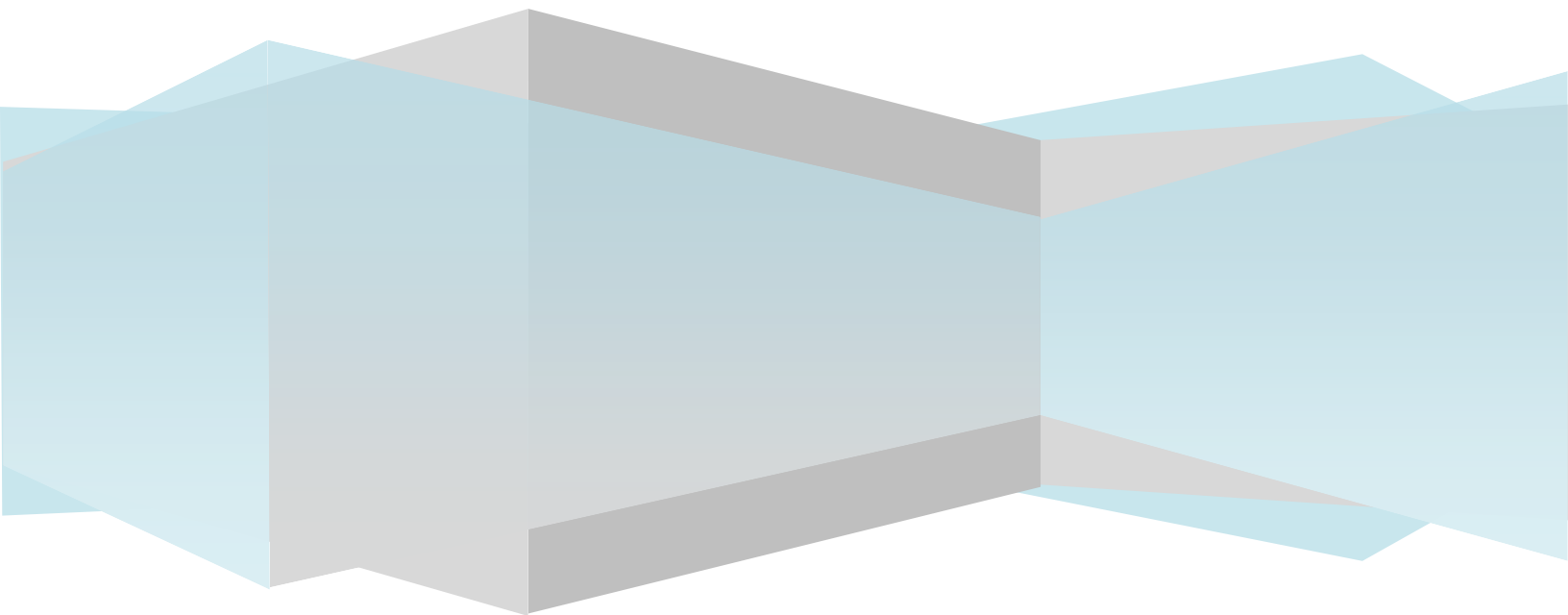


# In search of the minimum set of questions to identify the child population with disabilities



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## **1. Background**

In April 2010, the Minister responsible for HRSDC announced a new strategy for the collection and dissemination of data concerning people with disabilities. This new strategy includes data on people with disabilities as an integral component of the new socio-economic data system.

The data strategy for people with disabilities is composed of three pillars: data from surveys, data derived from administrative files and an integrated information platform. The first pillar consists of obtaining information using existing surveys, and when necessary, supplements to existing surveys. This approach maximizes the use of information in existing surveys by including a standard set of questions to identify people with disabilities. This will enable the analysis and dissemination of the information in existing surveys for persons with disabilities and persons without disabilities – subject, of course, to sufficient sample size and sampling variability. Supplements to existing surveys may be required to quantify specific issues concerning people with disabilities such as supports needed to fully participate in chosen daily activities, barriers encountered that prevent or impede full participation, etc. When fully implemented, this strategy is anticipated to provide timely information on labour market, health, education and social outcomes for people with disabilities.

In the past, data concerning people with disabilities was derived primarily from the disability-specific surveys – the 1983/84 Canadian Health and Disability Survey (CHDS), the 1986 and 1991 Health and Activity Limitation Surveys (HALS) and the 2001 and 2006 Participation and Activity Limitation Surveys (PALS).

The screening questions used to identify children with disabilities in PALS are considered to be the “state of the art”. These questions have been developed over time in consultation with the community, health and education professionals and program and service providers. These questions allow for the generation of data by type and severity of disability. However, these questions require considerable time to administer and this time may exceed the time available for adding new questions on surveys that include children with disabilities.

The *objective* of this research is to develop a set of questions using the 2006 PALS as the base for children aged from birth to 14 years that identify the majority (no less than 95%) of the population with disabilities while still maintaining the ability to generate data by type of disability. The report will include the set of questions for children with some options for consideration that include reducing the number of questions. The 2001 PALS data will be analyzed to ensure that the recommendations put forward from the 2006 PALS analysis are supported in the 2001 PALS data.

## **2. Methodology**

We had planned to use the methodology that was developed for a similar project for the adult population – persons with disabilities who are aged 15 years and older. This methodology was an iterative analysis of the responses to the screening questions (by type of disability) to establish any redundancies in the questions. Since the screening questions for children differed somewhat from the adult screen, we felt that it was important to explore those differences first before attempting to apply the adult methodology. In the end, the approach used was different.

We first examined children aged from birth to four years as a separate group since this is how they are dealt with in PALS. We then completed the analysis for all children with disabilities aged five to 14 years.

We repeated the exercise for 2001 PALS once the 2006 PALS analysis had been reviewed and accepted by HRSDC. We note that there were little differences between the 2006 and the 2001 PALS. For that reason, we include the 2001 tables as an Appendix to this report and we highlight any differences between the two data sources in the text of the report.

It is important to that the reader recognize that the 2006 PALS data that appear in this research report differ from the numbers released by Statistics Canada. Because we draw comparisons between 2001 PALS and 2006 PALS, we excluded those geographic areas in 2006 PALS that were not covered in 2001 PALS.

### 3. The Census and the PALS filter questions

A positive response to the disability questions on the 2006 Census of Population questionnaire provided the sampling frame for the 2006 PALS – children aged from birth to 14 years. A sample was selected and the 2006 PALS child questionnaire was completed by telephone interview (for the majority of selected children) with the parent or other responsible adult.

#### 3.1 Analyzing the data

<b>Table 3.1 False positives by age and gender, 2006 PALS</b>			
<b>Age</b>	<b>Gender</b>		
	<b>Both sexes</b>	<b>Females</b>	<b>Males</b>
Under 1	83.8%	92.2%	76.0%
1	81.0%	82.2%	79.5%
2	60.5%	61.8%	59.4%
3	45.4%	61.7%	30.9%
4	33.0%	32.3%	33.3%
5	35.5%	42.9%	31.6%
6	35.2%	34.7%	35.4%
7	39.6%	46.3%	34.5%
8	41.2%	47.8%	34.1%
9	32.5%	49.9%	21.2%
10	29.7%	40.6%	23.0%
11	30.9%	32.8%	29.3%
12	28.6%	36.1%	23.3%
13	38.1%	49.6%	29.2%
14	38.9%	43.8%	35.9%
<b>Total</b>	<b>40.6%</b>	<b>48.9%</b>	<b>34.6%</b>

The use of the 2006 Census as the sample frame for the 2006 PALS proved inefficient for children aged 14 years and younger with 40.6% of the sample identifying as not having a disability, i.e. - false positives; males – 34.6%, females 48.9%. It is interesting to note that the false positive rate is higher for females than for males at all ages. Table 3.1 shows that, for the most part, the false positive rate decreases as age increases. This same trend occurs within the adult population with disabilities. A similar pattern was noted in 2001 for both children and adults. Data for children for the 2001 PALS are provided in Appendix Table 3.1.

How could a parent or knowledgeable adult indicate some level of disability for the child on the Census questionnaire and then answer “No” to the same questions on the PALS questionnaire (the filter questions) and all of the detailed screening questions on the PALS questionnaire? We examined the consistency of responses between the Census and PALS and present the findings in the next three tables. If the response to the filter questions were reliable, then the data shown in Tables 3.2 to 3.5 would have 100% in the diagonal cells, e.g. – 100% of “No” response to the questions on the Census form would result in 100% of “No” response on the PALS questionnaire.

For children aged from birth to four years, we find some consistency (not perfect) between “No” to the Census and “No” to PALS across the four questions indicating a measure of reliability – a “No” most often means a “No”.

