An evaluation of the American Community Survey indicators of disability

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Abstract

Background: Collection of data in the Census for implementing disability legislation has been continuous since 1970 although the questions used have changed several times. Concerns have been raised about the ability of the newest question set developed for the American Community Survey (ACS) to adequately represent the population with disabilities because it does not capture all those eligible for certain benefit programs.

Objective: Using national data, we examine how the addition of questions on the receipt of SSI/SSDI changes the composition of the population identified by the ACS measures. In ancillary materials we also examine the addition of a work limitation question to the population identified by ACS measures.

Methods: Using descriptive secondary analysis of 2011 NHIS data we compare the characteristics of those identified by the ACS questions to those identified by the ACS questions and receipt of SSI/SSDI and those only receiving SSI/SSDI. The comparison is based on conditions, specific functional limitations and severity of limitation.

Results: The results provide evidence ACS questions identify a population representing persons at risk for participation difficulties including those who receive SSI/SSDI. The ACS population has higher proportions with mental health and development disabilities than comparison population. The ancillary data demonstrates the work limitation question does not make a significant difference in identifying recipients of SSI/SSDI.

Conclusion: The analysis demonstrates that the disability measures developed for the ACS produce an unbiased picture of the population with disabilities by including persons with all conditions, more severe disability or selected types of functional limitations.

Keywords

Disability; Measurement; American Community Survey; Work limitation

The collection of information about the nation's population with disabilities began with the 1830 Census asking questions about blindness and deafness. Disability was included in the

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Census until 1890 after which the questions were dropped. It was 1970 when questions on disability returned to the long form, a major change to the Census adopted in 1940 allowing statistical techniques of sampling to provide added questions for 5% of the persons enumerated[1] The disability questions in the recent version of the American Community Survey (ACS) (the replacement for the long form) were developed by an interagency workgroup led by the National Center for Health Statistics (NCHS) with membership from federal agencies with legislative or programmatic need for information on disability for small geographic areas.[2] The workgroup reviewed agency mandates and determined that information on disability was necessary for at least two major reasons: 1) to monitor whether persons with disabilities are being prevented from full participation in society as outlined in the 1990 Americans with Disabilities Act[3] and 2) to estimate the number of persons eligible for service programs offered by state and federal governments. The workgroup used the Institute of Medicine Model of Disability and the International Classification of Functioning, Disability and Health (ICF) as conceptual guides for identifying disability domains.[4,5] The workgroup defined disability at the person level conceptualizing limitations or difficulties as possible risk factors associated with restrictions to full participation in society.[6]

The ACS provides population estimates for small geographic areas and includes measures of key indicators of social participation such as employment, education and income. The addition of questions on disability allows comparison between those with and those without disabilities on these social participation indicators to determine if differences exist. However, the ACS format is not suited for the collection of complete information on all aspects of disability. There are considerable limitations on the number and length (including answer categories) of questions that can be asked in a census format. The questions must also be appropriate for the various modes of data collection used for the ACS.

The goal of the ACS disability question set was not to capture **all** aspects of disability or to identify **all** persons with disabilities (unpublished notes of ACS Subcommittee, February 13, 2004), as this would be impossible,[7] but rather to identify the majority of persons with disabilities using questions that provide valid and reliable information about those with more serious levels of limitation. Extensive development work went into crafting the questions which then underwent extensive cognitive and field testing.[8,9] Using available information from the National Health Interview Survey (NHIS), the workgroup identified the most prevalent functional domains that were associated with disability and questions were crafted to capture these domains. Based on legislative mandates of several of the agencies involved in the workgroup, two additional questions were developed to monitor aspects of independent living (a listing of the questions can be found in Appendix A).

