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A Guide to Disability Statistics from the American Community Survey

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Introduction

The mission of the Cornell StatsRRTC is to bridge the divide between the sources of disability data and the users of disability statistics. One product of this effort is a set of *User Guides* to national survey data that collect information on the disability population. The purpose of each of the User Guides is to provide disability data users with:

1. An easily accessible guide to the disability information available in the nationally representative survey;
2. A set of estimates on persons with disabilities from the dataset, including estimates on the size of the population, the prevalence rate, the employment rate and measures of economic well-being;
3. A description of the unique features of the survey;
4. A set of estimates that highlight the unique features of the survey; and
5. A description of how estimates from the dataset compare to other national data that are used to describe the population with disabilities.

This User Guide contains information on a new nationally representative survey of households conducted by the U. S. Census Bureau called the American Community Survey (ACS). The ACS is conducted each year and currently provides national and State level data on demographic, social, economic and housing characteristics. The survey includes six questions that are used to identify the population with disabilities.

There are many features of the ACS that will be useful to disability policymakers, disability service providers, and the disability advocacy community. First, the guide will demonstrate that the ACS contains a unique combination of data on disability, demographic characteristics, economic well being, and employment. Second, the sample size and the design of the ACS will allow users to examine a variety of annual disability statistics at the national, State, Metropolitan Statistical Area and county level. Third, because the data are collected in a consistent manner over time, users can estimate trends in various disability statistics at a level of geographic detail (i.e., the county level) that is not possible in any other national survey. These strengths of the ACS will allow users to track changes to the disability population so that: services can be more effectively targeted to the population; publicly and privately funded disability programs can be more effectively administered; and new programs can be evaluated.

While the ACS can provide information on a wide variety of topics, there are some limitations. First, the ACS is limited to six questions that are used to identify the disability population and it does not allow one to identify the prevalence of specific health conditions (e.g., cancer, paralysis, HIV/AIDS, etc.). Second, the ACS definition does not explicitly include important societal and environmental factors that may contribute to a disability such as discrimination and lack of reasonable accommodations. Finally, the ACS does not capture the population living in “group quarters.” Group quarters include individuals living in institutions, college dormitories, and other types of group quarters. This is a very important limitation in that it may leave out an important segment of the population with disabilities. The Census Bureau plans to address this last limitation of the ACS by including a sample of persons living in group quarters beginning in 2006.

Conceptual Model of Disability

One purpose of the User Guides is to describe the information on disability available in the various national surveys. An operational definition of disability is required to fulfill this purpose. Unlike age and gender, that are for the most part readily identifiable individual attributes, disability is usually defined as a complex interaction between a person’s health condition and the social and physical environment. An environment that provides accommodation may allow a person with a health condition to function at the level of a person without a health condition. In this instance, the person may not consider her health condition a disability.

The two major conceptual models of disability are the World Health Organization’s (WHO, 2001) International Classification of Functioning, Disability and Health (ICF) and the disability model developed by Saad Nagi (1965, 1979). Both of these conceptual models recognize disability as a dynamic process that involves the interaction of a person’s health condition, personal characteristics, the physical environment and the social environment. Changes to any one of these factors over time can have an impact on a person’s ability to function and participate in activities. A detailed description of these models, as well as a comparison of these models, is in Jette and Badley (1998).

We use ICF concepts to create operational definitions of disability. The concepts used include *impairment*, *activity limitation*, *participation restriction*, and *disability* (see WHO, 2001). A prerequisite to each of these concepts is the presence of a health condition. Examples

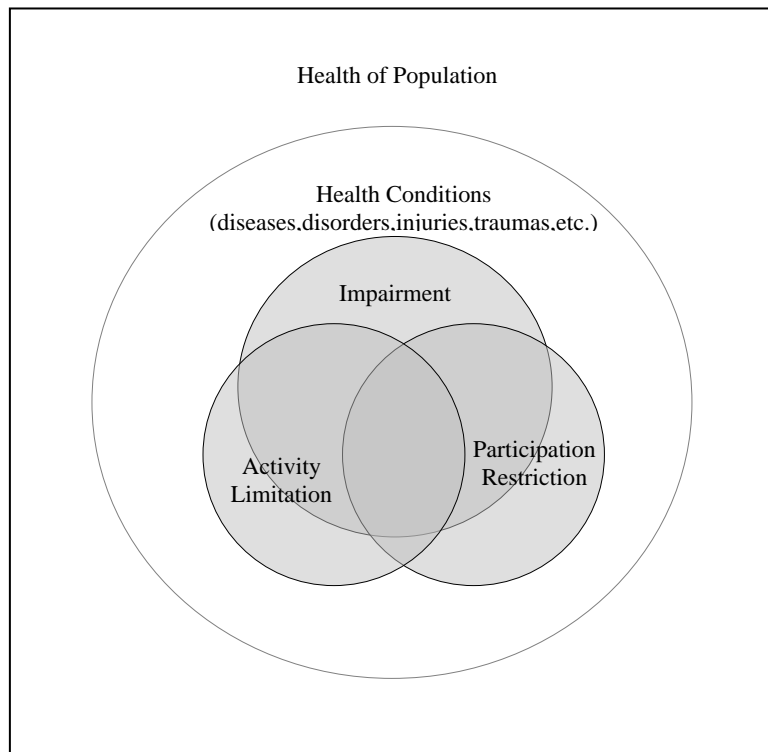
of health conditions are listed in the International Classification of Diseases, Tenth Edition (ICD-10) and they encompass diseases, injuries, health disorders, and other health related conditions. An *impairment* is defined as a significant deviation or loss in body function or structure. For example, the loss of a limb or vision loss may be classified as impairments. In some surveys, impairments are defined as long lasting health conditions that limit a person's ability to see or hear, limit a person's physical activity, or limit a person's mental capabilities. An *activity limitation* is defined as a difficulty an individual may have in executing activities. For example, a person who experiences difficulty dressing, bathing or performing other activities of daily living due to a health condition may be classified as having an activity limitation. In some surveys, activity limitations are identified based upon a standard set of activities of daily living questions (ADL's). A *participation restriction* is defined as a problem that an individual may experience in involvement in life situations. For example, a working-age person with a severe health condition may have difficulty participating in employment as a result of the physical environment (e.g., lack of reasonable employer accommodations) and/or the social environment (e.g., discrimination). In some surveys, participation restrictions are identified by questions that ask whether the person has a long lasting health condition that limits his or her ability to work, or whether a health conditions affects his or her ability to go outside his or her home to go shopping, to church or to the doctor's office.

The final ICF concept that we use is a *disability*. The term disability is used to describe the presence of an impairment, an activity limitation and/or a participation restrictions. This concept is similar to the definition used in the Americans with Disabilities Act of 1990 (ADA). The ADA defines a disability as “a *physical or mental impairment that substantially limits one or more of the major life activities, a record of such an impairment, or being regarded as having such an impairment.*”

While these concepts may seem to follow a progression—that is, an impairment leading to an activity limitation leading to a participation restriction—it is not necessarily the case. It is possible that a person may have a participation restriction without an activity limitation or impairment. For example, a person diagnosed as HIV positive may not have an evident impairment or activity limitation but may not be able to find employment due to discrimination resulting from his health condition. Similarly, a person with a history of mental illness, but who no longer has a loss in capacity or activity limitation, may also be unable to finding employment due to discrimination resulting from his health condition.

Figure 1 provides a useful summary of the ICF concepts. It illustrates that while there is an overlap across these concepts, it is possible that one of them can occur without a relation to the others. The universe of the ICF is the health of the population as a whole. The shaded area of Figure 1 illustrates the ICF concept of a disability.

Figure 1. Simplified Conceptual Model of Disability Using ICF Concepts



Operational Issues

Translating the ICF concepts into operational definitions in surveys is not a straightforward task. Decisions to classify the questions into one of the three specific ICF categories were made based upon judgments and are not based upon well defined rules from the ICF. In some cases, the classification is straightforward. In other cases, for example, the survey questions may be interpreted as both an activity limitation and participation restriction. Our approach in these cases was to make clear and consistent judgments so that it may be possible to make comparisons across the datasets. Using this approach provides a framework for comparisons across surveys and for comparisons to ICF concepts.

ACS Background, Methodology and Definitions

The survey methodology can have an important impact on the information that a survey collects on the population with disabilities. Mathiowitz (1998) provides a good review of the general methodological issues as well as those specific to the population with disabilities. The purpose of this section is to describe the development of the ACS, the methods used by the ACS to collect information on the population, and the precise definitions used to describe the population with disabilities.

Purpose of the ACS

The ACS is a new continuous data collection effort by the U.S. Census Bureau that is used to produce annual estimates at the national, State and local level on the characteristics of the United States population. It is designed to replace the decennial Census long form. Beginning in 2005, the ACS will collect information on an annual basis from approximately 3 million addresses in the United States. In 2006, it will also include 2.5 percent of the population living in group quarters, and 36,000 addresses in Puerto Rico (U.S. Census Bureau, 2003). In 2003, the ACS collected information on members from over 500,000 U. S. households.