Movement from “sometimes” to “No” is highest for the question “limitation in activity at home” with 81.6% of the responses changing to “No”. Around 60% of the “sometimes” for the three other questions move to a “No” response. It is interesting to note that these three questions see about one-third of the response moving from “sometimes” to “often”. The same pattern is noted for the “often” responses to Census.

One can hypothesize that the movement in the responses between the Census and PALS could be the introduction used for the PALS survey. Such as “... identify difficulties and barriers these

children and their families may face.” Parents/knowledgeable adults may not want to classify their child as a child who experiences barriers nor admit that they themselves that they have a child who experiences barriers.

<b>Table 3.2 Response to filter questions for children aged from birth to four years inclusive, 2006 Census and 2006 PALS</b>						
Age group	PALS		No	Sometimes	Often	Total
	Census					
Difficulty hearing, etc.	No		90.9%	4.8%	4.3%	24,200
	Sometimes		60.0%	9.0%	31.0%	26,900
	Often		64.9%	18.2%	16.9%	20,400
Limitation in activity at home	No		90.4%	5.5%	4.1%	47,200
	Sometimes		39.0%	15.9%	45.2%	12,000
	Often		54.7%	33.6%	11.6%	12,300
Limitation in activity at school	No		89.1%	5.3%	5.5%	52,400
	Sometimes		56.3%	11.8%	31.9%	9,600
	Often		66.6%	19.4%	14.0%	9,500
Limitation in other activities	No		86.6%	8.3%	5.2%	39,900
	Sometimes		57.1%	7.6%	35.3%	14,400
	Often		69.4%	20.6%	10.0%	17,200

The response patterns between the two sources – Census and PALS – are somewhat consistent for the very young children (Table 3.2). “No” responses to all four questions remained fairly stable. The “sometimes” responses to the Census were the most unreliable across all four questions. The “often” responses – especially “limitation in other” – saw movement both to “No” and to “sometimes”.

<b>Table 3.3 Response to filter questions for children aged from five to nine years inclusive, 2006 Census and 2006 PALS</b>						
Age group	PALS		No	Sometimes	Often	Total
	Census					
Difficulty hearing, etc.	No		81.6%	9.2%	9.1%	25,700
	Sometimes		16.0%	17.4%	66.6%	24,900
	Often		30.4%	33.9%	35.6%	23,300
Limitation in activity at home	No		81.6%	12.9%	5.4%	31,100
	Sometimes		22.7%	24.4%	52.8%	17,000
	Often		37.9%	41.3%	20.8%	25,700
Limitation in activity at school	No		56.0%	29.9%	14.1%	15,000
	Sometimes		56.2%	13.5%	30.2%	26,200
	Often		35.1%	40.9%	24.1%	32,700
Limitation in other activities	No		74.2%	17.8%	8.0%	30,300
	Sometimes		35.3%	19.4%	45.3%	16,700
	Often		51.7%	32.3%	16.1%	26,900

The response patterns between the two sources – Census and PALS – are less consistent for the age group (5 to 9 years) than for the younger children (Table 3.3). While “No” responses to

“difficulty hearing, etc.”, “limitation at home” and “limitation in other activities” were somewhat stable, the “No” responses given “limitation at school” were far less stable with only 56% remaining “No”. The “sometimes” responses to the Census were the most unreliable across all four questions. The “often” responses – especially “limitation in other” – saw movement both to “No” and to “sometimes”.

<b>Table 3.4 Response to filter questions for children aged from 10 to 14 years inclusive, 2006 Census and 2006 PALS</b>					
<b>Age group</b>	<b>PALS</b>	<b>No</b>	<b>Sometimes</b>	<b>Often</b>	<b>Total</b>
	<b>Census</b>				
Difficulty hearing, etc.	No	70.2%	15.8%	14.0%	37,500
	Sometimes	12.5%	15.8%	71.7%	30,200
	Often	37.7%	35.9%	26.4%	31,600
Limitation in activity at home	No	80.7%	16.6%	2.7%	43,700
	Sometimes	20.9%	23.1%	56.0%	22,200
	Often	41.3%	45.1%	13.6%	33,400
Limitation in activity at school	No	59.1%	30.4%	10.5%	16,700
	Sometimes	51.7%	13.1%	35.2%	37,300
	Often	34.4%	36.2%	29.5%	45,300
Limitation in other activities	No	75.4%	17.1%	7.5%	45,000
	Sometimes	34.2%	16.7%	49.1%	20,900
	Often	47.2%	34.6%	18.2%	33,400

The response patterns between the two sources for children aged 10 to 14 years inclusive follow the same pattern as for children aged from five to nine years inclusive (Table 3.4).

### **3.2 Recommendation for filter questions to identify the sampling frame**

It is *recommended* that if filter questions are used to identify the sampling frame for children with disabilities, they should undergo some testing to determine if, and then how, the context of the survey changes the response patterns. However, it is *strongly recommended* that other sampling frames be explored such as the use of administrative data, e.g. – data collected by Ministries of Education.

## 4. Children with disabilities from birth to four years inclusive

The questions asked in both the 2001 and 2006 PALS to identify disability among children aged from birth to four years were identical. The filter questions and the screening questions identified an estimated 27,300 children with disabilities in this age group. The four filter questions on the 2001 and 2006 PALS questionnaire were a repeat of the Census disability questions and identified an estimated 1,800 children in the 2006 PALS who answered “Yes” to these questions and “No” to all of the disability screening questions. These children are classified as having an “Unknown” type of disability. Screening questions were asked that identified four types of disabilities — seeing, hearing, developmental and the presence of a chronic health condition that limits or prevents participation in activities. In the 2006 PALS, there were an estimated 25,500 children whose parent/knowledgeable adult indicated that her/his child had a seeing, hearing, developmental disability and/or a chronic health condition that limited her/his activities.

### 4.1 Analyzing the data

There were an estimated 27,300 (25,500 with an identified type of disability and 1,800 whose type of disability was unknown) children with disabilities in the 2006 PALS representing a disability rate of 1.7%. The majority — 63.4% or 17,300 — were aged three and four years. Males with disabilities outnumbered females with disabilities almost two to one. The disability rate increased as age increased with a disability rate of less than one percent for children under the age of one and for children aged one.

<b>Table 4.1. Children with disabilities aged from birth to four years inclusive, estimates and disability rates, 2006 PALS</b>							
	<b>Gender</b>	<b>Under one year</b>	<b>One year</b>	<b>Two years</b>	<b>Three years</b>	<b>Four years</b>	<b>Aged from birth to four years inclusive</b>
Estimate	Both sexes	3,100	2,500	4,400	7,100	10,200	27,300
	Females	700	1,300	2,000	2,300	3,400	9,700
	Males	2,400	1,200	2,400	4,800	6,800	17,600
Disability rate	Both sexes	0.9%	0.8%	1.3%	2.2%	3.2%	1.7%
	Females	0.4%	0.8%	1.3%	1.5%	2.2%	1.2%
	Males	1.4%	0.8%	1.3%	3.0%	4.2%	2.1%



<b>Table 4.2. Children with disabilities aged from birth to four years inclusive by type of disability, 2006 PALS</b>						
% of children who have ....	Age					
	Under one year	One year	Two years	Three years	Four years	Aged from birth to four years
<b>Estimate</b>	<b>3,100</b>	<b>2,500</b>	<b>4,400</b>	<b>7,100</b>	<b>10,200</b>	<b>27,300</b>
a seeing disability	16.4%*	30.1%*	6.8%*	10.0%*	6.7%	10.9%
a hearing disability	6.8%*	19.7%*	9.6%*	13.0%	11.5%	11.8%
a developmental disability	50.6%	77.8%	63.6%	71.0%	54.4%	62.0%
a chronic condition that limits their activity	64.5%	67.1%	71.4%	69.1%	72.6%	70.1%
a disability but the type is unknown	..	..	..	..	7.6%	6.6%
* Sample is small so use data with caution.						
.. Data suppressed because of sample size.						

Just over six out of ten children in this age group have a developmental disability and just over seven of ten children have a chronic condition that limits their activity level. Developmental and/or presence of a chronic condition that limits the child's activity account for 24,500 of the 25,500 children that have one of the four types of disabilities. These two questions result in some overlap –

11,500 or 47% are identified by both the chronic condition and the developmental question, 7,600 or 31% have a positive response to at least one of the chronic conditions and the remaining 5,400 or 22% have a response only to the development questions. An estimated 1,000 children have either a seeing or a hearing disability.

There were 1,800 children where the parent/knowledgeable adult answered “Yes” only to at least one of the Census filter questions and “No” to the remaining screening questions. When asked about the underlying condition or health problem, the majority cited speech or language disturbances while the remaining cited other underlying conditions. It is important to note that the estimates for children aged from birth to three years inclusive were not considered reliable because of sample size.