Concerns have been raised as to whether the question set fails to identify an important, programmatically relevant group – those who are unable to work. Two forms of benefits for those who can't work include support through the Supplemental Security Income (SSI) and Social Security Disability Income (SSDI) programs. Both programs require medical verification of disabling conditions from physicians and SSDI also requires that the individual has worked 40 quarters to be eligible. As evidence, Burkhauser et al. note that the six questions failed to identify all persons receiving income support.[10,11] Because of this concern, Burkhauser, et al.[10] proposed that a work limitation question be added to the ACS

battery to prevent understating the population. They assert the absence of a work limitation question fails to capture a substantial portion of the population relevant to key disability policies and programs creating "systematically biased estimates of employment, program participation and economic well being".[10]

It should be noted that a work limitation question was tested in the development of the ACS questions but not included based on the results of cognitive and field testing.[8,9] While cognitive testing found the question identified some persons with functional limitation who were also limited in their ability to work, it also identified persons who would not be considered to have functional limitations but were limited in work for other reasons, such as caring for persons with illness or disabilities. The observation that the ACS questions do not identify all persons receiving benefits could be a function of how those programs are administered and how eligibility is determined. Benefit programs (e.g. SSI, SSDI), particularly those that provide financial benefits, consider a range of characteristics and program eligibility criteria other than the functioning or independence itself when making eligibility determinations. While the definition of disability for SSI or SSDI differs from the ADA definition used for the ACS, it is a worthwhile exercise to examine whether the ACS questions also capture those receiving benefits to assure the benefits population is represented as well as the general population with disabilities defined by the ADA.

Since the NHIS includes both the six ACS questions and questions on the receipt of SSI or SSDI benefits, disability status as defined by the ACS questions can be compared to reported receipt of benefits to investigate whether the six questions represent those receiving SSI/SSDI. Though it is possible that respondents misreport SSI/SSDI benefits, this analysis addresses the extent to which those reporting SSI/SSDI benefits are identified by the six ACS questions and the impact of including those reporting only SSI/SSDI benefit receipt on the prevalence and characteristics of the population with disabilities. The analysis also describes the disease and functional characteristics of those reporting SSI/SSDI benefits who are and are not identified by the ACS questions in order to determine if the population defined by the ACS questions is in any way biased.

While the critiques of the ACS questions state that approximately 25% of those who receive SSI/SSDI benefits are not identified by the ACS questions, no one has analyzed the combined ACS and SSI/SSDI data nor has anyone examined the differences between the groups captured by the ACS, the ACS plus those reporting receipt of SSI/SSDI and those only reporting the receipt of SSI/SSDI.[10] Examination of expanded information on the disease and functional limitations of those identified by each question set and the combined question sets will determine if a bias is introduced in the population identified by the ACS questions alone. Ancillary material also demonstrates the effects of adding a work limitation question to the ACS set.

Methodology/analysis

NHIS data from 2011 were used for this analysis. NHIS collects information about the health and health care of the civilian noninstitutionalized population of the United States from a representative sample of households across the country, and is conducted

continuously throughout the year by NCHS. Persons excluded from the NHIS include patients in long-term care institutions, correctional facilities and U.S. nationals living in foreign countries. Interviews are conducted in the respondents' households, but follow-ups may be conducted over the telephone in order to complete interviews.[12]

The data used are from the sample adult file and are based on self-report unless the sample adult could not respond due to a health condition, in which case a proxy respondent was used. The analysis is limited to persons aged 18 to 64. The ACS questions were asked of a random half sample of the 32,014 sample persons. A special weight was developed for use with the half sample. The conditional response rate for the Sample Adult file was 81.6% of persons identified as Sample Adults. Final response rate was calculated as (Family response rate) (Sample Adult response rate) or (81.3%) (81.6%) = 66.3%.

Measures used

Disability ——Several measures of disability were included in the analysis. For the measure based on the six ACS questions a 'yes' response to any of the six questions classifies a respondent as a person with an ACS disability. Answers of refused or don't know on any of the ACS questions were assumed to indicate non-disability on that particular function.