The U.S. Census Bureau has three main objectives for the ACS (U.S. Census Bureau, 2003). The first objective is to provide federal, State and local governments with an information base for the administration and evaluation of government programs. The second objective is to use the ACS as a replacement for the decennial Census long form so that the decennial Census can focus solely on counting the population. The third objective is to provide data users with timely information each year on demographic, housing, social and economic statistics that can be compared across States, communities, and population groups.

Development of the ACS

The development of the ACS began in the 1990s and has gone through several testing phases prior to full implementation. The purpose of these testing phases is to examine the performance of the new methodology used by the ACS for collecting more timely information found in the Decennial Census long form. Like the Decennial Census long form, the ACS is designed to produce reliable estimates for small geographic areas (e.g., counties, congressional districts, etc.). The ACS differs from the Decennial Census in that it collects data on a

continuous basis and produces reliable estimates by pooling the data over one year, three year, or five year periods; depending upon the size of the area and other considerations.

The early stages of the development process involved demonstrations and testing in four sites in 1996, eight in 1997, and nine in 1998. From 1999 to 2001, the testing expanded to 31 sites which included 36 counties. Most sites were defined as counties, but some sites were defined as multiple contiguous counties. Sites were chosen based upon population size and were not chosen to be nationally representative. A 5% sampling rate was used in most of these sites and a smaller rate was used within a few large sites. The purpose of this test was to compare county level estimates using the ACS methodology pooled from 1999-2001 to the estimates from the Decennial Census long form for the 36 counties. Beginning in 2000, the testing phase included a national comparison sample, referred to as the supplemental sample, with an overall sampling rate of 0.7% annually (i.e., approximately 800,000 addresses per year). The purpose of the national comparison sample was to compare the national population estimates from the ACS to those from the Decennial Census long form. The initial test results show that the ACS performs well when compared to the 2000 Decennial Census long form (Bench, 2004; Diffendal, Petroni and Williams, 2004). Full implementation of the ACS will include three million addresses per year, 2.5 percent of those living in Group Homes per year, and 36,000 addresses in Puerto Rico per year.

Between 2000 and 2004, the ACS data is based upon the sample design of the national comparison sample designed for testing purposes. In 2005, the ACS began full implementation of 3 million addresses. The estimates reported in this user guide are from the 2003 national comparison sample. The 2004 national comparison sample data will be released in August 2005. The Census Bureau has produced numerous reports on the development of the ACS that are available at http://www.census.gov/acs/www/AdvMeth/acs_census/.

Universe and Sample Design

The ACS currently collects data each year from a sample drawn from the universe of U.S. households. The universe does not include the population living in “group quarters.” Group quarters include individuals living in nursing homes, prisons, college dormitories, juvenile institutions, and emergency and transitional shelters for those experiencing homelessness. A sample of persons living in group quarters is scheduled to be included in 2006.

The sample design for the current national comparison sample is a two-stage stratified sample. Population estimates based upon the sample have some degree of sampling error and non-sampling error. Standard errors and confidence intervals that account for the sample design describe the degree of uncertainty in the estimates due to sampling error and some forms of non-sampling error. Appendix A provides additional information on the sample design for the ACS and the ACS PUMS; describes the efforts that the Census Bureau uses to minimize non-sampling error; and describes methods that account for the sample design that may be used to compute standard errors and confidence intervals for population estimates.

Data Collection Methodology

The survey uses three different methods to collect data from households: (1) a survey delivered by mail where a household member is responsible for completing the survey and mailing it back to the Census; (2) a telephone survey conducted by a Census Bureau employee using Computer Assisted Telephone Interview (CATI) technology; and (3) in-person interviews using Computer Assisted Personal Interview (CAPI) technology. A person referred to as the “householder,” who is usually a person who either owns the housing unit or who pays the rent for the housing unit, is responsible for completing the ACS questionnaire for the household. The Census Bureau first attempts to administer all of the questionnaires by mail. Approximately six weeks after the questionnaires are mailed, the Census Bureau begins conducting telephone interviews for all households who have not responded by mail and that have a telephone number. The Census Bureau identifies a sample of households that do not respond by mail or telephone and a trained Census Bureau field representative is sent to these households to conduct in-person interviews. The process results in high response rates, generally between 95 to 97 percent. For details on how the data are processed, see the ACS website <http://www.census.gov/acs/www/>.

Definitions

A description of the survey questions and a description of the methods used to produce data on disability, demographics, employment, and economic well-being are shown in Table 1.

Disability. The six disability questions in the 2003 ACS are based upon the 2000 Decennial Census disability questions designed by a federal interagency workgroup (Adler et al., 1999). The process used to develop the questions included an investigation of the content of

other surveys and extensive testing using the Census Bureau cognitive questionnaire lab. At the conclusion of the process, the interagency workgroup agreed upon six questions that satisfied the space limitations imposed by the Census Bureau. Although the workgroup acknowledged the level of difficulty in measuring disability in a set of six questions and that further methodological research is necessary, the questions have been regarded as an improvement over prior Census Bureau questions used to gather information on the disability population (Adler et al, 1999).

The questions are described in the first section of Table 1a. The first three questions (Q15a, Q15b, Q16a) are for all household members ages 5 and older and are consistent with the *impairment* concept from the ICF. They include classifications of long lasting health conditions that are associated with disability, including: severe sensory impairments (hearing, vision); long lasting physical impairments (substantially limits one or more of the following activities walking, climbing stairs, reaching, lifting, or carrying); and health conditions that result in mental impairments (learning, remembering, or concentrating).

The ACS also includes three questions that the federal interagency workgroup determined were necessary for program and policy purposes. The first of these questions, Question 16b, is for all household members ages 5 and older. It is consistent with the ICF *activity limitations* concept and identifies health conditions lasting at least six months that affect the performance of activities of daily living (dressing, bathing or getting around inside the home). The other two questions in the 2003 Questionnaire, Questions 17a and 17b, are for all household members ages 15 and older. They identify health conditions lasting at least six months that affect participation in usual life activities such as going outside the home alone to visit a doctor's office or going shopping, and working at a job or business. These questions are consistent with the ICF *participation restriction* concept.

The Census Bureau uses these six questions to identify seven disability categories that are described in Table 1a. They are: a *sensory disability* if the person has a "yes" response to question Q15a; a *physical disability* if the person has a "yes" response to question Q15b; a *mental disability* if the person has a "yes" response to question 16a; a *self-care disability* if the person has a "yes" response to Q16b; a *go-outside-the-home disability* if the person has a "yes" response to Q17a; and *employment disability* if the person has a "yes" response to Q17b.

The Census Bureau created a seventh category, referred to as a *disability*, as a "yes" response to at least one of the six disability questions. This definition is similar to the ICF use of

the term disability (see Figure 1) in that it includes impairments, activity limitations, or participation restrictions. For more information on the disability questions, see:

<http://www.census.gov/acs/www/UseData/Def/Disabili.htm>.

Demographics. Data on demographics are drawn from the “list of residents” section of the ACS and includes age, gender, race, and ethnic origin. Question 1 identifies a household member’s gender from the question, “What is this person’s sex?” Question 2 identifies a household member’s age from the question, “What is this person’s date of birth?” Questions 5 identifies whether a household member is Spanish/Hispanic/Latino from the question, “Is this person Spanish/Hispanic/Latino? Mark (x) the “no” box if not Spanish/Hispanic/Latino.” Finally, Question 6 identifies the household member’s race from the question “What is this person’s race? Mark (x) one or more races to indicate what this person considers himself/herself to be.” The Census Bureau uses these two questions to construct race categories as described in Table 1b.

Information on education for each household member is identified in the “person” section of the survey. The ACS includes three questions on education. Two of the questions are related to recent participation in an educational program. The third question, Question 11, asks, “What is the highest degree or level of school this person has completed?” For persons currently enrolled in an educational program, the ACS provides instructions to provide the highest grade completed or the highest degree received. The householder is presented a list of possible responses and is asked to identify the highest level of education that each household member has completed. The possible responses to the survey question include: no schooling; nursery school to fourth grade; fifth grade or sixth grade; seventh grade or eighth grade; ninth grade; tenth grade; eleventh grade; twelfth grade no diploma; high school graduate; some college credit, but less than one year; one or more years of college; Associate Degree (e.g., AA, AS); Bachelor’s degree (e.g., BA, AB, BS); Master’s degree (e.g. MA, MS, MEng, Med, MSW, MBA); Professional degree (e.g., MD, DDS, DVM, LLB, JD); or Doctorate Degree (e.g., PhD, EdD).

Employment Measures. The Census Bureau definition of employment status is drawn from two questions. Table 1c describes the ACS information on the employment status of each household member age 16 and older. A household member is considered employed if he or she met one of the two following criteria: (1) are “at work” during the reference period—that is, worked as a paid employee, worked in their own business or profession, worked on their own farm, or worked 15 or more hours as unpaid workers on a family farm or business, or (2) were

“with a job but not at work” during the reference period—that is, they had a job but temporarily did not work at that job during the reference period due to illness, bad weather, industrial dispute, vacation or other personal reasons. The reference period is defined as the week before the date that the householder completed the questionnaire.

There are at least two other employment measures that have been used to measure the employment rate of persons with disabilities. These measures capture employment status over a year-long period. The first measure is referred to as “any attachment to the labor force” and defines employment as at least 52 hours of employment during the reference year. The second is referred to as “year-round full-time” employment. It is defined by the Census Bureau as 50 to 52 weeks in the previous year and at least 35 hours per week during that year.