<b>Table 4.3. Children with developmental disabilities aged from birth to four years inclusive, by type of developmental disability, 2006 PALS</b>				
Age	Physical	Intellectual	Other	Total
Less than 1 year	68.9%	45.5%	32.4%	1,500
1	54.6%	39.3%	60.5%	2,000
2	51.7%	47.4%	50.9%	2,800
3	49.6%	58.5%	44.0%	5,100
4	35.2%	62.7%	34.8%	5,500
<b>Birth to 4 years</b>	<b>47.6%</b>	<b>54.6%</b>	<b>43.0%</b>	<b>16,900</b>

Among the 16,900 children with a developmental disability aged from birth to four years, 47.6% were reported to have a delay in their physical development with the proportion declining as age increased – from a high of 68.9% among children in their first year of life to 35.2% among 4-year olds. This might be because the child was premature and is “catching up” rather

than indicating that the child has a disability. This is something that should be discussed with the medical profession if these types of questions continue to be the method used to identify these young children.

Just over half (54.6%) of children with a developmental disability were reported to have a delay in their intellectual development and here the trend increased as age increased to a high of 62.7% among 4-year olds.

Among the 16,900 children with a developmental disability aged from birth to four years, 43% were reported to have other kind of delay with the largest proportion among children aged 2 to 4 years – 79.2%. According to the information on underlying condition provided by the parent or guardian, the majority of these delays were as a result of problems or conditions such as autism, epilepsy, cerebral palsy, hearing issues, speaking and communication problems and Down’s syndrome.

**Table 4.4. Children aged from birth to four years inclusive who have a chronic health problem that limits activity, 2006 PALS**

Ques. #	Chronic condition	Total number reporting condition that limits activity
CHRC_Q01A	Asthma or severe allergies	7,700
CHRC_Q01B	Heart condition or disease	1,900
CHRC_Q01C	Kidney condition or disease	400
CHRC_Q01D	Cancer	..
CHRC_Q01E	Diabetes	1,400*
CHRC_Q01F	Epilepsy	1,600
CHRC_Q01G	Autism	3,000
CHRC_Q01H	Cerebral Palsy	2,000
CHRC_Q01I	Spina Bifida	..
CHRC_Q01J	Cystic fibrosis	..
CHRC_Q01K	Muscular Dystrophy	100*
CHRC_Q01L	Migraines	100*
CHRC_Q01M	Arthritis/Rheumatism	..
CHRC_Q01N	Paralysis of any kind	200*
CHRC_Q01O	Missing or malformed arms, legs, fingers, toes	900
CHRC_Q01P	Fetal Alcohol Syndrome	400*
CHRC_Q01Q	Attention Deficit Disorder (ADD) or Attention Deficit Hyperactivity Disorder (ADHD)	1,600
CHRC_Q01R	Down syndrome	1,000
CHRC_Q01S	Complex medical care needs	3,100
CHRC_Q01T	Any other long-term condition diagnosed by a health professional, specify	6,300
	Total	19,100

\* Sample is small so use data with caution.  
 .. Data suppressed because of sample size.

This screening question includes 18 specific chronic conditions and two general questions at the end of the list that asks if the child has complex medical care needs and then any other long-term condition that has been diagnosed by a health professional. The majority of the specific conditions that are on the list have very small estimates. The two general questions at the end have the highest prevalence, excluding asthma or severe allergies.

One could consider changing this question by:

- deleting the diseases and conditions with low prevalence – cancer, diabetes, spina bifida, cystic fibrosis, muscular dystrophy, migraines, arthritis/rheumatism, paralysis of any kind, fetal alcohol syndrome,
- analyzing the responses to “other long-term condition diagnosed

by a health professional (write-in responses to “other (CHRC\_Q01T) and for those with sufficient prevalence, add to list,

- changing “Other long-term condition ...” to “Other long-term conditions ...” and providing numbered spaces for conditions to be entered – perhaps up to four. This is proposed based on an analysis of the responses to the write-in responses to “other” (CHRC\_Q01T) where the majority of respondents provided more than one chronic condition.

## **4.2 Recommendations for children aged from birth to four years**

1. The screening questions for children with disabilities aged from birth to four years should be in a separate section from those asked for children aged five to 14 years. This would simplify the flow pattern and enable the chronic condition list to be customized for this age group.
2. The filter questions identify 27,300 children with disabilities aged from birth to four years. We suggest that these questions should be modified as follows to reflect the young age of the children.
  - a. Does (\_\_\_\_) have any difficulty hearing, seeing, *speaking, learning new things, moving about, reaching for or grasping small objects, etc.?*”
  - b. Does a physical condition or mental condition or health problem reduce the amount or the kind of activity (\_\_\_\_) can do at home?
  - c. Does a physical condition or mental condition or health problem reduce the amount or the kind of activity (\_\_\_\_) can do *at school or pre-school or daycare?*
  - d. Does a physical condition or mental condition or health problem reduce the amount or the kind of activity (\_\_\_\_) can do in other activities *with parent, siblings or friends?*
3. Seeing and hearing disabilities account for only 1,000 children. Given that organ condition and disease are already included in the list of chronic conditions, one could add “eye condition or disease that affects seeing” and “ear condition or disease that affects hearing” to the list of chronic conditions.
4. Many of the chronic conditions included on the current list have a very low prevalence among children in this age group. We suggest deleting the conditions with low prevalence.
5. Complex medical care needs was identified by the parent/knowledgeable adult for 3,100 children. The responses to the main condition questions (CCMC\_Q02\_1, CCMC\_Q02\_2 and CCMC\_Q02\_3) could be explored to determine if there are specific conditions that could be added to the chronic condition list. We suggest deleting this category and allow parent/knowledgeable adult to provide conditions in the “Any other long-term condition ...”
6. The “Any other long-term condition ...” was identified by the parent/knowledgeable adult for 6,300 children. We suggest that the responses provided in write-in responses to CCHRC\_Q01T should be analyzed to determine if any conditions could be added to the chronic condition list.
7. Based on our analysis of the responses to the write-in responses to CHRC\_Q01T, the majority of respondents provide more than one condition. We suggest modifying the question to “Any other long-term conditions that have been diagnosed by a health professional” and provide numbered spaces (1 through 4) for write-ins.
8. We suggest dropping CHRC\_Q02, CHRC\_Q03A, CHRC\_Q03B and CHRC\_Q03C for two reasons.

- a. an analysis of the responses indicate that having a chronic condition at this age results in a limitation in activity, and
  - b. the respondent has just answered the filter questions – the last three of which are provide the same information.
9. We suggest asking the filter questions first (CFLT01 to CFLT04 with modifications as suggested), then the chronic condition list and then the developmental questions (CDFT\_Q01, CDFT\_Q02A, CDFT\_Q02b and CDFT\_Q02C.
10. We suggest that the Main Condition questions (CCMC) are redundant since you already have the main conditions in the chronic condition list and age of onset seems unnecessary given the age of the child.

### **4.3 Potential impact on estimates of children with disabilities**

By adding the eye and ear conditions to the list of chronic conditions, there should be no impact on the estimates produced by the modified list of questions that are described in Section 4.3 that follows.

### **4.4 Proposed questions for children aged from birth to four years**

#### **Filter questions**

1. Does (\_\_\_\_) have any difficulty hearing, seeing, *speaking, learning new things, moving about, reaching for or grasping small objects, etc.?*”
2. Does a physical condition or mental condition or health problem reduce the amount or the kind of activity (\_\_\_\_) can do at home?
3. Does a physical condition or mental condition or health problem reduce the amount or the kind of activity (\_\_\_\_) can do *at school or pre-school or daycare?*
4. Does a physical condition or mental condition or health problem reduce the amount or the kind of activity (\_\_\_\_) can do in other activities *with parent, siblings or friends?*

#### **Chronic conditions**

5. Does (\_\_\_\_) have any of the following LONG\_TERM conditions that have been DIAGNOSED by a health professional?
  - a. Asthma and severe allergies
  - b. Heart condition or disease
  - c. **NEW** Eye condition or disease
  - d. **NEW** Ear condition or disease
  - e. Diabetes
  - f. Epilepsy
  - g. Autism
  - h. Cerebral palsy
  - i. Missing or malformed arms, legs, fingers, toes
  - j. Attention Deficit Disorder (ADD) or Attention Deficit Hyperactivity Disorder (ADHD)
  - k. Down’s syndrome
  - l. Complex medical care needs
  - m. Any other LONG-TERM condition(s) that has (have) been diagnosed by a health professional, specify:
    - a. ....

- b. ....
- c. ....
- d. ....

**Developmental questions**

- 6. Because of a condition or health problem, does (\_\_\_\_) have a delay in (his/her) development, either a physical, intellectual or another type of delay? If Yes, what kind of delay is this?
  - 1. A delay in (his/her) physical development?
  - 2. A delay in (his/her) intellectual development?
  - 3. Other type of delay? Specify .....