Two additional measures were constructed based on basic action difficulties and complex activity limitations as previously defined from questions not included in the ACS set.[13] A report of any difficulty in mobility, sensory functioning, selected elements of emotional functioning, and important elements of cognitive functioning are classified as basic action difficulties. Any difficulty in walking, standing, sitting, climbing stairs, reaching overhead, lifting and carrying and using fingers to pick up small items is classified as mobility difficulty. Emotional difficulty is defined by the Kessler six questions (K6) with a score of 13 or higher used as the cut off point for identifying emotional difficulties.[14] Vision difficulty is defined by either trouble seeing even when wearing glasses or contact lenses or being blind or unable to see at all. Hearing difficulty is defined by either a lot of trouble hearing without a hearing aid or being deaf. Cognitive difficulty is captured by a question that asks about being limited in any way because of difficulty remembering or because of experiencing periods of confusion. A separate variable using a scale created from the movement elements provides a severity range for those with movement difficulty. The scale is described in Altman and Bernstein.[15]

The complex activity limitations measure participation limitations and includes indicators of work limitations, social role and leisure limitations and indicators of need for help in either activities of daily living (ADLs) or instrumental activities of daily living (IADLs).[13]

We constructed a composite indicator of *work limitation* from the two questions available in the NHIS which identify those who are either unable to work or had a limitation in amount or kind of work. The combined indicator is similar to the single question available in the Current Population Survey (CPS).[1] A second component of complex activity limitation

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[1]The exact question is as follows: "Does anyone in the household have a health problem or disability which prevents them from working or which limits the kind or amount of work they can do?".

captures difficulties in participation in social/leisure activities based on three questions in the NHIS. Those questions capture difficulties experienced without using any special equipment in going out to shop, going to the movies or sporting events; participating in social activities like visiting friends, going to parties; or to relaxing at home watching TV, listening to music. The third component of complex activity limitations identifies need for help with personal care and instrumental activities of daily living (IADLS). Personal care is identified by needing help to accomplish one or more activities of daily living (ADLs), such as bathing, dressing and getting around inside the house The IADLs captures needing the help of another person for handling routine needs such as doing household chores, shopping, or doing necessary business. Needing help with either type of activity are combined to represent a person's limitations in maintaining independence.

Conditions associated with reporting any ACS limitations, basic action difficulties, and complex activity limitations are also included in the analysis. If the respondent indicates a positive response on any of the three groups of questions they are asked what kind of condition causes that problem. We collapsed the conditions into fourteen categories. Table 1 shows the kind of conditions that are included within each of the categories.

Measures related to receipt of SSI/SSDI benefits were constructed based on several questions which indicated if the person acknowledged receiving specific benefits and if those benefits were attributable to having a disability. Since we are examining the overlap of the variables defining disability (ACS questions and receipt of SSI/SSDI) we include Table A in the Appendix showing the multiple combinations possible and the sizes of each group. The table shows the relationship between the indicators representing the ACS variable and the SSI/SSDI variables.

Analysis—We have conducted a descriptive analysis of the populations defined by use of the ACS question set, the SSI/SSDI question set and the combination of those question sets. All counts and percentages shown here are weighted estimates for the sampled adult data from the 2011 NHIS. Point estimates and confidence intervals for this analysis were calculated using the SUDAAN software package which adjusts for the complex sample design of the NHIS.[15] Significance of difference between percentages was evaluated using two-tailed *t* tests at the 0.05 level. Terms such as "higher", "lower" and "fewer" indicate statistically significant differences. Since we want to examine whether the ACS alone captures sufficient information to reflect those with SSI/SSDI benefits we look at each measure separately but also compare the characteristics of the groups defined by different combinations of the questions – the population defined by the ACS questions only, those identified by the ACS questions and receipt of SSI/SSDI, and those reporting receipt of SSI/SSDI only.

Results

Agreement between the ACS question set and receipt of SSI/SSDI –

Table 2 describes the relationship between the populations identified by the ACS and SSI/SSDI questions. Population counts and the percent distribution of the total adult population ages 18–64 categorized by responses to the ACS and the SSI/SSDI questions is provided. In

addition, the percentage distribution of the population defined by a positive response to any of the ACS questions and the percentage distribution of the population defined by any receipt of SSI/SSDI is also provided as is the distribution of the population defined by combining the ACS questions and the receipt of SSI/SSDI benefits.