Income and Poverty Data. The economic well-being measures use information from the ACS on annual income, family size, family composition, household size and household composition. The section labeled income in Table 1d describes the income measures and summarizes the method used by the Census Bureau to construct a poverty measure.

The income measure uses income received in the past 12 months (i.e., income received in the year preceding the completion of the survey) from each individual household member. For a household that completes the survey in July 2004, the year is July 2003 to June 2004. The questions are located in the “person” section of the survey. Questions 41a through 41h are used to collect information on the following sources of income: wages, salary, commissions, bonuses, or tips from all jobs (before deductions for taxes, bonds, dues or other items); self-employment income from own non-farm businesses or farm businesses, including proprietorships and partnerships (net income after business expenses); interest, dividends, net rental income, royalty income, or income from real estates and trusts; Social Security or Railroad Retirement; Supplemental Security Income (SSI); any public assistance or welfare payments from the State or local welfare office; retirement, survivor or disability pensions (not including social security); and any other sources of income received regularly such as Veterans’ (VA) payments, unemployment compensation, child support or alimony (not including lump sum payments such as money from an inheritance or the sale of a home). Annual total income is the sum of all of the income sources for the household member.

The poverty measure is computed based upon the standards defined in Directive 14 from the Office of Management and Budget (OMB). These standards use poverty thresholds created in 1982 and index these thresholds to 2003 dollars using poverty factors based upon the Consumer

Price Index (CPI-U). They use the family as the income sharing unit and family income is the sum of total income from each family member living in the household. The poverty threshold depends upon the size of the family; the age of the householder (i.e., the person who owns or pays rent for the housing unit and who fills out the ACS questionnaire for the household) for one member families and two member families; and the number of related children under the age of 18. In Appendix B, Appendix Table 1 shows the 2003 poverty threshold. Family income is compared to the relevant poverty threshold to determine the poverty status of families.

In some cases, members of the household may be unrelated to the head. The poverty threshold for these members is based upon the person's own total income. The poverty measure uses a different threshold, as shown in Appendix Table B-1, for a member of a household who is unrelated to the householder. A poverty measure is not created for unrelated household members who are under the age of 15 because the ACS does not collect income information from persons under the age of 15.

The second measure used to examine economic well-being is the median family income-to-needs ratio. The family income-to-needs ratio is defined as a family's income divided by the income level associated with the poverty line for the family. It is referred to as the income-to-needs ratio because the income level associated with the poverty line represents the amount required to purchase the basic needs of the family. A value above 1 represents family income that is greater than the poverty line. For example, a value of 1.5 represents family income that is 1.5 times the income level associated with the poverty line for the family. A value below 1 represents family income that is less than the poverty line. For example, a value of 0.5 represents family income that is half of the income associated with the poverty line for the family. Lower values are associated with lower levels of economic well-being. The median family income-to-needs ratio sorts persons in a defined group by their family income-to-needs ratio from the lowest value to the highest value, and uses the value of the person who is in the middle (i.e., at the 50th percentile). While the poverty measure shows the percentage of the distribution below the poverty line (i.e., the percentage in the lower tail of the distribution), the median family income-to-needs ratio shows how the middle person in the distribution is doing relative to the poverty line. It therefore provides another way to characterize the family size adjusted economic well-being of different groups.

Poverty statistics and the income-to-needs ratio do not adjust for expenses that are the result of a health condition or a disability (e.g., personal assistance, equipment, medications,

etc.). They also do not adjust for in-kind benefits, such as health insurance, food stamps, housing, transportation, child-care, etc. For both reasons, household income relative to the poverty line is substantially limited as an indicator of a household's poverty if the household contains a person with a disability. Further details on the ACS poverty measure are available from the U. S. Census Bureau ACS website

<http://www.census.gov/acs/www/UseData/Def/Poverty.htm>

Two other measures of economic well-being are included that use both related and unrelated members of the household as the income sharing unit. The first measure is total household income. It does not adjust for household size. The second measure is household size adjusted income. It assumes that the income needed to achieve a level of economic well-being is lower for those who live in the same household than it is to live in separate households. That is, by sharing housing and other resources, less income is needed to achieve a certain level of economic well-being. The measure is usually described by the following formula.

$$\text{Household Adjusted Income} = \frac{\text{Household Income}}{(\text{Household Size})^e}$$

Where e is a parameter with a value between 0 and 1 and represents the degree of sharing (i.e., economies of scale) within the household. When e equals 0, the measure assumes that income needed is independent of household size. For example, the measure assumes a household with 5 members needs the same income as a household with one member to achieve a certain level of economic well-being. When e equal 1, the measure assumes that there is no sharing of resources within the household. For example, the measure assumes that a household with 5 members needs 5 times the income as a household with one member to achieve the same level of economic well-being. While there is no universal agreement on the value of the e parameter, there is empirical evidence that shows that setting $e=0.5$ makes a reasonable adjustment for the degree of sharing within the household (see Ruggles 1990 p. 77; and Citro and Michael, 1995). Citro and Michael (1995) provide a good description of household adjusted income and economic well-being measures. This paper uses a value of e equal to 0.5 in the computation of household size adjusted income.

Endorsements

Although the ACS is a relatively new data source, it has already received public endorsements from more than 40 public and private entities. The entities include the U. S. Conference of Mayors, the National League of Cities, the National Council of Black Mayors, the National Congress of American Indians, the Rural Policy Research Institute, and the Consortium of Social Science Associations. Several organizations have also passed resolutions in support of the ACS, including the National Council of Mayors, the National Congress of American Indians, the National Association of Black County Officials, and the National Black Caucus of Local Elected Officials. The endorsements and resolutions recognize the importance of the ACS in making informed and timely decisions on how to allocate resources.

Dissemination

The U. S. Census Bureau disseminates hundreds of ACS summary data tables to the public at the national level, the State level, the Metropolitan Statistical Area (MSA) level, and county level. The ACS summary data tables are available on the Census Bureau's American Factfinder site (http://factfinder.census.gov/home/saff/main.html?_lang=en) and are also available from the Census on CD-ROM. The summary tables provide users with easily accessible data aggregated to the geographic level.

An ACS Public Use Microdata Sample (PUMS) is also available from the U. S. Census Bureau. The PUMS contains data at the household level and person level. The Census Bureau uses procedures to assure the confidentiality of these data. These procedures result in statistically insignificant differences in estimates between the ACS summary data and ACS PUMS data. The PUMS data allow users to produce customized statistics that are not available from the Census Bureau summary tables.

PUMS data for 2000, 2001, 2002 and 2003 are available from the Census Bureau. The ACS has changed over time and these changes, and their implications, are described below.

Changes to the ACS and Implications

The ACS has changed over time and will likely undergo further changes in the future. The changes include the introduction of a new population weighting and editing methodology for the ACS after the release of the 2000 ACS data, a new sampling methodology for the PUMS

introduced after the 2000 ACS PUMS data release, and a change in the structure of the disability questions that was introduced in the 2003 ACS. These changes can have implications on estimates of the trends in disability over time.

2000 ACS PUMS Weights and Editing Methodology

The Census Bureau changed the method used to perform edits and to construct population weights after releasing the 2000 ACS data. The Census Bureau replaced all of the 2000 ACS tables with tables that used the new weights and editing methodology so the tables distributed through the Census Bureau American Factfinder website are now consistent over time. They have not replaced the 2000 ACS Public Use Microdata Sample, so the 2000 ACS PUMS population weights and editing methodology are based upon the old methodology and the subsequent years of ACS PUMS data are based upon the new methodology. As a result, it is possible that differences between the 2000 ACS PUMS estimates and estimates based upon subsequent years of data are due to differences in the population weights and editing methodology and not entirely due to actual differences in the population.

Appendix B includes a table that suggests that the difference in population weights and editing methodology may have a significant impact on estimates from the 2000 ACS. It compares tables from the 2000 ACS data that are distributed by the Census Bureau American Factfinder site that use the new ACS population weights to estimates using the old weights from the 2000 ACS PUMS. The tables suggest that the differences due to the population weights may be significant and important.

Users should be aware of the difference in the population weights and editing methodology between the 2000 ACS PUMS and the PUMS from later years when examining changes to the disability population from the year 2000 onward.

Changes to the PUMS Sampling Methodology

The ACS PUMS sampling methodology differed between the 2000 ACS PUMS and the later years. In 2000, the Census Bureau's Disclosure Review Board limited the sampling rate. In 2001, the Disclosure Review Board allowed the Census Bureau to increase the sampling rate in order to reduce the sampling error. This was also done in 2002 and 2003. As a result, the ACS PUMS from 2001 through 2003 includes many more cases than in 2000 ACS PUMS and,

as a result, there is relatively lower degree of uncertainty in the estimates associated with sampling error.

Users should be aware of the difference in sampling methodology between the 2000 ACS PUMS and the PUMS from later years when examining changes to the disability population from the year 2000 onward.

Changes to the Disability Questions

In 2003, the ACS made a change to the structure of the last two disability questions. Between 2000 and 2002, the disability questions were structured as follows:

Q15. Does this person have any of the following long lasting conditions:

- a. Blindness, deafness, or a severe vision or hearing impairment?
- b. A condition that substantially limits one or more basic physical activities such as walking, climbing stairs, reaching, lifting, or carrying?