## 5. Children with disabilities aged from five to 14 years

The set of questions used to identify children with disabilities who are five to 14 years is a mix of the adult approach and the very young child approach. For example, the list of chronic conditions is a good tool for the very young child – those under the age of five – to identify any disease, condition or anomaly that may have an impact on the child’s physical and intellectual development and therefore result in a disability. By the time the child is five, the nature and extent of the limitation as a result of a health problem or condition begins to manifest itself in a particular type of disability.

The PALS filter and screening questions uses the same framework as the adult population – defining disability by classifying the limitation in activity by ten types – mobility, agility, seeing, hearing communicating, learning, developmental/intellectual, emotional/psychological/behavioural and type of disability unknown. What is different between the child (5 to 14 years) and the adult population is that there is also the list of chronic conditions. This list covers 18 specific diseases and conditions that are associated with disability among children. It also includes two general categories – complex medical needs and a write-in for other diseases or conditions. The 10 types of disabilities cover 91.1% of the 173,200 children identified as having a disability in the 2006 PALS. The remaining 8.9% or 15,500 children are only identified through the chronic conditions question and among those children an estimated 9,000 children are reported to have only asthma or severe allergies.

The following two tables provide some basic data about the population with disabilities aged five to 14 years that were identified through questions that are similar to the adult screening questions, the filter questions and the chronic conditions that limit activity.

<b>Table 5.1. Children with disabilities aged 5 to 14 years inclusive, estimates and disability rates, 2006 PALS</b>						
<b>Age</b>	<b>Estimate</b>			<b>Disability rate</b>		
	<b>Females</b>	<b>Males</b>	<b>Both sexes</b>	<b>Females</b>	<b>Males</b>	<b>Both sexes</b>
5	3,700	8,500	12,200	2.3%	5.4%	3.8%
6	4,900	9,700	14,600	2.8%	5.1%	4.0%
7	5,900	9,400	15,300	3.7%	5.5%	4.7%
8	6,100	7,200	13,300	3.8%	4.0%	3.9%
9	5,400	13,100	18,500	2.7%	6.6%	4.6%
10	6,500	13,600	20,100	3.1%	7.0%	5.0%
11	9,500	12,000	21,500	5.3%	5.7%	5.5%
12	7,200	12,500	19,700	4.0%	5.8%	5.0%
13	6,300	11,300	17,600	3.0%	5.9%	4.4%
14	7,200	13,200	20,400	3.5%	5.8%	4.7%
<b>5 to 14 years</b>	<b>62,700</b>	<b>110,500</b>	<b>173,200</b>	<b>3.4%</b>	<b>5.7%</b>	<b>4.6%</b>

Males outnumber females across all ten years with the largest differences in ages five, nine and ten. The disability rate is also consistently higher for males than females with the lowest rate being for females aged five years (2.3%) and the largest for males aged 10 years (7%).

<b>Table 5.2. Disability by type and age group, 2006 PALS</b>			
<b>Type of disability</b>	<b>5 to 9 years</b>	<b>10 to 14 years</b>	<b>5 to 14 years</b>
Mobility	9,600	13,200	22,800
Agility	20,500	16,200	36,700
Seeing	6,500	10,100	16,600
Hearing	7,700	12,100	19,800
Communicating	37,300	40,200	77,500
Learning	48,800	71,400	120,200
Development	25,000	28,200	53,200
Emotional/Psychological/Behavioural	24,700	35,000	59,700
Chronic condition that limits activity	50,000	65,300	115,300
Unknown	2,600	3,600	6,200
<b>Total</b>	<b>73,900</b>	<b>99,300</b>	<b>173,200</b>

Having a learning disability or a chronic condition that limits activity or having a communication disability are the most prevalent types of disabilities among children aged from five to 14 years – 69.4%, 66.6% and 44.7% respectively; seeing, hearing and mobility have the lowest rates at 9.6%, 11.4% and 13.2% respectively.

Just over one quarter (45,400 or 26.2%) of children with disabilities have only one type of

disability. Among those, the majority (15,500 or 33%) report only one or more chronic conditions that limit activities. Among those 15,500 or 34% report only a chronic condition and 13,800 or 30% report only a learning disability.

## **5.1 Analyzing the data**

In analyzing the data for children with disabilities aged from five to 14 years, we took a step back and viewed children with disabilities as children and thought that we should revisit the concept of disability and the impact that the use of a technical aid might have on the life of a child with a disability. We also felt that it was important to revisit the way in which cognitive disabilities were being identified – large overlap between learning and developmental and the emotional/psychological/behavioural question to identify children with a mental health problem. Given the increase emphasis on bullying and the fact that this is significant among children with disabilities, we felt that this was an opportunity to address this issue as well.

However, given that the objective of the research was to identify the minimum set of question, we have done two things with the analysis. We have “tweaked” the existing questions and present those as Option 1 in Section 5.5. We summarize our other changes based on the use of technical aids and the cognitive issues and present them as Option 2 in Section 5.5.

The current set of filter and screening questions include questions to identify the nature of the disability and a list of chronic conditions. What the chronic condition list provides is the ability to examine what types of disabilities are associated with a particular condition or disease. For example, an estimated 18,000 children were identified by the respondent as having autism. We could profile these children including what other types of disabilities these children have as well as that these children and their families face in the conduct of their daily life activities. To our knowledge, these data have not been disseminated in this manner.



### **5.1.1 Chronic condition question**

We suggest that the chronic conditions list provides yet another characteristic of the child's disability characteristics. Given that, we suggest that it is not necessary as a screener. In examining the data, we determined that if we dropped the chronic condition question as a screener, the effect would be a loss of 15,500 children aged from five to 14 years (9% of children in that age group with disabilities). However, 83% or 12,800 of these children were also identified through the filter questions. These 12,800 children would increase the number of children with an unknown type of disability from 6,200 to 19,000. The loss then would be 2,700 with the effect slightly more pronounced among children aged from 10 to 14 years – 1,000 for children aged from five to nine years and 1,700 among children aged 10 to 14 years.

### **5.1.2 The filter questions**

Making the assumption that the chronic condition is dropped as a screening question, we now have increased the number of children with an unknown type of disability from 6,200 to 19,000. An examination of the “main condition” data, as coded to the ICD-10 classification system, indicates that these two populations are different with respect to their underlying condition or health problem. Among the 6,200, 38% cite a hearing problem as one of their underlying conditions and 16% report a disease of the respiratory system – asthma, allergies, etc. By contrast, among the 12,800 that are added because of dropping the chronic condition question, 67% report a disease of the respiratory system.

With respect to the filter questions, we suggest that they be modified as per the suggestion made for children aged from birth to four years excluding the reference to pre-school and perhaps daycare.



### 5.1.3 Seeing questions

PALS currently asks the seeing questions that are similar to those asked of adults. PALS asks five questions of which two establish the seeing disability and the other three establish the degree of difficulty.

**Table 5.3. Children who wear glasses by type of disability and age group, PALS 2006**

Disability type	Use of glasses	5 to 9 years	10 to 14 years	5 to 14 years
Children with disabilities	Wears glasses and does not have a seeing disability but has other types of disabilities	12,800	27,200	40,000
	Wears glasses and has a seeing disability	3,400	4,900	8,300
	Does not wear glasses but has a seeing disability	3,100	5,100	8,200
Children without disabilities	Wears glasses and does not have any type of disability	6,500	17,700	24,200
	Does not wear glasses and does not have any type of disability	110,300	131,400	241,700
<b>Total</b>		<b>116,800</b>	<b>149,100</b>	<b>265,900</b>

The first screening question current in PALS deals with wearing glasses. Of the estimated 265,900 children selected for participation in the 2006 PALS, an estimated 72,500 or 27.3% wore glasses. Of those, 33% or 24,200 wore glasses but did not answer “Yes” to any of the filter or screening questions and were therefore classified as a child without a disability.<sup>1</sup> It is interesting to note that 11,600 or 48% of these children were reported on the Census as having to reduce the kind or amount of activity that they did at school.

Is it the wearing of glasses that triggered a positive response to the “limitation at school” question on the Census but the context of the PALS survey that triggered a negative response to the same question on PALS along with a positive response to the wearing of glasses on PALS? We suggest that we could only know through further testing.

There were 40,000 children who indicated that they wore glasses but indicated that they did not have a seeing disability but other screening questions indicated that they had other types of disabilities.

The remaining 8,300 or 11.5% who wore glasses continued to have some difficulty seeing and were classified as having a seeing disability.