Approximately 13.1% of the population 18–64 was identified as having a disability by the ACS question set, and 5.3% indicated receipt of SSI/SSDI (Table 2). Approximately 28 million people (14.5%) would be classified as having a disability by positive responses to either the ACS questions and/or indication of receipt of SSI/SSDI. Of the total population identified by the ACS and SSI/SSDI questions, approximately 1.4% indicate receipt of SSI or SSDI without also being identified by the ACS questions. It is this 1.4% of the total population whose non-coverage by the ACS questions is under examination in this analysis.

Among those identified by the six ACS questions, a total of 29.7%, report receipt of SSI/ SSDI compared to 5.3% of the total population ages 18–64. Approximately 73.1% of those receiving SSI/SSDI were also identified by ACS questions leaving 26.9% of those receiving SSI/SSDI not identified by the ACS questions. This 26.9% of the smaller SSI/SSDI population is equivalent to 1.4% of the total population. The last columns describes the population with disabilities as defined by the combination of the ACS questions and the receipt of SSI/SSDI benefits. The ACS questions capture 90.2% of this population with *only* 9.8% of the population being identified by indications of receipt of SSI/SSDI alone.

The examination of possible biases in the characteristics of those captured by the various combinations of measures is a key focus of these analyses. Of interest is whether the population *only* reporting receipt of SSI/SSDI benefits differs from those identified by the ACS questions (with and without receipt of SSI/SSDI) in the prevalence of conditions that can cause disability. Of particular interest are differences in conditions associated with psychological or cognitive difficulties since those types of functional limitations are recognized as harder to capture in surveys. Table 3 compares the percent reporting specific types of conditions and Table 4 compares the percent reporting specific types of functional limitations as well as the severity of mobility limitation across the four groups defined by positive response to the ACS questions and receipt of SSI/SSDI. A wide range of conditions were reported by respondents as the cause of their disability. In most cases, those identified by the ACS questions were characterized by similar or greater percentages reporting the various types of conditions than was the case for those responding to receipt of SSI/SSDI *only*. The higher percentages were particularly notable for persons indicating sensory problems, arthritis or back problems, injuries, heart related problems, developmental problems, mental health problems and nervous system problems as the cause of their disability. In most instances the highest percentages of all were found among those who responded positively to both the ACS questions and the SSI/SSDI questions (column 3). The group identified by the ACS questions is not a 'healthier' population than the group identified by the receipt of SSI/SSDI alone.

In Table 4, the groups defined by the ACS questions and specifically the group defined by the union of ACS questions and receipt of SSI/SSDI demonstrate higher levels of basic action difficulties than persons who *only* reported SSI/SSDI receipt. The ACS questions

only capture a higher percent of the population with seeing difficulty, hearing difficulty, movement difficulty, emotional difficulty, and cognitive difficulty than the group which is defined only by the SSI/SSDI questions. Those with a positive response to any ACS questions were almost three times as likely as the SSI/SSDI *only* group to have multiple problems (a combination of two or more of the individual types of functioning difficulty) (45.0%, compared to 16.8%). The group identified by the ACS questions also reporting receipt of SSI/SSDI has even a greater percentage with multiple problems (61.5%). The ACS defined group generally had higher levels of social/leisure limitations and self care limitations than those who *only* report SSI/SSDI benefit receipt. However, a higher percentage of those receiving SSI/SSDI benefits *only* reported work limitations but this percentage was lower than among those who report an ACS problem with receipt of SSI/SSDI. As with basic action difficulties, the percent with multiple complex activity problems is much higher in the ACS defined groups than among those with SSI/SSDI benefits *only* (35.1% and 65.7% compared to 25.2%). We also found that persons with receipt of SSI/SSDI who were identified by the ACS questions were significantly more likely to have social and leisure limitations and self-care limitations than those identified *only* by receipt of SSI/SSDI benefits.