Q16. Because of a physical, mental, or emotional condition lasting 6 months or more, does this person have any difficulty in doing any of the following activities:

- a. Learning, remembering, or concentrating?
- b. Dressing, bathing, or getting around inside the home?
- c. (Answer this if the person is 16 YEARS OLD OR OVER.) Going outside the home alone to shop or visit a doctor's office?
- d. (Answer this if the person is 16 YEARS OLD OR OVER.) Working at a job or business?

An analysis of the data by Stern and Brault (2005) suggests that some of the people responding to questions 16c and 16d may not have understood that it was linked to the introductory sentence, "Because of a physical, mental, or emotional condition lasting 6 months or more, does this person have any difficulty in doing any of the following activities." Some sample members may have responded as if the introductory sentence did not exist, which can lead to a different interpretation of the question. For example, without the introductory sentence, a person may misinterpret question 16d asks "are you working at a job or business?" A "yes" to this interpretation to the question would indicate that they are currently working, not that they have a health condition that makes it difficult for them to work at a job or business. Therefore, it is possible that these last two questions identified some people, who may not have a disability, as a person with a disability.

In 2003, the Census Bureau restructured the disability questions as follows.

Q15. Does this person have any of the following long lasting conditions:

- c. Blindness, deafness, or a severe vision or hearing impairment?
- d. A condition that substantially limits one or more basic physical activities such as walking, climbing stairs, reaching, lifting, or carrying?

Q16. Because of a physical, mental, or emotional condition lasting 6 months or more, does this person have any difficulty in doing any of the following activities:

- a. Learning, remembering, or concentrating?
- b. Dressing, bathing, or getting around inside the home?

Answer Question 17 only if this person is age 15 or older. Otherwise skip to question for Person 2 on page 10.

Q17. Because of a physical, mental, or emotional condition lasting 6 months or more, does this person have any difficulty in doing any of the following activities:

- a. Going outside the home alone to shop or visit a doctor's office?
- b. Working at a job or business?

While this change may appear to be minor, there was a major change in the employment rates and economic well-being estimates for the population with disabilities that occurred between the 2002 ACS and the 2003 ACS. Appendix Table A2 shows the changes over time in the prevalence, employment, and poverty rates of the population identified as having a disability based upon these last two questions. The differences are large, and it is possible that the difference is due to a change in the structure of the survey.

Users should be aware that differences between estimates from the ACS disability data before the 2003 survey may differ from the 2003 ACS estimates because of this difference in the questionnaire. The difference is likely to affect the ACS overall disability definition, the go-outside-the-home disability definition and the employment disability definition. It is likely that the other four disability questions were not affected by the change in the questionnaire and may be used to estimate changes over time.

Future Changes

The American Community Survey (ACS) advisory committee established a subcommittee to re-examine the disability questions in the ACS. The National Center for Health Statistics (NCHS) was asked to lead the subcommittee. They have made recommendations to the full committee on proposed changes to the disability questions. The Census Bureau will field test these questions before making a decision to include the questions in the ACS. While the proposed questions have not been scheduled to be included in the ACS, it is possible that they

will be introduced into the survey in the future. Users should pay special attention to the structure of the disability questions in the ACS and be aware that they may change

ACS Description of Disability Population

Disability can have different implications for employment and economic well-being at different ages. In this paper, we first identify different age groups that reflect differences in activities. These age groups are: primary and secondary school age persons between the ages of 5 to 17, school-to-work transition age persons between the ages of 18 and 24, working age persons between the ages of 25 to 61, early Social Security retirement age persons between the ages of 62 and 64, and normal Social Security retirement age persons ages 65 and older. The ACS does not collect data on disability for household members under the age of 5 years old. In this paper, estimates of the employment rate and economic well-being of the population are based upon working age persons between the ages of 25 and 61.

Population estimates, prevalence estimates, and sample sizes from the 2003 ACS are presented in Table 2. The rows are broken down into sections for the population ages 5 and older and for each of the age categories identified in the previous paragraph. The columns identify the persons without a disability, those with a disability, and persons who report each one of the six disability types identified in the ACS. The disability types will not sum to the total population with a disability because individuals may report more than one disability type (i.e., the types are not mutually exclusive).

The column labeled disability shows that in 2003 an estimated 37,478,000 people ages 5 and older, or 14.2 percent of that population, report a disability. Of the two participation restrictions which are asked of all people ages 15 and older, approximately 21,391,000 people report an employment disability and 10,705,000 report a go-outside the home disability for prevalence rates of 9.8 percent and 4.9 percent, respectively. Of the activity limitations and impairments which are asked for all people ages 5 and older, an estimated 7,022,000 people report a self-care disability, 13,483,000 people report a mental disability, 23,593,000 people report a physical disability and 10,793,000 report a sensory disability. The prevalence rates are 2.7 percent, 5.1 percent, 9.0 percent and 4.1 percent, respectively.

Moving down to the age group categories shows that the group with largest number of people with a disability, approximately 17,146,000, is the working age population between the ages of 25 and 61. The table also shows that the prevalence of disability increases with age from

6.3 percent of the population between the ages 5 to 17 to 39.9 percent of the population ages 65 and older. Finally, the table shows that the composition of disability type changes with age. Mental disabilities are the most prevalent of the six disability types for those ages 5 to 17 and those ages 18 to 24 at 5.1 percent and 3.7 percent, respectively. Physical disabilities are the most prevalent of the six for those ages 25 to 61, 62 to 64 and 65 and older, with prevalence rates of 7.5 percent, 19.2 percent and 30.4 percent, respectively.

The distribution of age, gender, race and education characteristics within each disability group are shown in Table 3. The first section of the Table shows that the population without disabilities tends to be younger than the population with disabilities. The first column shows that a majority of the population without a disability is age 44 or younger, with 18.7 percent of the population between ages 5 and 14, 14.0 percent between 15 and 24, 16.1 percent between 25 and 34, 17.5 percent between 35 and 44. In sum, 66.3 percent of persons without a disability are between ages 5 and 44. The corresponding percent of the population with disabilities in the 5 to 44 age range is only 31.2 percent (7.5 percent + 5.9 percent + 6.5 percent + 11.3 percent). The age differences are similar for the other disability categories in the ACS, with the notable exception of mental disabilities where 16.9 percent of the population with a mental disability is between the ages of 5 and 14 and 10.0 percent between the ages of 15 and 24.

The next section of the Table shows differences by gender. Approximately 51 percent of the population without disabilities is female compared to 52.8 percent of the population with disabilities. The table shows that the largest gender compositional differences are among the go-outside the home and self-care disabilities, where 63.6 percent and 58.9 percent of the respective populations are women.

The ACS data show the population with disabilities tends to have a greater share of black and Native Americans, and a smaller share of Asians, compared to the population without a disability. Approximately 13.8 percent of the population with a disability is black and 1.1 percent is Native American compared to corresponding percentages of 11.7 percent and 0.7 percent of the population without a disability. The population with disabilities that are Asian is 2.4 percent compared to the 4.5 percent of the population without disabilities who are Asian. The share of persons with a disability who report Hispanic ethnicity is 9.6 percent, or smaller than the 14.0 percent of the population without a disability that reports Hispanic ethnicity.

Finally, the table shows that the population with a disability consists of a greater share of people with low levels of education compared to the population without disabilities. This section

of the table focuses on the working age population, those between the ages of 25 to 61, in order to reduce age-related differences in educational level and to provide a context for the working age population tables in the next section. An estimated 25.0 percent of those working age population with disabilities has less than high school education and another 33.6 percent only has a high school education, while the corresponding numbers for those without a disability are 11.6 percent and 28.0 percent respectively.

ACS Employment and Economic Well Being Estimates

The 2003 ACS shows that the employment rates for persons with a disability are lower than the employment rates for persons without a disability. Table 4 shows this result for each of the three employment measures for the working age population. The first section shows that while 79.5 percent of the population without a disability was employed during the reference week, only 39.3 percent of the population with a disability was employed during the period. The annual employment measures show that the larger percentages of both populations were employed sometime in the previous year, 87.1 percent of persons without a disability and 48.9 percent of persons with a disability, and smaller percentages, 59.6 percent and 24.5 percent, were employed full-time year round. Among the six disability types, the highest employment rates are for the population with sensory disabilities and the lowest are for those with self-care disabilities. The rest of the table shows differences across all of the disability categories for gender, race and education level subgroups. The employment rates are lower for women than they are for men, are lower for minorities than they are for whites, and are lower for those with less education. However, the table also points to differences in employment rates between those with and without a disability among the black population and the population with less than a high school education. Among the black population, 76.9 percent of the population without a disability was employed during the reference period compared to only 30.4 percent of the population with a disability. Among the population with a less than high school education, 67.0 percent of those without a disability were employed during the reference week compared to only 25.2 percent of those with a disability.

The economic well-being of the population with disabilities is substantially worse than that of the population without disabilities based upon the four measures presented in Table 5. The first row of the table shows that 7.7 percent of the population without a disability is below the poverty line compared to 23.7 percent of the population with a disability. Among the six

disability types, the poverty rates are lowest for those with a sensory disability, with a rate of 20.8 percent, and highest for those with a mental disability, with a rate of 30.8 percent.