Therefore, based on this analysis, should all children who wear glasses be counted as having a seeing disability? If so, the number of children with a seeing disability would increase to 72,500 and the number of children with disabilities aged from five to 14 years would increase by 24,200, increasing the number from 173,200 to 197,400. We raise this issue because we believe that a child aged from five to 14 years is on an incredible learning curve and the use of a technical aid at this point in her/his life may be a signal for a potential problem in the future.

We suggest, therefore, that there are two options for consideration.

<sup>1</sup> This analysis could not be done because the false positives were on a separate file and the response to the glasses question was not included.

1. Reformat the seeing questions in line with the new approach to identify adults with a seeing disability.
2. Reformat the existing questions and include children who wear glasses but report no difficulty seeing as a child who has a seeing disability. This would increase the number of children with disabilities by at least 24,200 and would increase the number of children with a seeing disability by 64,200.

Before adopting this approach, we suggest that it is important to discuss it with pediatric health professionals to establish the types of conditions or diseases that result in children wearing glasses at an early age and the extent to which this might result in a seeing disability in the future.

### 5.1.4 Hearing questions

PALS currently asks the hearing questions that are similar to the ones asked on the adult PALS questionnaire. PALS asks five questions of which two establish the presence of a hearing disability and the other three to establish the degree of difficulty.

**Table 5.4. Children who use a hearing aid by type of disability and age group, PALS 2006**

Disability type	Use a hearing aid	5 to 9 years	10 to 14 years	5 to 14 years
Children with disabilities	Uses a hearing aid and does not have a hearing disability but has other types of disabilities	1,400	2,400	3,800
	Uses a hearing aid and has a hearing disability	1,400	2,100	3,500
	Does not use a hearing aid but has a hearing disability	6,200	10,100	16,300
Children without disabilities	Uses a hearing aid and does not have any type of disability	..	..	500
	Does not use a hearing aid and does not have any type of disability	..	..	241,700
<b>Total</b>		<b>116,800</b>	<b>149,100</b>	<b>265,900</b>

.. Means either the number was suppressed because of small sample size (uses a hearing aid but no disability) or suppressed because of residual disclosure.

The first question deals with using a hearing aid or hearing aids. Of the estimated 265,900 children selected for participation in the 2006 PALS, an estimated 7,800 or 3% use hearing aids. Of those, 500 (6%) used a hearing aid but did not answer “Yes” to any of the filter or screening questions and were classified as a child without a disability. The sample was too small to provide any insights into the responses to the filter questions on the Census.<sup>2</sup>

There were 3,800 children identified as using a hearing aid but for whom the respondent to PALS indicated that they did not

have a hearing disability but other screening questions indicated that they had other types of disabilities. The remaining 3,500 children who used a hearing aid still continued to have some difficulty hearing and were classified as having a hearing disability.

<sup>2</sup> This analysis could not be done because the false positives were on a separate file and the response to the hearing aid question was not included.

There were 16,300 children who experienced some difficulty hearing but did not use a hearing aid. Among this group, 6,200 are aged five to nine years and 10,100 are aged 10 to 14 years.

This analysis provides results that are somewhat different from what we saw in the seeing analysis. Firstly, very few children who are classified as having difficulty hearing wear a hearing aid. Secondly, more than half of the children who wear a hearing aid indicate that they no longer have any difficulty hearing and are not classified as having a hearing disability. And finally, there are only 500 children who use a hearing aid that are classified as a child without a disability. Using the same rationale as applied for the seeing questions, we suggest two options.

1. Reformat the hearing questions in line with the new approach to identify adults with a hearing disability.
2. Reformat the existing questions and include children who use a hearing aid but report no difficulty hearing as a child who has a hearing disability. This would increase the number of children by at about 500 with respect to the total number of children with disabilities and would increase the number of children with a hearing disability by 4,300.

Before adopting this approach, we suggest that it is important to discuss it with paediatric health professionals to establish the types of conditions or diseases that result in children who use a hearing aid at an early age and the extent to which this might result in a hearing disability in the future.

### **5.1.5 Mobility question**

PALS 2006 asked only one question to establish the 22,800 children who have a mobility disability and it did not include reference to the use of a technical aid. The PALS 2001 did include a reference and the number identified with a mobility disability was 21,200. In both surveys, the question was the same except for reference to the use of a technical aid.

The new question to identify a mobility disability among adults is more general in terms of walking – does not provide any example such as walking on a flat firm surface, such as a sidewalk or floor – but adds another type of walking difficulty – climbing stairs.

We suggest that the adult question be used for children as it may identify additional children who have breathing difficulties (such as asthma) or heart issues.

### **5.1.6 Agility question**

PALS asked only one question to establish the 36,700 children who have an agility disability, defined as a child who has difficulty his/her hands or fingers to grasp or to hold small objects such as a pencil or scissors. We have no suggestion for change to the question.

## 5.1 7 Communication questions

PALS asked five questions to identify a communication disability. These questions addressed two types of communication issues – difficulty speaking and difficulty being understood when speaking. An additional three-part question was asked to determine with whom the child had difficulty being understood when speaking – family, friends and others.

**Table 5.5. Communication disability by type degree of difficulty and age group, 2006 PALS**

Type of communication disability	Degree of communication disability	5 to 9 years	10 to 14 years	5 to 14 years
<b>Difficulty speaking</b>	<b>Total</b>	<b>37,300</b>	<b>40,200</b>	<b>77,500</b>
	Yes – cannot speak	2,400	4,000	6,400
	Yes – a lot of difficulty	8,100	7,300	16,400
	Yes – some difficulty	15,900	14,000	29,900
	No difficulty	10,900	14,900	25,800
<b>Difficulty being understood when speaking</b>	<b>Total</b>	<b>34,900</b>	<b>36,200</b>	<b>71,100</b>
	Yes	31,900	33,700	65,600
	No	3,000	2,500	5,500

Of the 173,200 children with disabilities aged from five to 14 years, 77,500 or 45% were classified as having a communication disability that manifests itself either with difficulty speaking

or with difficulty being understood when speaking. There were an estimated 25,800 or 33% of children with a communication disability that reported that they had no difficulty speaking and 6,400 or 8% for whom it was reported that they could not speak at all.

For the 71,100 children who had either some difficulty speaking but who could speak or who had no difficulty speaking, the question was asked about difficulty being understood when speaking. Among those children, 5,500 or 8% reported that they had no difficulty being understood when speaking.

The flow of the questions was complex and we suggest that it could be simplified as follows: Ask of all children aged from five to 14 years “Because of a health problem or condition, does (\_\_\_) have any difficulty when she/he is speaking? Would you say (\_\_\_) cannot speak at all, (\_\_\_) has a lot difficulty speaking, (\_\_\_) has some difficulty speaking or (\_\_\_) has no difficulty speaking. There would be a follow-up question asked of all children except those for whom it was stated “Cannot speak at all”. The follow-up question would be “Because of a health problem or condition, does (\_\_\_) have any difficulty being understood when speaking?”

We suggest that these two questions that would provide the data that are shown in Table 5.5 but would not provide the detail included in COFT\_Q05A, COFT\_Q05B and COFT\_Q05C. We suggest that these data in these three questions are similar to the chronic conditions question in that it provides some additional detail about the child’s disability characteristics but is not necessary to establish the nature of the disability.

We tried to see if there was some way to combine the two questions since there is a great overlap between the two but the response categories got too complex. However, this may be something to consider and perhaps the questionnaire design people at Statistics Canada may have some suggestions.

### 5.1.8 “Cognitive” disability questions

PALS asks four questions to determine type of cognitive disability – two to establish a learning disability, one to establish a developmental disability or disorder and one to establish the presence of an emotional, psychological or behavioural condition (cited as “emotional” for the rest of this discussion) that has lasted or is expected to last six months or more. Of the 173,200 children with disabilities aged five to 14 years, 130,800 or 75% report at least one of these three conditions – 53,400 children aged five to nine years and 77,400 aged 10 to 14 years.

Type of disability	5 to 9 years	10 to 14 years	5 to 14 years
<b>All type of disabilities</b>	<b>73,900</b>	<b>99,300</b>	<b>173,200</b>
<b>At least one “cognitive” disability</b>	<b>53,400</b>	<b>77,400</b>	<b>130,800</b>
All three “cognitive” disabilities	14,600	14,900	29,500
Only learning	20,000	29,800	49,800
Only developmental	2,200	2,700	4,900
Only “emotional”	800	2,500	3,400
Learning and developmental	6,500	9,900	16,400
Learning and “emotional”	7,700	16,800	24,500
Developmental and “emotional”	1,600	800	2,400

We examined the three cognitive types of disabilities together to determine the nature and extent of the overlap among children with disabilities who reported at least one cognitive disability. There was an estimated 29,500 or 23% who reported having all three types of cognitive disabilities.