In the last section of Table 4 we examine variation of severity of movement limitations across the different definitions of disability. The percent of respondents identified by ACS questions only or by both the ACS questions and receipt of SSI/SSDI indicate more severe movement difficulty (level 4) than those *only* defined by receipt of SSI/SSDI (level 4 15.1% & 22.4% compared to 9.1%). Comparisons cannot be made for the fifth level of severity because there are too few in that category in the SSI/SSDI *only* population. This provides an indication that the respondents who are only identified by the SSI/SSDI questions demonstrate notably less severity of their movement functioning.

The percentages identifying specific conditions as causing the disability are remarkably similar in those identified by the ACS question set alone compared to those identified by the ACS questions and the SSI/SSDI questions. Additionally the indicators of basic action difficulties, limitations in complex activities, and severity for those with movement limitations are also quite similar. Since the ACS questions provide over 90% of the combined measures that is not unexpected, but does demonstrate the robustness of the ACS questions to represent the population of concern quite adequately without an addition of an SSI/SSDI component.

Discussion

We used data from the 2011 NHIS to investigate the relationship of the ACS disability questions and the questions on receipt of SSI/SSDI benefits. We describe the conditions and functional limitations of those identified as having a disability by the ACS question set; those receiving SSI/SSDI who are also identified by the ACS questions; and those who receive SSI/SSDI but are not captured by the ACS questions. The results demonstrate that the ACS questions alone can be used to inform policy without bias. Ancillary material has also been included to examine the addition of a set of work limitation questions and its effect on capturing the SSI/SSDI recipients not captured by the ACS questions. We demonstrate

that ACS questions identify a population that represents most persons at risk for participation difficulties (the objective of the ACS questions) including most of those who receive SSI/SSDI. These results do not support the argument that the ACS questions, without a work limitation component, result in a population that is biased, that is, misses an important segment of the population with disabilities. The ancillary analysis demonstrates that the addition of a work limitation question did not capture all SSI/SSDI recipients and the population added had lower levels of conditions, basic actions and complex activity limitations. The population identified by the ACS questions represent all the same conditions that are found in the population receiving SSI/SSDI *only* and is actually characterized by much higher proportions of mental health and development disabilities than are found among persons who *only* report receipt of SSI/SSDI. While the ACS questions do not capture all persons who receive SSI/SSDI benefits they capture close to three-quarters of that group. Including those reporting only SSI/SSDI in the population having disability increases that population by only 1.4% and does not change the characteristics of the group. These results also show that those who are identified by the ACS question set, with or without receipt of SSI/SSDI, report more serious levels of limitation of movement than among those who only indicate receipt of SSI/SSDI.

Defining the population who experience limitations with physical, emotional or cognitive functioning and with limitations in self care is consistent with identifying persons who are at risk for limitation in social participation and therefore have a disability.[15] The ACS battery was developed to identify this population using a limited number of questions and a format appropriate for a census or a survey. However, the population identified by the ACS may not fully include populations believed to have a disability based on other measures such as those based on social participation directly, be it employment or social activity, or the receipt of program benefits because of the social context or social process factors that affect social participation as well as receipt of benefits. The expectation that the group identified by the ACS questions will include all those receiving disability benefits may be unrealistic.[10] Even if we assume that survey responses that indicate receipt of benefits are completely accurate, the determination of benefit eligibility is a variable process, considers more than functional limitation and is approached somewhat differently in all fifty states. The more important issue is whether the failure of the ACS questions to identify all persons who receive benefits makes the population that is identified a poor representation of the target policy population. Do persons not identified by the ACS questions but who do report the receipt of benefits have different types of functional limitations or more severe limitations?