The next row shows the median income to needs ratio. The median family income for persons without disabilities is 3.8 times the needs standard used for the poverty line. For those with a disability, the median family income is 2.2 times the poverty line. Differences by disability type show the highest median family income-to-needs ratio for persons with a sensory disability, with a family income level 2.5 times the poverty line, and the lowest median family income-to-needs ratio for persons with a mental disability, with a family income level only 1.7 times the poverty line.

Median household income among those without a disability is approximately \$60,000 per year compared to \$34,600 among the population with a disability. Median Household income is lowest for those with a mental disability, at \$27,400, and highest for those with a sensory disability, \$38,000.

Finally, adjustments for household size show similar disparities. The last row shows that the median household size adjusted income is \$35,796 for persons without disabilities and \$21,304 for persons with disabilities. Adjusting for household size has a larger impact on the population without disabilities because persons without disabilities tend to live in households with more members compared to persons with disabilities. Median adjusted household income is highest for persons with a sensory disability at \$23,413 and is lowest for persons with a mental disorder at \$17,321.

The rest of the table shows that the economic well being measures also differ by gender, race and education level. The poverty rates for the black population with disabilities and those with less than high school education are the highest at 36.4 percent and 36.5 percent, respectively. These two groups also have the lowest median family-income-to-needs ratios, median household income and median household size adjusted income.

ACS State Level Estimates

An advantage of the ACS is that the sample is large enough to support State level estimates of disability prevalence rates, employment rates and economic well-being measures. Sample sizes for each State by disability type are shown in Appendix E. The ACS State level estimates point to significant difference in the disability population across States. State level

policymakers can use the data to track the progress of the population with disabilities within their State. They may also use the data to make comparisons across States and over time.

Table 6 shows State level prevalence rates for all of the ACS disability categories for those between the ages of 25 and 61. The table shows that that the prevalence of disability is highest in West Virginia at 21.2 percent, Mississippi at 19.2 percent and Kentucky at 18.0 percent. The disability prevalence rate is lowest in New Jersey at 8.9 percent, Colorado at 9.0 percent and Connecticut, Illinois, and Minnesota at 9.2 percent. The median State is Georgia with a prevalence rate of 12.0 percent. The table shows differences across States in terms of the other six disability questions.

State level employment rates are shown in Table 7. They range from over 54 percent in South Dakota (55.7 percent), Wyoming (54.6 percent) and Alaska (54.0 percent) to below 31 percent in West Virginia (27 percent), Kentucky (29.1 percent), and Alabama (30.9 percent). The median State is Missouri with an employment rate of 40.8 percent. Differences across States also exist for the population without disabilities, as shown in the second column of the Table. The column shows that employment rates range from lows of 75.4 percent in West Virginia, 76.6 percent in California, and 77.4 percent in New Mexico and Oklahoma, to highs of 86.5 percent in Nebraska, 86.2 percent in Vermont, and 86.1 percent in North Dakota. Thus, to some degree, the differences in employment rate for the population with disabilities may arise due to differences in the labor market environment.

To account for the differences that might arise across States due to the labor market environment, the relative employment rates are shown in the third column. The relative rate is the employment rate for the population with disability divided by the employment rate for the population without disabilities. It provides a measure of the disparity within a State between the employment rate for the population with a disability and the rate for the population without a disability. For example a relative rate value of 40 percent indicates that the employment rate for those with disabilities is only 40 percent of the employment rate for those without disabilities. The table shows large differences in relative employment rates across States. These differences range from lows of 35.8 percent in West Virginia, 37.1 percent in Kentucky and 38.8 percent in Alabama, to highs of 68.2 percent in Alaska, 65.5 percent in Wyoming and 65.2 percent in South Dakota.

State level poverty rates are shown in Table 8. They range from a relatively high rate of 31.3 percent in Louisiana, Mississippi and New Mexico to relatively low rates of 13.8 percent in

Alaska, 15.2 percent in Utah and 17.3 percent in New Hampshire. The median State is Missouri with a poverty rate of 22.6 percent. The second column shows that the poverty rates differ by State for the population without disabilities, suggesting that part of the difference in the poverty rates for persons with disabilities across States may be due to differences in the State economic environment. These differences range from lows of 4.0 percent in Minnesota, 4.5 percent in New Hampshire and 4.6 percent in Virginia, to highs of 11.9 percent in Louisiana, 12.1 percent in West Virginia, and 12.7 percent in Delaware.

To account for differences in economic conditions across States, we include the relative poverty rate in the last column. The relative poverty rate is the poverty rate for the population with disabilities divided by the poverty rate for the population without disabilities. A value of 1.8 indicates that the poverty rate for the population with disabilities is 1.8 times greater than the poverty rate for the population without disabilities. The relative rates range from lows of 2.1 in Utah and 2.2 in Alaska and Arizona, to relatively high disparities of 4.7 in Minnesota, 4.8 in Rhode Island and 4.9 in Nebraska. It is important to note that these large relative rates result more from the very low levels of poverty for the population without disabilities rather than higher than average rates of poverty for persons with disabilities.

Median Household Income levels for working age persons with disabilities also vary across States. Table 9 shows differences across States in median household income levels for persons with disabilities compared to persons without disabilities. It does not adjust for household size or composition.

The first row of the table shows the values for Alabama. The first column shows that the median household income working age person without a disability is \$51,000 in the year prior to the 2003 survey. The second column shows that the median household income level for working age persons with a disability is \$25,700 in the year prior to the 2003 survey. The next column shows the relative rate, defined as the median household income of working age persons with a disability divided by the median household income of working age persons without a disability, in percentage terms. In Alabama, the household income of persons with a disability is 50.4 percent of the household income of persons without a disability. The rest of the columns show the median household income level of households with a working age person who reports a specific disability type in the ACS.

Median income for the population with disabilities is highest, \$50,000, in Hawaii. It is followed by Connecticut and New Hampshire, where the median household income for persons

with disabilities is \$46,100 and \$45,800 respectively. Median household income for persons with disabilities is lowest in Louisiana at \$25,400, followed by Alabama and Kentucky where the levels are \$25,700 and \$25,800 respectively.

The absolute amounts do not account for differences in economic conditions across States. To account for differences in economic conditions across States, the third column shows the median household income of persons with disabilities relative to the median household income of those without disabilities. It is defined as the median household income of persons with disabilities divided by the median household income of persons without disabilities. Compared to the population without disabilities, the median income of persons with disabilities is highest in Utah, where the median household income of persons with disabilities is 75.9 percent of the median household income level for persons without disabilities. Utah is followed by South Dakota and Wyoming, with relative rates of 72.1 percent and 71.8 percent respectively. The State with the lowest levels of median income relative to persons without a disability is Delaware, where the median household income of persons with disabilities is 48.3 percent of those without disabilities. It is followed by Louisiana and Alabama, with relative rates of 49.6 percent and 50.4 percent, respectively.

ACS Disability Trends 2000 to 2003

The ACS data can also be used to examine time trends. Table 10 shows trends from 2000 to 2003 for disability prevalence rates, employment rates, and poverty rates. Because of the change in the questionnaire that affected the go-outside the home disability question and the work disability question (as explained in Section V of this Guide), the trends in this guide focus on disability as defined by the presence of a sensory disability, physical disability, mental disability or a self-care disability. It is important to note that this limited definition misses part of the population that may have a go-outside-the-home disability or an employment disability and who do not report one of the other four disability questions in the ACS. While we cannot directly estimate the size of this population for 2000 through 2002, in 2003 approximately 10.1 percent of persons who reported at least one of the six disabilities reported yes to only the go-outside the home and/or the employment disability questions. Trends for each of these four disability types used to identify a disability are also included.

The first section of Table 10 shows that the prevalence of one of the four specific disability types has remained relatively constant over time. In 2000, 10.8 percent of the working

age population reported that they had at least one of the four disability types. The estimate dropped to 10.6 percent in 2001, returned to 10.8 percent in 2002, and is 10.7 percent in 2003. The prevalence of each of the four disability types is also similar over time. The prevalence rates are between 1.9 and 2.0 percent for self-care disabilities, between 3.8 percent and 4.0 percent for mental disabilities, 7.3 percent and 7.5 percent for physical disabilities, and 2.7 percent and 2.9 percent for sensory disabilities.

The second section of Table 10 shows that the employment rates for persons with and without disabilities have declined from 2000 to 2003. The first column of the section shows that employment among the working age population without a disability declined from 80.7 percent in 2000 to 79.5 percent in 2003. The employment rates for those who reported one of the four disabilities fell from 45.2 percent in 2000 to 40.0 percent in 2003. The Table shows that the decline is evident in each of the four disability types.

The final section of Table 10 shows that the poverty rate for persons with and without disabilities has risen from 2000 to 2003. The first section of the Table shows that in 2000, the poverty rate for those without a disability was 7.4 percent. By 2003, it increased to 7.8 percent. For those who report one of the four disability types, poverty increased from 21.9 percent in 2000 to 23.9 percent by 2003. The increase in the poverty rate is also evident across each of the four disability types.

