Directrices analíticas:
La creación de identificadores de la discapacidad mediante la sintaxis SAS de la lista breve de preguntas sobre funcionamiento del Grupo de Washington

Introducción

La mejor manera de entender la discapacidad es plantearla como un continuo. Desde el punto de vista de la dificultad de funcionamiento, la "dificultad" se puede reflejar a través de una variedad de descriptores, desde "no tiene ninguna dificultad en absoluto" hasta "le resulta imposible", pasando por "tiene cierta dificultad" y "tiene mucha dificultad" para llevar a cabo la acción. Cada uno de estos descriptores representa un punto de corte o umbral al determinar el identificador de la discapacidad final, por ejemplo, para definir a las personas con discapacidad y sin esta. Estos niveles de funcionamiento se plasman también en las categorías de respuesta a la lista breve de preguntas sobre funcionamiento del Grupo de Washington.

La prevalencia de la discapacidad no consiste en una sola estadística, sino que se puede calcular utilizando varios umbrales según el propósito de la recopilación de datos y la presentación de informes al respecto. Por ejemplo, si el propósito es ofrecer acceso equitativo a los espacios públicos, el nivel de referencia de la inclusión para un identificador de la discapacidad podría ser *cierta dificultad*, ya que incluso las personas que presenten un grado bajo de dificultad de funcionamiento se beneficiarán de las adaptaciones dirigidas a eliminar barreras y facilitar el acceso. La instalación de escaleras mecánicas en lugar de escalones, por ejemplo, es un elemento de diseño universal habitual que beneficia a personas con una amplia gama de dificultades de movilidad. De manera alternativa, si el propósito es facilitar subsidios o prestaciones, el nivel de inclusión para un identificador de la discapacidad podría ser *le resulta imposible*, ya que solo las personas con limitaciones funcionales más graves cumplirían los criterios de elegibilidad más estrictos.

La sintaxis SAS descrita en este documento se aplica al cálculo de los cuatro identificadores de la discapacidad en cuatro umbrales. El uso de estos cuatro umbrales diferentes en la población de personas *con discapacidad* da lugar a los cuatro identificadores de la discapacidad siguientes:

Los **documentos sobre implementación del Grupo de Washington** comprenden las herramientas desarrolladas por el Grupo de Washington sobre Estadísticas de la Discapacidad con el objeto de recopilar datos sobre la discapacidad internacionalmente comparables a través de censos y encuestas. En los documentos se abordan las mejores prácticas en materia de ejecución de la lista breve, la lista ampliada, la lista breve mejorada, los módulos del Grupo de Washington y el Fondo de las Naciones Unidas para la Infancia (UNICEF) sobre el funcionamiento en niños y niñas de 2 a 4 años y de 5 a 17 años, y el módulo sobre discapacidad para encuestas de población activa del Grupo de Washington y la Organización Internacional del Trabajo (OIT), así como otras herramientas del Grupo de Washington. Entre muchos otros temas, se tratan la traducción, las especificaciones de las preguntas, las directrices analíticas, los códigos de programación para los análisis, y el uso de las herramientas con fines de desglose.

Para consultar otros documentos sobre implementación del Grupo de Washington y obtener información adicional, visite su sitio web: http://www.washingtongroup-disability.com/.

- **DISCAPACIDAD1**: el nivel de inclusión es al menos una esfera/pregunta codificada como TIENE CIERTA DIFICULTAD o TIENE MUCHA DIFICULTAD o LE RESULTA IMPOSIBLE.

- **DISCAPACIDAD2**: el nivel de inclusión es al menos dos esferas/preguntas codificadas como TIENE CIERTA DIFICULTAD, o una esfera/pregunta codificada como TIENE MUCHA DIFICULTAD o LE RESULTA IMPOSIBLE.

- **DISCAPACIDAD3**: el nivel de inclusión es al menos una esfera/pregunta codificada como TIENE MUCHA DIFICULTAD o LE RESULTA IMPOSIBLE.

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  NOTA: DISCAPACIDAD3 ES EL PUNTO DE CORTE RECOMENDADO POR EL GRUPO DE WASHINGTON.

  </div>

- **DISCAPACIDAD4**: el nivel de inclusión es cualquier esfera codificada como LE RESULTA IMPOSIBLE (4).

NOTA: la sintaxis SAS se basa en las *etiquetas de variable y etiquetas de valor* indicadas en las tablas que aparecen más adelante. Asegúrese de utilizar las mismas *etiquetas de variable y valor* O BIEN de revisar la sintaxis SAS con el fin de que refleje las *etiquetas* de su base de datos.

La lista breve de preguntas sobre funcionamiento del Grupo de Washington se aplica como parte de la Encuesta Nacional de Entrevistas de Salud (NHIS) de los Estados Unidos. Los datos utilizados para elaborar estas directrices proceden de la encuesta de 2013.

Nota dirigida a los usuarios de la Encuesta Nacional de Entrevistas de Salud: los nombres de variable del archivo de datos de dicha encuesta y la documentación pueden diferir de los indicados en este documento, p. ej., la esfera de cuidado personal indicada como SC_SS, es UB_SS en el archivo de datos y la documentación de la Encuesta Nacional de Entrevistas de Salud.

El código SAS utilizado para elaborar los productos de este documento se incluye íntegramente en el apéndice.

Preguntas o esferas de la lista breve del Grupo de Washington	Etiqueta de variable
1. ¿Tiene dificultad para ver, incluso cuando usa lentes?	VIS_SS
2. ¿Tiene dificultad para oír, incluso cuando usa un audífono?	HEAR_SS
3. ¿Tiene dificultad para caminar o subir escalones?	MOB_SS
4. ¿Tiene dificultad para recordar o concentrarse?	COG_SS
5. ¿Tiene dificultad para lavarse o vestirse (gestionar su autosuficiencia para el cuidado personal)?	SC_SS
6. Cuando emplea su lenguaje habitual, ¿tiene dificultad para comunicarse —por ejemplo, para entender a los demás o para que lo entiendan—?	COM_SS

Las etiquetas de valor utilizadas para cada pregunta de la lista breve son:

1. No tiene ninguna dificultad
2. Sí, tiene cierta dificultad
3. Sí, tiene mucha dificultad
4. Le resulta imposible
7. No contesta
8. No comprobado
9. No sabe

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.

```
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
```