The analysis suggests that this is not the case. The population identified by the ACS questions is a large percent (90.2%) of the population identified by the combined ACS questions and the receipt of benefits. Moreover, the population identified by the ACS questions looks a lot like the population identified by the ACS questions *and* the receipt of benefits in terms of the conditions causing the limitations and in the specific functional limitations reported. The solution proposed by Burkhauser, et al.[10] to address the failure of the ACS battery to identify all SSI/SSDI recipients by adding a work limitation question to the ACS battery will also include persons who have no reported functional limitation and only identifies an additional 1.0% of the SSI/SSDI recipients not identified by the ACS questions while adding 2.6% with fewer conditions, basic action limitations, complex

activity limitations and less severe movement limitations (see ancillary analysis). This analysis provides evidence the ACS questions are unbiased and representative of the major conditions/impairments and limitations associated with disability while also conforming to the space, reliability and validity requirements of the Census.

Conclusion

There are many purposes for identifying a population with disabilities and the questions used to define the relevant populations will depend on the purpose for which the data are being collected. To monitor the Americans with Disabilities Act (ADA) it is necessary to track the status of a broadly defined group to determine if persons with a disability are fully included in society. The context of the 1990 Americans with Disabilities Act extends civil rights and equalization of opportunity to a broader population with disabilities (whether they are able to work or not) and has also expanded the conceptualization of disability issues beyond the need for specific programmatic support. The clients for benefit programs fall well within that broader group, although some further identifying characteristics associated with the criteria used by the benefit programs may be necessary to identify just these subgroups specifically.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

Appendix

Appendix A.

American Community Survey questions on disability.

16.   a. Is this person deaf or does he/she have serious difficulty hearing? Yes/No
b. Is this person blind or does he/she have serious difficulty seeing even when wearing glasses? Yes/No
17.   a. Because of a physical, mental or emotional condition, does this person have serious difficulty concentrating, remembering or making decisions? Yes/No
b. Does this person have serious difficulty walking or climbing stairs? Yes/No   c. Does this person have difficulty dressing or bathing? Yes/No
18.   Because of a physical, mental or emotional condition, does this person have difficulty doing errands alone such as visiting s doctor's office or shopping? Yes/No

Table A

Combination of ACS Measure and Social Security Measure Creates one large group from two measurement groups and six combination sub-categories.

Combination of ACS Questions and SSI/SSDI Indicator		Population Estimate	Percentage of Total Population
Both ACS & SSI/SSDI		27,900,000	14.5%
Any SSI/SSDI		10,200,000	5.3%
	SSI/SSDI and ACS[*]	7,500,000	3.9%
	SSI/SSDI Only	2,800,000	1.4%
Any ACS		25,100,000	13.1%
	ACS Only	17,700,000	9.2%
	ACS and SSI/ SSDI[*]	7,500,000	3.9%
	ACS and SSI[+]	2,200,000	1.2%
	ACS and SSDI[+]	4,300,000	2.2%
	ACS, SSDI & SSI[+]	960,000	0.5%

[*] Equivalent groups.

[+] For analysis purposes after Table 2, ACS & SSI, ACS & SSDI and ACS, SSDI & SSI have been combined to one category identified as ACS and SSDI.

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Table 1

Conditions represented by the 14 categories of the causes of limitations.

Condition Categories Used in Analysis	Percent of Total Population with Disability Reporting Condition	Conditions Included
Type of Conditions		
Sensory Problems	5.0%	Problems with vision or hearing
Arthritis or Back Problems	49.2%	Arthritis/rheumatism is combined with back problems
Injuries	17.1%	Fractures, bone/joint injuries are combined with other injuries
Heart Related Problems	12.2%	Combined heart conditions, stroke, hypertension and circulation problems (including blood clots)
Developmental Problems	2.8%	Combined intellectual disability, other developmental disabilities such as cerebral palsy, learning disabilities and other birth defects
Mental Health Problems	15.1%	Combined depression, other mental health problems and alcohol abuse
Lung Problems	7.0%	Combined asthma and emphysema
Cancer	1.8%	All cancers
Nervous System Problems	7.9%	Combined epilepsy/seizures, multiple sclerosis, muscular dystrophy, polio, paralysis, para/quadriplegia, Parkinson's disease, migraine headaches, other nerve damage including carpel tunnel
Genitourinary	1.5%	Kidney, bladder or renal disease
Diabetes/Metabolic Disorders	8.5%	Combined Diabetes, thyroid problems, Grave's disease, gout, ulcer and hernia
Musculoskeletal	20.0%	Combined Fibromyalgia, Lupus, Osteoporosis, tendinitis, knee problems (not arthritis), amputations
Weight Problem	7.7%	Weight problems
Other	6.3%	If the family member was limited by a condition not included in one of the 18 fixed categories (represented in a combined state above) or the additional conditions that appeared on the interviewer's computer screen, then the interviewer entered a verbatim response of up to 50 characters for one or both of the "other impairment problem" categories. Respondents could list any number of applicable conditions.