We found that 58,100 or 44% reported only one type of cognitive disability and among those, only 3,400 reported only an “emotional” disability. We examined the ICD responses provided for 3,400 children who reported only an “emotional” disability and saw no pattern – the sample was quite small. We suggest that if this question is being asked to identify children with problems as a result of a mental health condition (including bullying), then perhaps the word “behavioural” should be dropped since it seems to be picking up children with ADD/ADHD and learning disabilities and consideration be given to adding “being bullied”. However, before these changes are accepted, we suggest that consultation be undertaken with mental health care professionals to determine the best way to identify children with mental health problems.

We also found that of the 52,300 children who were reported to have a developmental disability, only 4,900 or 9% reported that their only cognitive disability was developmental. This is not surprising because the majority responded “yes” to all three types of cognitive disabilities and there was significant overlap between only learning and developmental. We have no suggestions how to change the developmental question. We suggest that if there continues to be a requirement to produce data for children with a learning disability and those with a developmental disability, some additional work will have to be undertaken to eliminate the overlap between the two since the learning disability definition supported by the Learning Disabilities Association of Canada (LDAC) excludes the possibility of having a learning disability and a developmental disability. We suggest that additional work be undertaken with representatives from LDAC and the Canadian Association for Community Living (CACL) to get a better understanding of how to differentiate between the two types of disabilities. It may also be appropriate to involve health and education professionals as well.

Finally, we looked at the two questions that identified the 120, 200 children with a learning disability and explored the relationship of the two questions. The first question dealt with the

respondent's perception concerning the child having a learning disability and the second asked if the child had been diagnosed as having a learning disability.

<b>Table 5.7. Learning disability by response to the two learning questions by age and gender, PALS 2006</b>			
<b>Response to the two learning disability questions</b>	<b>5 to 9 years</b>	<b>10 to 14 years</b>	<b>5 to 14 years</b>
Only perception of learning disability	8,700	5,200	13,900
Only diagnosed learning disability	5,600	8,900	14,500
Both perception and diagnosed	34,500	57,300	91,800
<b>Total</b>	<b>48,800</b>	<b>71,400</b>	<b>120,200</b>

The majority of respondents provided a positive response to the two questions – 91,800 or 76%.

The difficulty with the “perception” question is that it includes the words “attention problems” and “hyperactivity” as three of the three examples provided. This could be the source of the overlap between learning and developmental disabilities.

We did some investigation of the children who have been identified as having a learning disability to establish whether their disability characteristics are different but the samples were too small to offer any valid insights.

## 5.2 Recommendations for children aged five to 14 years

1. The screening questions for children with disabilities aged from 5 to 14 years should be in a separate section from those asked for children aged birth to four years. This would simplify the flow pattern and enable the screening questions to be customized, firstly for the very young child (those under five years of age) and then for the older child.
2. We suggest that the filter questions should be modified as follows to reflect the activities that a child does during the ages of five to 14 years.
  1. Does (\_\_\_\_) have any difficulty hearing, seeing, *speaking, learning new things, moving about, reaching for or grasping small objects, etc.?*
  - 2a. Does a physical condition or mental condition or health problem reduce the amount or the kind of activity (\_\_\_\_) can do at home?
  - 2b. Does a physical condition or mental condition or health problem reduce the amount or the kind of activity (\_\_\_\_) can do *at school or daycare?*
  - 2c. Does a physical condition or mental condition or health problem reduce the amount or the kind of activity (\_\_\_\_) can do in other activities *with parent, siblings or friends?*
3. In examining the data, we determined that if we dropped the chronic condition question as a screener, the effect would be a loss of 15,500 children aged from five to 14 years (9% of children in that age group with disabilities). However, 83% or 12,800 of these children were also identified through the filter questions. These 12,800 children would increase the number of children with an unknown type of disability from 6,200 to 19,000. The loss then would be 2,700. Given that, we suggest that it is not necessary to use the chronic condition list as a screener.
4. We have concerns that the use of technical aids are a criterion for only hearing and seeing and has been dropped in the PALS 2006 for mobility and was not used in either PALS for agility. Given that, we examined the use of glasses and hearing aids to establish the extent of



use and how the data for these two types of disabilities were affected. As a result, we are recommending two options for both the seeing and hearing questions.

- a. For seeing, we suggest that Option 1 is adopting the structure currently being tested for the adults. The question incorporates the use of glasses into the question and the response categories provide the information needed to determine the severity of the limitation. Option 2 would use the old structure but would include all children who wear glasses as having a seeing disability. This would increase the number of children aged from five to 14 years with disabilities from 173,200 to 197,400 and the number of children with a seeing disability to 72,500.
  - b. For hearing, we suggest that Option 1 is adopting the structure currently being tested for the adults. The question incorporates the use of hearing aids into the question and the response categories provide the information needed to determine the severity of the limitation. Option 2 would use the old structure but would include all children who use hearing aids as having a hearing disability. This would increase the number of children aged from five to 14 years with disabilities from 173,200 to 173,700 and the number of children with a hearing disability to 24,100.
5. We suggest that the question currently being tested to identify a mobility disability in adults should be adopted for children with disabilities. This new question includes difficulty climbing stairs and would have the potential of including children with a breathing problem (asthma, etc.) or heart issues.
  6. We suggest no change to the agility question.
  7. The speaking questions used in the 2006 PALS had a very complex flow pattern. We suggest that they could be modified as follows:
    - a. Ask of all children aged from five to 14 years “Because of a health problem or condition, does (\_\_\_) have any difficulty when she/he is speaking? Would you say (\_\_\_) cannot speak at all, (\_\_\_) has a lot difficulty speaking, (\_\_\_) has some difficulty speaking or (\_\_\_) has no difficulty speaking.
    - b. There would be a follow-up question asked of all children except those for whom it was stated “Cannot speak at all”. The follow-up question would be “Because of a health problem or condition, does (\_\_\_) have any difficulty being understood when speaking?”

We suggest that these two questions that would provide the data that are shown in Table 5.5 but would not provide the detail included in COFT\_Q05A, COFT\_Q05B and COFT\_Q05C. We suggest that these data in these three questions are similar to the chronic conditions question in that it provides some additional detail about the child’s disability characteristics but is not necessary to establish the nature of the disability.

8. The four questions used to identify children with “cognitive” disabilities posed the most challenge in terms of who they included and the overlap among the three. We suggest that:
  - a. the “emotional” question should be revised to ensure that it is identifying children with mental health issues. This question should be reviewed by mental health care professionals
  - b. the “perception” question used to identify children with learning disabilities is very often answered by children with a developmental disability. This could be because of the examples given in the question. This question should be reviewed by CACL and LDAC as well as health and education professionals.

### **5.3 Potential impact on estimates of children with disabilities aged five to 14 years**

Depending on the options chosen, there may or may not be an impact on the estimates of children with disabilities. This section of the report will be written once it is decided which option will be chosen for seeing and hearing.

### **5.4 Proposed questions for children aged from five to 14 years**

#### **5.4.1 Option 1**

Option 1 involves a “tweaking” of the PALS questions plus minor changes proposed to the seeing, hearing and mobility questions plus dropping the chronic conditions question.

#### **Filter questions**

1. Does (\_\_\_\_) have any difficulty hearing, seeing, *speaking, learning new things, moving about, reaching for or grasping small objects, etc.?*”
2. Does a physical condition or mental condition or health problem reduce the amount or the kind of activity (\_\_\_\_) can do at home?
3. Does a physical condition or mental condition or health problem reduce the amount or the kind of activity (\_\_\_\_) can do *at school or daycare?*
4. Does a physical condition or mental condition or health problem reduce the amount or the kind of activity (\_\_\_\_) can do in other activities *with parent, siblings or friends?*

#### **Seeing question**

5. Does (\_\_\_\_) have difficulty seeing, even when wearing glasses? Would you say no difficulty, some difficulty, a lot of difficulty or completely unable to see.

#### **Hearing question**

6. Does (\_\_\_\_) have difficulty hearing, even when using a hearing aid? Would you say no difficulty, some difficulty, a lot of difficulty or completely unable to hear.

#### **Mobility question**

7. Does (\_\_\_\_) have difficulty walking or climbing steps? Would you say no difficulty, some difficulty, a lot of difficulty or completely unable to do this.

#### **Agility question**

8. Does (\_\_\_\_) have any difficulty using his/her hands or fingers to grasp or hold small objects, such as a pencil or scissors? Would you say no difficulty, some difficulty, a lot of difficulty or completely unable to do this.

#### **Communication questions**

9. Does (\_\_\_\_) have any difficulty when she/he is speaking? Would you say (\_\_\_\_) cannot speak at all, (\_\_\_\_) has a lot difficulty speaking, (\_\_\_\_) has some difficulty speaking or (\_\_\_\_) has no difficulty speaking.



