or 9 on all six domains;

```

If missing(Vision) and missing(Hearing) and missing(Mobility) and
missing(Cognition) and missing(Self_Care) and missing(Communication) then
Disability4=.;
Else IF ((vision = 4) OR (Hearing = 4) OR (mobility = 4) OR (Communication =
4) OR (Self_Care = 4) OR (Cognition = 4)) then Disability4=1;
Else Disability4 = 2;

```

Label

```

Vision="Degree of difficulty seeing"
Communication="Degree of difficulty communicating using usual language"
Hearing="Degree of difficulty hearing"
Cognition="Degree of difficulty remembering or concentrating"
Self_Care="Degree of difficulty with self-care"
Mobility="Degree of difficulty walking or climbing steps";

```

```

Format Vision Communication Hearing HEAR_3_R HEAR_4_R Cognition Self_Care
UB_1_R UB_2_R Mobility MOB_4_R MOB_5_R Diff.
Disability1 Disability2 Disability3 Disability4 DisabF.;
Run;

```

Title "NHIS 2013: Unweighted frequencies with missing included in the percent";

```

Proc freq data=SS.Funcdisb13;
Tables Vision Hearing Mobility Communication Self_Care Cognition SUM_234
SUM_34 Disability1 Disability2 Disability3 Disability4/missing;
Run;

```

Title;

Title "NHIS 2013: Unweighted frequencies";

```

Proc freq data=SS.Funcdisb13;
Tables Vision Hearing Mobility Communication Self_Care Cognition SUM_234
SUM_34 Disability1 Disability2 Disability3 Disability4;
Run;

```

Title;

```
Proc format library=SS.SS;  
  Value Diff  
    1="No Difficulty"  
    2="Some Difficulty"  
    3="A lot of Difficulty"  
    4="Cannot do at all"  
    .="Missing"  
;  
  Value DisabF  
    1="With Disability"  
    2="Without Disability"  
;  
Run;
```