Data Source: 2011 National Health Interview Survey (see Survey Description, 2012 for documentation of condition categories, pp.26–30)

Table 2

Percentages of those aged 18–64 Identified as having a disability by the ACS questions, receipt of SSI/SSDI questions or a combination of the two.

Indicators of Disability	Total Population	Total	Any[a] ACS	Any[b] SSI/SSDI	Combined Measures
Total	192,000,000	100%	25,100,000	10,200,000	27,900,000
			13.1%	5.3%	14.5%
No Disability	164,000,000	85.5%			
All Disability Measures	27,900,000	14.5%	100%	100%	100%
Any ACS	*25,100,000*	*13.1%*	*100%*	*73.1%*	*90.2%*
ACS Only[c]	17,700,000	9.2%	70.3%	—	63.7%
ACS & SSI/SSDI	7,500,000	3.9%	29.7%	73.1%	26.5%
SSI/SSDI Only[d]	*2,800,000*	*1.4%*	—	*26.9%*	*9.8%*

[a] Any ACS represents all of the respondents who indicated a positive response to one or more of the ACS questions.

[b] Any SSI/SSDI represents all of the respondents who indicate a positive response to one or more of SSI/SSDI receipt questions.

[c] An indication of ACS Only indicates that respondents have a positive to the ACS alone with no overlap of the responses with SSI/SSDI.

[d] An indication of SSI/SSDI Only indicates that respondents have a positive response to SSI/SSDI alone with no overlap of the responses with ACS.

Source of data: 2011 National Health Interview Survey

Table 3

Percentages of those aged 18–64 Identified as having a disability by the ACS questions, receipt of SS/SSDI questions or a combination of the two by selected conditions.

Disability Characteristics	Any[a] ACS	Both ACS Questions & SSI/SSDI	Receipt of SSI/SSDI Only[b]	Combination of Any ACS and Any SSI/SSDI
Total	13.1%	3.9%	1.4%	14.5%
Type of Conditions				
Sensory Problems	11.7%[+] (0.9)	17.5%[+] (1.7)	2.9%[+] (1.6)	10.8% (0.9)
Arthritis or Back Problems	53.9%[+] (1.6)	53.3%[+] (2.8)	39.4%[+] (4.6)	52.4% (1.5)
Injuries	22.6%[+] (1.4)	25.6%[+] (2.4)	11.8%[+] (2.5)	21.5%
Heart Related Problems	22.3% (1.3)	30.2%[+] (2.4)	17.6%[+] (3.6)	21.8% (1.2)
Developmental Problems	6.9% (0.9)	14.9% (2.0)	—[c]	6.9% (0.8)
Mental Health Problems	27.8% (1.4)	34.0%[+] (2.4)	23.6%[+] (3.9)	27.4% (1.3)
Lung Problems	12.0% (1.1)	17.8% (2.0)	11.3% (3.2)	11.9% (1.0)
Cancer	2.6% (0.4)	4.4% (1.0)	—	3.1% (0.5)
Nervous System Problems	14.1% (1.1)	19.9%[+] (2.1)	11.8%[+] (2.6)	13.8% (1.0)
Genitourinary	1.9% (0.4)	2.8% (0.7)	—	2.3% (0.5)
Diabetes/metabolic Disorders	15.1% (1.1)	18.2% (1.7)	15.9% (3.8)	15.2% (1.0)
Musculoskeletal	19.8% (1.2)	20.4% (2.0)	15.5% (3.4)	19.3% (1.2)
Weight Problems	8.7% (0.9)	10.4% (1.7)	—	8.1% (0.8)
Other Conditions	6.9% (0.8)	9.6% (1.7)	10.6% (3.1)	7.3% (0.8)