Comparisons to Other Data Sources

The ACS is one of several nationally representative datasets that may be used to estimate the number of people with disabilities, the prevalence of persons with disabilities, the employment rate of persons with disabilities and the economic well-being of persons with disabilities. Different surveys use different methods to collect information on persons with disabilities and these differences can lead to differences in estimates. This section shows how the ACS estimates of the population compare to estimates from other nationally representative surveys.

The national datasets used for the comparison include: the 2000 Decennial Census, the March 2004 Current Population Survey (CPS), the 2002 National Health Interview Survey (NHIS), the 1994 National Health Interview Survey-Disability Supplement, the 2001 Panel Study of Income Dynamics and the 2002 Survey of Income and Program Participation (SIPP). The year associated with each dataset represents the actual year that the survey was

administered. The March 2004 CPS collects annual income and annual labor supply information for the 2003 calendar year. Details on the methods used to collect information on persons with disabilities in each of these surveys may be found in the corresponding Cornell StatsRRTC User Guides.

Differences in estimates may be related to differences in the population over time. Thus, it is important to pay special attention to the survey year when comparing estimates across the surveys. The 2000 Decennial Census Long Form, for example, is representative of the year 2000. Changes in the population, the labor market and the economic environment between the year 2000 and the year 2003 can affect population estimates, prevalence estimates, employment estimates and economic well-being estimates.

Each comparison table defines disability as the presence of a participation restriction, an activity limitation, or an impairment. It is important to note that the second participation restriction is now referred to as Instrumental Activities of Daily Living (IADLs). This term captures a broader set of participation restrictions than the ACS “go-outside the home” definition. It also includes participation restrictions that affect a person’s ability to: manage money and keep track of bills, prepare meals, and do work around the house.

It is also important to note that some datasets are limited to identifying a disability based upon a participation restriction. This is evident in the table by looking across the columns that identify the ICF disability concepts. A “NA” entry indicates that specific information on the particular ICF concept is not available in the survey. Disability is defined in these cases only based upon the information that is available in the survey. For example, the CPS only contains information on a work limitation. The definition of disability in the CPS is therefore based solely on whether the person has a work limitation. In Figure 1, this definition captures a portion of persons who fall within the participation restriction circle.

The comparisons are made across the working-age population. There are two reasons for this decision. First, most of the nationally representative surveys focus on the working age population. Second, among the subset of surveys that identify children with disabilities, there are relatively large differences in the methods used to define and identify disability, and it is difficult to make meaningful comparisons. Further research on methods used to identify children with disabilities is needed.

Population and Prevalence Estimates

The ACS population and prevalence rate estimates are lower than estimates from datasets that use a larger set of questions to estimate the size of the population with disabilities and higher than estimates from datasets that use a smaller set of questions. Table 11 shows differences across surveys in the size of the population with disabilities. The first section of the table shows the ACS estimate of approximately 1,667,000 persons between the ages of 18 and 24 with a disability. It is lower than the 2,426,000 estimate from the Survey of Income and Program Participation (SIPP) and the 2,126,000 estimate from the NHIS, which both use a much larger set of survey questions to identify persons with disabilities. It is larger than the estimates from the Census 2000, the March 2004 Current Population Survey, and the 2001 Panel Study of Income Dynamics (PSID), which use a smaller set of survey questions.

The rest of the table shows comparisons for other age groups. The 2003 ACS shows 17,146,000 persons with disabilities in the 25 to 61 year age group. It is smaller than the 26,620,000 in the SIPP and the 23,192,000 in the NHIS. The PSID estimate of 20,054,000 is also slightly higher than the ACS estimate. The ACS estimate is larger than the population estimates for the March 2004 CPS and the 2000 Census long form.

Table 12 shows estimates for prevalence rates. The first section of the table shows the 2003 ACS disability prevalence rate estimate of 6.5 percent for the population between the ages of 18 and 24. It is lower than the SIPP estimate of 8.9 percent, very similar to the NHIS estimate of 7.8 percent, and higher than estimates based upon the Census 2000, the CPS and the PSID. For the working age population between the ages of 25 and 61, the 2002 ACS data shows that 11.9 percent of the population reports a disability. The ACS estimate is lower than the 18.7 percent reported in the SIPP, the 16.7 percent reported in the NHIS, and the 14.6 percent reported in the PSID. It is higher than the 10.1 percent reported in the Census 2000 and the 8.2 percent reported in the CPS. For the population age 62 to 64, the ACS data show a prevalence rate estimate of 26.7 percent. The ACS estimate is lower than the SIPP estimate of 39.5 percent and the NHIS estimate of 32.5 percent, is similar to the PSID estimate of 30.1 percent, and is higher than the Census 2000 estimate of 22.7 percent and the March 2004 CPS estimate of 18.9 percent. For the population ages 18 to 64, the ACS data shows a prevalence rate of 11.7 percent. It is lower than the 17.9 percent estimate in the SIPP, the 15.8 percent estimate in the NHIS, and

the 14.7 percent estimate in the PSID. It is higher than the Census 2000 estimate of 9.9 percent and the March 2004 CPS estimate of 7.9 percent.

Employment Rate Estimates

The employment rate estimates in the ACS using the reference week measure and the some attachment to the labor force measure fall in the lower end of the range of estimates from national surveys. The ACS full-time full-year employment rate estimate is higher than estimates from other surveys. Table 13 illustrates these findings. The 2003 ACS reference period measure shows an employment rate estimate of 79.5 percent for persons without disabilities and 39.3 percent for persons with a disability. For those without a disability, the ACS is relatively lower than estimates from other national surveys. For those with a disability, it is lower than the PSID estimate of 53.2 percent, is slightly lower than the SIPP estimate of 48.9 percent and the NHIS estimate of 47.3 percent and the Census 2000 estimate of 41.8 percent. It is higher than the March 2004 CPS estimate of 19.6 percent. The ACS employment rate estimate using the some attachment to the labor force measure for persons with disabilities is 48.9 percent. It is lower than the 2001 PSID estimate of 67.8 percent, the 2002 SIPP estimate of 61.1 percent, the 2002 NHIS estimate of 57.9 percent, and the 2000 Census estimate of 51.9 percent. It is larger than the March 2004 CPS estimate of 27.9 percent which represents attachment to the labor force in the 2003 calendar year. The ACS full-time full-year estimate for persons with disabilities is 24.5 percent. It is lower than the 2001 PSID estimate of 45.1 percent, the 2002 SIPP estimate of 31.1 percent, the 2002 NHIS estimate of 29.8 percent, and the Census 2000 estimate of 27.1 percent. It is lower than the March 2004 CPS estimate of 9.4 percent which represents full-time full-year work during the 2003 calendar year.

Economic Well-Being Estimates

The poverty rate estimates from the 2003 ACS are in the higher end of the range of estimates from other surveys, the household income measure estimate middle of the range of estimates from other surveys, and the household size adjusted income measure is in the middle of the range of estimates from many of the other surveys. Table 14 compares poverty rate estimates across the datasets. The 2003 ACS poverty rate estimate for the working age population without a disability is 7.7 percent. It is slightly lower than the 7.9 percent estimate from the Census 2000

estimate and the 8.0 percent estimate from the March 2004 CPS. It is larger than the 4.6 percent estimate from the 2001 PSID, the 5.0 percent estimate from the 2002 NHIS and the 6.5 percent estimate from the 2002 SIPP. The 2003 ACS poverty rate estimate for those with a disability is 23.7 percent. It is lower than the 28.8 percent estimate from the March 2004 CPS. It is higher than the poverty rate estimates of 11.8 percent from the 2001 PSID, 15.7 percent from the 2002 NHIS, 18.8 percent from the 2003 SIPP, and 23.2 percent from the Census 2000. The remaining columns show poverty rates across disability datasets by the disability type.

The last two sections of Table 14 compare median household income and median household size adjusted income across datasets. These estimates are not adjusted for inflation. For persons without a disability, the median household income is \$60,000. It is larger than the \$53,313 estimate in the SIPP and the \$56,860 estimate in the Census 2000. It is slightly lower than the \$61,999 estimate from the March 2004 CPS and the \$62,000 estimate from the 2001 PSID. For persons with a disability, the median household income estimate in the ACS is \$34,600. It is larger than March 2004 estimate of \$27,955, the Census 2000 estimate of \$33,600, and the 2002 SIPP estimate of \$33,895. It is smaller than the 2001 PSID estimate of \$42,000.

The final section of the Table shows median household size adjusted income estimates across datasets. The ACS estimate for persons without a disability is \$35,796, which is similar to estimates from the 2000 Census and the 2002 CPS, and lower than estimates from the 2001 PSID. For persons with a disability, the ACS estimate is \$21,304. It is higher than estimates from the 2002 CPS and the 2000 Census, and lower than the estimate from the 2001 PSID.

Summary and Conclusions

This guide carefully described the information on the disability population from the new Census Bureau survey called the American Community Survey (ACS). It began with a description the ICF conceptual model of disability. The ICF provides a framework that may be used to assess the disability information in the ACS as well as the disability information in other surveys.

The guide then presented an overview of the survey methodology and definitions. The design of the ACS provides several advantages over other data collection efforts. First, it has gone through a rigorous testing phase and the results of the testing show that the data is reliable when compared to the 2000 Decennial Census long form. Second, the survey methodology and design result in a relative high response rate. The design also supports estimates at the national

level, the State level, and, once fully implemented, the Metropolitan Statistical Area level and county level. Third, the disability questions were designed by a federal inter-agency workgroup and they were subjected to a systematic design and development process. Finally, the ACS provides a variety of employment and economic well-being indicators. The paper focuses on indicators commonly used in the literature but there are a number of other indicators that researchers may select from the ACS.