NOTE: There would be a follow-up question asked of all children except those for whom it was stated “Cannot speak at all”.

10. Does (\_\_\_\_) have any difficulty being understood when speaking?

### **Learning questions**

11. Do you think that (\_\_\_\_) has a learning disability, such as dyslexia, hyperactivity or attention problems?

12. Has a teacher, doctor or other health professional ever said that (\_\_\_\_) had a learning disability?

NOTE: We suggest that the follow-up question to establish severity does not capture the impact of having a learning disability. We suggest that this should be discussed with LDAC and education and health professionals.

### **Developmental question**

13. Has a doctor, psychologist or other health professional ever said that (\_\_\_\_) has a developmental disability or disorder?

NOTE: We suggest that the follow-up question to establish severity does not capture the impact of having a learning disability. We suggest that this should be discussed with CACL and education and health professionals.

### **Emotional/Psychological/Behavioural question**

14. Does (\_\_\_\_) have any emotional, psychological or behavioural conditions that have lasted or are expected to last six months or more?

NOTE: We suggest that the follow-up question to establish severity does not capture the impact of having a learning disability. We suggest that this should be discussed with mental health professionals.

## **5.4.2 Option 2**

Option 2 affects the seeing, hearing and cognitive questions.

### **Filter questions**

1. Does (\_\_\_\_) have any difficulty hearing, seeing, *speaking, learning new things, moving about, reaching for or grasping small objects, etc.?*”
2. Does a physical condition or mental condition or health problem reduce the amount or the kind of activity (\_\_\_\_) can do at home?
3. Does a physical condition or mental condition or health problem reduce the amount or the kind of activity (\_\_\_\_) can do *at school or daycare?*
4. Does a physical condition or mental condition or health problem reduce the amount or the kind of activity (\_\_\_\_) can do in other activities *with parent, siblings or friends?*

### **Seeing questions**

5. Does (\_\_\_\_) wear glasses or contact lenses?

NOTE: A ‘No’ response skips to Question 7.

6. Does (\_\_\_) have difficulty seeing, even when wearing glasses or contact lenses? Would you say no difficulty, some difficulty, a lot of difficulty or completely unable to see.
7. Does (\_\_\_) have difficulty seeing? Would you say no difficulty, some difficulty, a lot of difficulty or completely unable to see.

NOTE: All children who wear glasses would be counted as having a seeing disability using these three questions. We suggest that this should be discussed with paediatricians to establish if having to wear glasses as a child would increase the probability of having a seeing disability as an adult.

### **Hearing questions**

8. Does (\_\_\_) use a hearing aid or hearing aids?
9. Does (\_\_\_) have difficulty hearing, even when using a hearing aid? Would you say no difficulty, some difficulty, a lot of difficulty or completely unable to hear.
10. Does (\_\_\_) have difficulty hearing? Would you say no difficulty, some difficulty, a lot of difficulty or completely unable to hear.

NOTE: All children who use hearing aids would be counted as having a hearing disability using these three questions. We suggest that this should be discussed with paediatricians to establish if having to wearing a hearing aid(s) as a child would increase the probability of having a hearing disability as an adult.

### **Mobility question**

11. Does (\_\_\_) have difficulty walking or climbing steps? Would you say no difficulty, some difficulty, a lot of difficulty or completely unable to do this.

### **Agility question**

12. Does (\_\_\_) have any difficulty using his/her hands or fingers to grasp or hold small objects, such as a pencil or scissors? Would you say no difficulty, some difficulty, a lot of difficulty or completely unable to do this.

### **Communication questions**

13. Does (\_\_\_) have any difficulty when she/he is speaking? Would you say (\_\_\_) cannot speak at all, (\_\_\_) has a lot difficulty speaking, (\_\_\_) has some difficulty speaking or (\_\_\_) has no difficulty speaking.

NOTE: There would be a follow-up question asked of all children except those for whom it was stated ‘Cannot speak at all’.

14. Does (\_\_\_) have any difficulty being understood when speaking?

### **Learning questions**

15. Do you think that (\_\_\_) has a learning disability, such as dyslexia, hyperactivity or attention problems?
16. Has a teacher, doctor or other health professional ever said that (\_\_\_) had a learning disability?

NOTE: We suggest that the follow-up question to establish severity does not capture the impact of having a learning disability. We suggest that this should be discussed with LDAC and education and health professionals.

### **Developmental question**

17. Has a doctor, psychologist or other health professional ever said that (\_\_\_) has a developmental disability or disorder?

NOTE: We suggest that the follow-up question to establish severity does not capture the impact of having a learning disability. We suggest that this should be discussed with CACL and education and health professionals.

### **Emotional/Psychological/Behavioural question**

18. Does (\_\_\_) have any emotional, psychological or behavioural conditions that have lasted or are expected to last six months or more?

NOTE: We suggest that the follow-up question to establish severity does not capture the impact of having a learning disability. We suggest that this should be discussed with mental health professionals.

Finally, we suggest that the four questions to identify children with cognitive disabilities are the most problematic and require additional work. We are especially concerned with the “emotional” question as we do not think that it captures children with mental health problems.

## Appendix Tables – PALS 2001

<b>Appendix Table 3.1 False positives by age and gender, 2001 PALS</b>			
<b>Age</b>	<b>Gender</b>		
	<b>Both sexes</b>	<b>Females</b>	<b>Males</b>
Under 1	91.0%	88.6%	93.4%
1	67.3%	67.8%	67.0%
2	43.0%	47.7%	38.2%
3	26.3%	33.5%	22.1%
4	39.9%	44.6%	36.9%
5	32.3%	42.5%	26.7%
6	36.4%	43.0%	32.9%
7	30.5%	40.5%	24.4%
8	24.7%	26.2%	23.6%
9	28.9%	34.0%	24.9%
10	19.0%	23.2%	16.8%
11	29.7%	34.1%	26.3%
12	30.9%	41.0%	24.3%
13	29.6%	31.9%	27.9%
14	32.2%	34.1%	30.5%
<b>Total</b>	<b>34.7%</b>	<b>40.1%</b>	<b>30.9%</b>

<b>Appendix Table 3.2 Response to filter questions for children aged from birth to four years inclusive, 2001 Census and 2001 PALS</b>					
<b>Age group</b>	<b>PALS</b>	<b>No</b>	<b>Sometimes</b>	<b>Often</b>	<b>Total</b>
	<b>Census</b>				
Difficulty hearing, etc.	No	87.5%	6.9%	5.5%	14,900
	Sometimes	60.8%	12.3%	27.0%	17,900
	Often	52.5%	13.5%	34.0%	25,600
Limitation in activity at home	No	90.8%	5.2%	4.0%	33,500
	Sometimes	54.9%	31.2%	13.9%	12,400
	Often	33.5%	20.5%	46.0%	12,600
Limitation in activity at school	No	96.6%	1.5%	1.9%	44,300
	Sometimes	54.3%	28.9%	16.8%	7,200
	Often	48.9%	22.8%	28.3%	6,900
Limitation in other activities	No	88.5%	7.7%	3.8%	30,900
	Sometimes	61.9%	25.6%	12.5%	14,000
	Often	43.7%	21.0%	35.3%	13,500

<b>Appendix Table 3.3 Response to filter questions for children aged from five to nine years inclusive, 2001 Census and 2001 PALS</b>					
<b>Age group</b>	<b>PALS</b>	<b>No</b>	<b>Sometimes</b>	<b>Often</b>	<b>Total</b>
	<b>Census</b>				
Difficulty hearing, etc.	No	74.9%	13.4%	11.8%	41,100
	Sometimes	37.9%	25.7%	36.4%	31,300
	Often	13.1%	18.4%	68.4%	28,600
Limitation in activity at home	No	82.5%	12.1%	5.5%	53,300
	Sometimes	50.0%	36.3%	13.7%	27,900
	Often	21.5%	25.1%	53.4%	19,800
Limitation in activity at school	No	69.2%	20.9%	9.9%	24,300
	Sometimes	40.8%	37.6%	21.6%	38,200
	Often	42.0%	13.9%	44.1%	38,500
Limitation in other activities	No	76.0%	16.3%	7.7%	51,400
	Sometimes	45.0%	36.2%	18.8%	30,800
	Often	25.6%	22.4%	52.0%	18,800