[+] Significant difference at the 0.05 level or better between Any ACS questions and SSI/SSDI only or between ACS questions combined with SSI/SSDI and SSI/SSDI only.

[a] Any ACS represents all of the respondents who indicated a positive response to one or more of the ACS questions.

[b] An indication of SSI/SSDI only indicates that respondents have a positive response to SSI/SSDI alone with no overlap of the responses with the ACS questions.

[c] Relative standard error > 30%.

Source of data: 2011 National Health Interview Survey

Table 4

Percentages of those aged 18–64 Identified as having a disability by the ACS questions, receipt of SSI/SSDI questions or a combination of the two by functional limitations and severity of limitations.

	Any[a] ACS	Both ACS Questions & SSI/SSDI	Receipt of SSI/SSDI Only[b]	Combination of Any ACS and Any SSI/SSDI
	13.1%	3.9%	1.4%	14.5%
Types of Basic Action Difficulties				
Seeing Difficulty	33.8% (1.2)	33.6 (2.3)	—[c]	31.3 (1.2)
Hearing Difficulty	18.2 (1.1)	16.4 (2.0)	—	16.8 (1.0)
Movement Difficulty	66.6 (1.4)	84.1%[+] (2.0)	59.5%[+] (4.5)	65.9% (1.4)
Emotional Difficulty	17.5% (1.0)	22.4% (2.0)	—	16.2% (1.0)
Cognitive Difficulty	17.7%[+] ((1.1)	34.9%[+] (2.5)	7.7%[+] (2.3)	16.7% (1.0)
More than one problem	45.0%[+] (1.4)	61.5%[+] (2.4)	16.8%[+] (3.4)	42.2% (1.4)
Type of Complex Activity Limitations				
Work Limitations	53.3%[+] (1.4)	92.2%[+] (1.4)	68.4%[+] (3.7)	54.8% (1.4)
Social/Leisure Limitations	35.5%[+] (1.5)	54.7%[+] (2.7)	15.7%[+] (3.4)	35.6% (1.4)
Self Care Limitations	20.2% (1.2)	42.7%[+] (2.7)	14.3%[+] (3.7)	19.6% (1.1)
More than one problem	35.1% (1.4)	65.7%[+] (2.5)	25.2%[+] (3.5)	34.1% (1.3)
Levels of Severity for those with Movement Limitations				
Least Severe	9.1% (0.9)	5.2%[+] (1.3)	14.0%[+] (3.0)	9.6% (0.9)
Level Two	14.0% (0.9)	14.8% (1.8)	13.3% (2.8)	13.9% (0.9)
Level Three	19.9% (1.2)	25.6% (2.2)	21.0% (3.6)	20.0% (1.1)
Level Four	15.1%[+] (1.1)	22.4%[+] (2.1)	9.1%[+] (2.5)	14.5% (1.0)
Most Severe	8.5% (0.7)	16.0% (1.9)	—	7.8% (0.7)
No Movement Limits	33.4% (1.4)	15.9% (2.0)	40.7% (4.5)	34.1%

[+] Significant difference at the 0.05 level or better between Any ACS questions and SSI/SSDI only or between ACS questions combined with SSI/SSDI and SSI/SSDI only.

[a] Any ACS represents all of the respondents who indicated a positive response to one or more of the ACS questions.

[b] An indication of SSI/SSDI only indicates that respondents have a positive response to SSI/SSDI alone with no overlap of the responses with the ACS questions.

c Relative standard error > 30%.

Source of data: 2011 National Health Interview Survey