The utility of the ACS was illustrated using estimates from the ACS Public Use Microdata Sample on the population with disabilities, including: the size of the population, the prevalence rate, the demographic composition, the employment rate and economic well being measures. The estimates are presented at both the national and at the State level. At the national level, the ACS estimates show that there are approximately 37 million people with disabilities in the U. S. population who do not live in “group quarters” and who are ages 5 and older. This implies the prevalence of disability is approximately 14.2 percent. Compared to the population without disabilities, the population with disabilities is older, more likely to be of African American and Native American decent, and more likely to have an education level below the high school level. The employment and economic well being measures show that even with the new improved disability data contained in the ACS, there are still large disparities between the population with disabilities and the population without disabilities. At the State level, the ACS estimates show significant differences in the prevalence of disability, employment and economic well-being. The differences exist both in absolute terms and when the differences are relative to the population within the State without a disability.

The ACS also allows users to examine trends over time. However, there are differences in the structure of the last two disability questions over time. Therefore, a modified definition of disability is required to examine time trends for the period from 2000 through 2003. Using this modified definition, we showed that the prevalence of disability remained relatively constant throughout the period, employment rates declined and poverty rates rose. While these trends follow the trends of the population without a disability and are related to the business cycle, they illustrate that the population with disabilities faced relatively larger declines, in percentage terms, in employment rates and relatively large increases, in percentage terms, in poverty rates. Time trends from 2003 onwards may use the full set of disability questions to better represent the population with disabilities.

Finally, this User Guide compared estimates from the ACS to other national surveys that collect information on the population with disabilities. The comparisons showed that surveys that use a larger number of questions to identify the population with disabilities tend to have higher estimates of the population with disabilities, higher disability prevalence estimates, higher disability employment rates, higher household median income levels for persons with disabilities and lower poverty rates for persons with disabilities. Estimates from the ACS fall within the middle of the range of estimates for the characteristics used in this guide.

In conclusion, while there are some limitations to the disability data collected in the ACS and further methodological research is required, the ACS disability data has been recognized as an improvement over prior Census Bureau surveys (Adler et al, 1999). As the ACS data collection effort continues, researchers and policymakers will be able to track changes in employment and economic indicators across States and over time. These differences may provide important information on how the labor market environment, the social environment and the policy environment influence the employment and economic well-being of the population with disabilities. The use of the ACS to monitor the progress of the population with disabilities will be an important component of the nation's efforts to reach the goals of full participation, independent living and economic self-sufficiency for the population with disabilities.

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Tables

Table 1a. Disability Definitions from the 2003 American Community Survey

Census Term	Question	Ages
	Q15. Does this person have any of the following long lasting conditions:	
Impairment: Sensory Disability	a. Blindness, deafness, or a severe vision or hearing impairment?	Ages 5 and older
Impairment: Physical Disability	b. A condition that substantially limits one or more basic physical activities such as walking, climbing stairs, reaching, lifting, or carrying?	Ages 5 and older
	Q16. Because of a physical, mental, or emotional condition lasting 6 months or more, does this person have any difficulty in doing any of the following activities:	
Impairment: Mental Disability	a. Learning, remembering, or concentrating?	Ages 5 and older
Activity Limitation: Self-care Disability	b. Dressing, bathing, or getting around inside the home?	Ages 5 and older
	Q17. Because of a physical, mental, or emotional condition lasting 6 months or more, does this person have any difficulty in doing any of the following activities:	
Participation Restriction: Go- Outside-the-Home Disability	a. Going outside the home alone to shop or visit a doctor's office?	Ages 15 and older
Participation Restriction: Employment Disability	b. Working at a job or business?	Ages 15 and older
Disability	If a person responds yes to at least one of the six questions found in Q15, Q16 and Q17, then the Census classifies the person as having a disability.	Ages 5 and older

Source: Author's adaptation from ACS website
<http://www.census.gov/acs/www/UseData/Def/Disabili.htm>

Note: For 2000 through 2002, the ACS grouped Q17a and b under question 16 as 16c and 16d, and the questions were asked for household members 16 and older. See Section V of User Guide for a discussion of this change.

Table 1b. Demographic Definitions from the 2003 American Community Survey

Census Term	Question	Ages
Gender	(List of Residents Section) Q1. What is this person's sex?	All
Age	(List of Residents Section) Q2. What is this person's age and what is this person's date of birth?	All
Race	(List of Residents Section) Q6. What is this person's race? Mark (X) one or more races to indicate what this person considers himself/herself to be. Responses include the following: White; Black or African-American; American Indian or Alaska Native (print name of enrolled or principal tribe); Asian Indian; Chinese; Filipino; Japanese; Korean; Vietnamese; Other Asian (Print Race); Native Hawaiian; Guamanian or Chamorro; Samoan; Other Pacific Islander (Print Race Below); Some other race (print race below).	All
Census Race Recode	The Census Bureau recoded to the following: White Alone; Black or African American Alone; American Indian Alone; Alaska Native Alone; American Indian and Alaska Native Alone; Asian Alone; Native Hawaiian or Other Pacific Islander Alone; Some other race alone; or two or more races. Alone means that this category was the only race category selected. The householder is allowed to select one or more races for a household member. See Census website for details of race recode.	All
Additional Recode	American Indian Alone, Alaska Native Alone, and American Indian and Alaska Native Alone are grouped into one category in this paper and called American Indian or Alaska Native.	All
Hispanic Origin	(List of Residents Section) Q5. Is this person Spanish/Hispanic/Latino? Mark (X) the "No" box if not Spanish/Hispanic/Latino. Responses include the following: No, not Spanish/Hispanic/Latino; Yes, Mexican, Mexican Am., Chicano; Yes, Puerto Rican; Yes, Cuban, Yes, other Spanish/Hispanic/Latino (print group).	All
Hispanic Recode	Recoded to 1 if Yes to question, 2 if no to question.	
Education	Q11. What is the highest level of schooling this person has completed? If currently enrolled, mark the previous grade or highest degree received.	All
Education Recode: Less than High School	Nursery school to 4th grade; 5th grade or 6th grade; 7th grade or 8th grade; 9th grade; 10th grade; 11th grade; or 12th grade no diploma	All
High School	If response is high school graduate or equivalent (e.g., GED).	All
Greater than High School	If response indicates at least some college.	All

Source: Author's adaptation from ACS website <http://www.census.gov/acs/www/UseData/Def.htm>

Table 1c. Employment Definitions from the 2003 American Community Survey

Census Term	Question	Ages
ACS Questions	Q22. LAST WEEK, did this person do ANY work for either pay or profit? Mark the "Yes" box even if the person worked for only 1 hour, or helped without pay in a family business or farm for 15 hours or more, or was on active duty in the Armed Forces.	Ages 15 and older
	Q28b. LAST WEEK, was the person TEMPORARILY absent from a job or business? (Yes, on vacation, temporary illness, labor dispute, etc.)	Ages 15 and older
	Q32. During the PAST 12 MONTHS, How many WEEKS did this person work? <i>Count paid vacation, paid sick leave and military service.</i>	Ages 15 and older
	Q33. During the PAST 12 MONTHS, in the WEEKS WORKED, how many hours did this person usually work each WEEK?	Ages 15 and older
Employment Definitions		
Employed: Reference Period	The person is classified as employed if they respond "yes" to Q22 or Q28b.	Ages 15 and older
Employed: Sometime in Previous Year	At least 52 hours of work during the previous year. Determined by multiplying usual hours per week (Q33) by the number of weeks worked in past 12 months (Q32).	Ages 15 and older
Employed: Full-time year round	At least 50 weeks during the previous year and at least 35 hours per week. Determined by condition that weeks worked is greater than or equal to 50 (from Q32) and usual hours per week is greater than or equal to 35 hours.	Ages 15 and older

Source: Author's adaptation from ACS website <http://www.census.gov/acs/www/UseData/Def.htm>

Table 1d. ACS Economic Well-Being Measures from the 2003 American Community Survey

Census Term	Question	Ages
Income	(Person Section) Q40a-h. Asks the person to list the amount of income received from the following sources: wages, salary, commissions, bonuses, or tips from all jobs (before deductions for taxes, bonds, dues or other items); self-employment income from own non-farm businesses or farm businesses, including proprietorships and partnerships (net income after business expenses); interest, dividends, net rental income, royalty income, or income from real estates and trusts; Social Security or Railroad Retirement; Supplemental Security Income (SSI); any public assistance or welfare payments from the State or local welfare office; retirement, survivor or disability pensions (not including social security); and any other sources of income received regularly such as Veterans' (VA) payments, unemployment compensation, child support or alimony (not including lump sum payments such as money from an inheritance or the sale of a home).	Ages 15 and older
Poverty	The Census Bureau used information on the family income and household composition, along with standard poverty thresholds, to construct a poverty measure. See the Census Bureau website http://www.census.gov/acs/www/UseData/Def/Poverty.htm for details.	All ages except unrelated HH members below the age of 15.
Household Size	The sum of all people who the householder reports living in the housing unit.	All ages
Household Income	The sum of income for each household member age 15 and older in the household unit.	All ages
Household Adjusted Income	Household income adjusted for sharing within the housing unit based upon the method described in the paper. See Citro and Michael (1995) page 176 for further information.	All ages