<b>Appendix Table 3.4 Response to filter questions for children aged from 10 to 14 years inclusive, 2001 Census and 2001 PALS</b>					
<b>Age group</b>	<b>PALS</b>	<b>No</b>	<b>Sometimes</b>	<b>Often</b>	<b>Total</b>
	<b>Census</b>				
Difficulty hearing, etc.	No	68.9%	14.7%	16.4%	50,200
	Sometimes	40.5%	27.3%	32.1%	35,600
	Often	15.3%	14.8%	69.8%	31,700
Limitation in activity at home	No	82.0%	14.8%	3.2%	60,400
	Sometimes	53.7%	30.9%	15.4%	35,500
	Often	16.0%	20.9%	63.1%	21,600
Limitation in activity at school	No	66.2%	26.0%	7.8%	23,300
	Sometimes	37.4%	35.3%	27.2%	49,700
	Often	37.6%	15.2%	47.2%	44,600
Limitation in other activities	No	74.2%	18.6%	7.2%	57,600
	Sometimes	45.2%	34.7%	20.2%	39,000
	Often	26.3%	20.8%	52.9%	21,000

<b>Appendix Table 4.1. Children with disabilities aged from birth to four years inclusive, estimates and disability rates, 2001 PALS</b>							
	Gender	Under one year	One year	Two years	Three years	Four years	Aged from birth to four years inclusive
Estimate	Both sexes	1,300	3,200	4,800	8,300	8,600	26,200
	Females	900	1,200	2,200	2,800	3,100	10,200
	Males	500	2,000	2,600	5,500	5,500	16,000
Disability rate	Both sexes	0.4%	1.0%	1.4%	2.6%	2.4%	1.6%
	Females	0.6%	0.8%	1.4%	1.8%	1.7%	1.3%
	Males	0.3%	1.2%	1.5%	3.3%	3.0%	1.9%

<b>Appendix Table 4.2. Children with disabilities aged from birth to four years inclusive by type of disability, 2001 PALS</b>						
% of children who have ....	Age					
	Under one year	One year	Two years	Three years	Four years	Aged from birth to four years
<b>Estimate</b>	<b>1,300</b>	<b>3,200</b>	<b>4,800</b>	<b>8,300</b>	<b>8,600</b>	<b>26,200</b>
a seeing disability	..	..	..	7.6%	7.6%	8.0%
a hearing disability	..	..	15.9%	11.3%	9.2%	12.1%
a developmental disability	69.2%	67.0%	73.8%	73.2%	59.8%	68.0%
a chronic condition that limits their activity	50.2%	72.2%	64.2%	60.4%	62.1%	62.6%
a disability but the type is unknown	..	..	..	10.2%	11.6%	8.9%
.. Data suppressed because of sample size.						

<b>Appendix Table 4.3. Children with developmental disabilities aged from birth to four years inclusive, by type of developmental disability, 2001 PALS</b>				
Age	Physical	Intellectual	Other	Total
Less than 1 year	90.2%	59.3%	8.0%	900
1	58.5%	44.6%	29.8%	2,100
2	52.2%	45.1%	46.1%	3,500
3	57.2%	58.9%	31.8%	6,100
4	42.0%	74.4%	48.9%	5,100
<b>Birth to 4 years</b>	<b>53.7%</b>	<b>58.9%</b>	<b>38.1%</b>	<b>17,800</b>

<b>Appendix Table 4.4. Children aged from birth to four years inclusive who have a chronic health problem that limits activity, 2001 PALS</b>		
<b>Ques. #</b>	<b>Chronic condition</b>	<b>Total number reporting condition that limits activity</b>
CHRC_Q01A	Asthma or severe allergies	5,900
CHRC_Q01B	Heart condition or disease	1,800
CHRC_Q01C	Kidney condition or disease	800
CHRC_Q01D	Cancer	..
CHRC_Q01E	Diabetes	..
CHRC_Q01F	Epilepsy	1,500
CHRC_Q01G	Autism	2,200
CHRC_Q01H	Cerebral Palsy	2,900
CHRC_Q01I	Spina Bifida	..
CHRC_Q01J	Cystic fibrosis	..
CHRC_Q01K	Muscular Dystrophy	..
CHRC_Q01L	Migraines	..
CHRC_Q01M	Arthritis/Rheumatism	..
CHRC_Q01N	Paralysis of any kind	600
CHRC_Q01O	Missing or malformed arms, legs, fingers, toes	500
CHRC_Q01P	Fetal Alcohol Syndrome	400
CHRC_Q01Q	Attention Deficit Disorder (ADD) or Attention Deficit Hyperactivity Disorder (ADHD)	1,600
CHRC_Q01R	Down syndrome	1,300
CHRC_Q01S	Complex medical care needs	3,000
CHRC_Q01T	Any other long-term condition diagnosed by a health professional, specify	6,100
	Total	16,400
* Sample is small so use data with caution.		
.. Data suppressed because of sample size		

<b>Appendix Table 5.1. Children with disabilities aged 5 to 14 years inclusive, estimates and disability rates, 2001 PALS</b>						
<b>Age</b>	<b>Estimate</b>			<b>Disability rate</b>		
	<b>Females</b>	<b>Males</b>	<b>Both sexes</b>	<b>Females</b>	<b>Males</b>	<b>Both sexes</b>
5	3,500	8,100	11,600	1.9%	4.3%	3.1%
6	3,700	8,500	12,300	2.2%	4.1%	3.2%
7	4,600	9,500	14,100	2.5%	4.6%	3.6%
8	7,000	9,600	16,600	3.8%	5.1%	4.4%
9	6,400	9,400	15,800	3.1%	4.9%	4.0%
10	6,200	12,800	19,000	3.2%	6.1%	4.7%
11	7,200	10,400	17,600	3.6%	5.0%	4.3%
12	5,300	10,500	15,800	2.7%	5.2%	4.0%
13	6,600	9,900	16,500	3.4%	5.2%	4.3%
14	7,000	8,600	15,500	3.7%	4.2%	3.9%
<b>5 to 14 years</b>	<b>57,500</b>	<b>97,200</b>	<b>154,700</b>	<b>3.0%</b>	<b>4.9%</b>	<b>4.0%</b>

<b>Appendix Table 5.2. Disability by type and age group, 2001 PALS</b>			
<b>Type of disability</b>	<b>5 to 9 years</b>	<b>10 to 14 years</b>	<b>5 to 14 years</b>
Mobility	10,500	10,600	21,100
Agility	16,700	14,700	31,400
Seeing	6,400	8,200	14,500
Hearing	10,800	9,800	20,600
Communicating	36,200	30,700	67,000
Learning	43,800	56,600	100,400
Development	22,000	24,100	46,200
Emotional/Psychological/Behavioural	26,800	32,900	59,800
Chronic condition that limits activity	45,300	55,800	101,100
Unknown	2,300	2,700	4,900
<b>Total</b>	<b>70,400</b>	<b>84,300</b>	<b>154,700</b>



Appendix Tables 5.3 and 5.4 were not done because data were missing for the children without disabilities, i.e. – the falsers positives were on a separate file in 2001 so responses to wearing glasses were not included.

<b>Appendix Table 5.5. Communication disability by type degree of difficulty and age group, 2001 PALS</b>				
<b>Type of communication disability</b>	<b>Degree of communication disability</b>	<b>5 to 9 years</b>	<b>10 to 14 years</b>	<b>5 to 14 years</b>
<b>Difficulty speaking</b>	<b>Total</b>	<b>36,200</b>	<b>30,700</b>	<b>66,900</b>
	Yes – cannot speak	3,800	1,800	5,600
	Yes – a lot of difficulty	7,400	5,100	12,400
	Yes – some difficulty	16,700	14,200	30,900
	No difficulty	8,300	9,600	18,000
<b>Difficulty being understood when speaking</b>	<b>Total</b>	<b>32,400</b>	<b>28,900</b>	<b>61,300</b>
	Yes	29,100	26,800	<b>55,800</b>
	No	3,300	2,100	5,500

<b>Appendix Table 5.6. Cognitive disabilities by type and age group, PALS 200</b>			
<b>Type of disability</b>	<b>5 to 9 years</b>	<b>10 to 14 years</b>	<b>5 to 14 years</b>
<b>All type of disabilities</b>	70,400	84,300	154,700
<b>At least one “cognitive” disability</b>	49,500	60,900	110,400
All three “cognitive” disabilities	11,900	16,100	28,000
Only learning	13,800	20,600	34,400
Only developmental	2,200	1,300	3,500
Only “emotional”	2,200	2,300	4,500
Learning and developmental	6,700	6,100	12,700
Learning and “emotional”	11,500	13,800	25,300
Developmental and “emotional”	1,300	700	2,000

<b>Appendix Table 5.7. Learning disability by response to the two learning questions by age and gender, PALS 2001</b>			
<b>Response to the two learning disability questions</b>	<b>5 to 9 years</b>	<b>10 to 14 years</b>	<b>5 to 14 years</b>
Only perception of learning disability	7,300	4,400	11,700
Only diagnosed learning disability	3,800	4,800	8,600
Both perception and diagnosed	32,800	47,300	80,100
<b>Total</b>	<b>43,800</b>	<b>56,600</b>	<b>100,400</b>