Source: Author's adaptation from ACS website <http://www.census.gov/acs/www/UseData/Def.htm>

Table 2. 2003 ACS Population Estimates, Prevalence Estimates, and Sample Sizes By ACS Disability Definition

	No Disability	Disability	Participation Restriction		Activity Limitation	Impairment		
			Employment ¹	Go-Outside Home ¹	Self-Care	Mental	Physical	Sensory
<i>All, Age 5-99</i>								
Population Estimate	225,836,000	37,478,000	21,391,000	10,705,000	7,022,000	13,483,000	23,593,000	10,793,000
Prevalence Rate	85.8	14.2	9.8	4.9	2.7	5.1	9.0	4.1
Sample Size	948,274	172,435	101,047	49,837	31,875	60,369	109,570	50,470
<i>Ages 5 to 17</i>								
Population Estimate	49,674,000	3,348,000	159,000	105,000	421,000	2,675,000	644,000	589,000
Prevalence Rate	93.7	6.3	2.0	1.3	0.8	5.1	1.2	1.1
Sample Size	204,162	14,353	726	482	1,703	11,618	2,537	2,386
<i>Ages 18 to 24</i>								
Population Estimate	24,194,000	1,667,000	714,000	399,000	187,000	953,000	535,000	356,000
Prevalence Rate	93.6	6.5	2.8	1.5	0.7	3.7	2.1	1.4
Sample Size	86,686	6,288	2,705	1,569	698	3,708	1,871	1,229
<i>Ages 25 to 61</i>								
Population Estimate	126,649,000	17,146,000	9,854,000	4,227,000	2,925,000	5,745,000	10,819,000	3,944,000
Prevalence Rate	88.1	11.9	6.9	2.9	2.0	4.0	7.5	2.7
Sample Size	528,165	74,627	43,322	18,469	12,637	24,800	47,088	16,914
<i>Ages 62 to 64</i>								
Population Estimate	4,941,000	1,795,000	1,111,000	404,000	293,000	393,000	1,292,000	455,000
Prevalence Rate	73.4	26.7	16.5	6.0	4.4	5.8	19.2	6.8
Sample Size	24,275	8,767	5,489	1,968	1,416	1,946	6,294	2,261
<i>Ages 65 and older</i>								
Population Estimate	20,376,000	13,520,000	9,551,000	5,569,000	3,194,000	3,714,000	10,301,000	5,447,000
Prevalence Rate	60.1	39.9	28.2	16.4	9.4	11.0	30.4	16.1
Sample Size	104,986	68,400	48,805	27,349	15,421	18,297	51,780	27,680

Source: Author's calculation from 2003 American Community Survey Public Use Microdata Sample (PUMS).

Notes: (1) The *employment* and *go-outside the home* participation restrictions are asked only for those ages 15 and older.

Standard errors for estimates in this Table are located in Appendix Table D-1.

Table 3. 2003 American Community Survey Estimates of the Distribution of Demographic Characteristics for Persons With and Without Disabilities

Characteristic	No Disability	Disability	Participation Restriction		Activity Limitation	Impairment		
			Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
Age								
% 5 to 14	18.7	7.5	NA	NA	5.3	16.9	2.2	4.6
% 15 to 24	14.0	5.9	4.1	4.7	3.4	10.0	2.8	4.1
% 25 to 34	16.1	6.5	5.6	5.3	4.4	7.6	4.7	4.8
% 35 to 44	17.5	11.3	11.0	9.7	9.7	11.5	10.4	8.5
% 45 to 54	15.3	15.8	16.2	14.0	15.5	14.5	16.8	13.0
% 55 to 64	9.4	16.9	18.4	14.3	16.3	11.9	19.5	14.5
% 65 to 74	5.5	14.4	16.0	14.8	14.3	9.1	17.7	16.7
% 75 to 84	3.0	14.9	18.8	22.2	18.7	11.6	17.8	21.4
% 85 or older	0.5	6.8	9.8	15.0	12.6	6.9	8.2	12.4
Total	100	100	100	100	100	100	100	100
Gender								
% Male	49.0	47.2	42.9	36.5	41.1	50.0	43.0	51.4
% Female	51.0	52.8	57.1	63.6	58.9	50.0	57.0	48.6
Total	100	100	100	100	100	100	100	100
Race								
% Asian	4.5	2.4	2.4	3.3	2.4	2.2	2.1	2.4
% Black	11.7	13.8	14.2	14.1	16.0	15.8	13.7	10.9
% Native American	0.7	1.1	1.1	1.2	1.4	1.3	1.2	1.3
% White	76.5	77.3	77.7	76.5	75.1	74.2	78.1	80.6
% Some Other Race	6.6	5.4	4.7	5.0	5.1	6.5	4.9	4.9
Total	100	100	100	100	100	100	100	100
Ethnicity								
% Hispanic	14.0	9.6	8.6	9.4	9.4	10.4	8.9	9.2
Education (25-61)								
% Less than High School	11.6	25.0	28.6	31.0	28.4	31.2	25.7	24.5
% High School/GED	28.0	33.6	34.5	33.3	32.5	32.5	33.8	32.9
% Some College	29.4	28.4	26.7	25.1	27.8	25.9	28.9	27.7
% Four Year College Graduate or more	31.0	13.0	10.3	10.7	11.3	10.5	11.6	14.9
Total	100	100	100	100	100	100	100	100

Source: Author's calculation from 2003 American Community Survey Public Use Microdata Sample (PUMS).

Standard errors for estimates in this Table are in Appendix Table D-2.

Table 4. 2003 Employment Rate Estimates, Ages 25 to 61

Characteristic	No Disability	Disability	Participation Restriction		Activity Limitation	Impairment		
			Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
<i>All</i>								
Reference Period	79.5	39.3	18.9	17.9	18.3	28.2	33.8	49.9
Sometime Previous Year	87.1	48.9	28.3	25.8	26.2	37.2	42.8	58.1
Full-Time Previous Year	59.6	24.5	9.1	9.0	9.4	15.0	20.3	34.5
<i>Men</i>								
Reference Period	87.1	43.4	20.8	19.4	19.6	30.9	35.6	56.4
Sometime Previous Year	94.5	53.7	31.0	27.9	28.3	40.1	45.5	65.0
Full-Time Previous Year	71.9	29.6	11.2	11.0	10.7	18.2	23.2	41.2
<i>Women</i>								
Reference Period	72.2	35.5	17.2	16.9	17.3	25.8	32.3	41.3
Sometime Previous Year	80.0	44.5	25.9	24.3	24.5	34.6	40.4	49.0
Full-Time Previous Year	47.7	19.6	7.1	7.5	8.3	12.0	17.7	25.6
<i>White</i>								
Reference Period	80.7	41.4	19.6	18.4	19.1	29.9	35.3	53.0
Sometime Previous Year	87.8	50.8	29.0	25.9	26.7	38.9	44.2	60.9
Full-Time Previous Year	60.5	25.8	9.1	8.7	9.8	15.9	21.2	37.1
<i>Black</i>								
Reference Period	76.9	30.4	14.7	13.9	30.9	21.0	27.9	35.8
Sometime Previous Year	86.9	39.9	23.1	21.3	40.2	29.4	36.5	45.0
Full-Time Previous Year	59.5	18.3	7.5	7.4	18.5	10.3	16.4	22.9
<i>Native American</i>								
Reference Period	73.9	32.1	15.8	17.1	15.9	22.9	24.9	40.3
Sometime Previous Year	84.7	42.7	24.9	22.6	21.3	32.6	34.2	51.1
Full-Time Previous Year	53.3	19.4	8.6	8.8	8.3	11.1	15.2	23.2
<i>Asian</i>								
Reference Period	72.9	42.5	30.7	30.1	25.6	29.3	35.9	49.8
Sometime Previous Year	81.1	55.4	45.0	47.5	42.0	41.4	48.7	59.4
Full-Time Previous Year	53.7	29.2	18.8	18.7	13.4	16.9	24.3	38.5
<i>Hispanic</i>								
Reference Period	74.1	37.1	18.5	17.6	16.3	26.0	32.8	45.1
Sometime Previous Year	82.5	48.1	29.7	27.4	27.4	35.8	43.5	54.3
Full-Time Previous Year	55.5	23.5	11.0	11.1	9.2	15.2	20.2	30.3

Table 4 (continued). 2003 American Community Survey Employment Rate Estimates, Ages 25 to 61

Characteristic	No Disability	Disability	Participation Restriction	Activity Limitation	Impairment			
			Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
<i>LT High School</i>								
Reference Period	67.0	25.2	12.2	12.1	10.9	19.3	20.5	30.7
Sometime Previous Year	77.0	34.0	20.0	18.6	17.4	26.8	28.7	38.4
Full-Time Previous Year	47.7	13.9	5.7	5.7	4.5	9.4	11.0	17.7
<i>High School</i>								
Reference Period	77.8	37.6	17.5	16.7	16.0	28.3	32.1	49.6
Sometime Previous Year	86.1	47.3	26.8	23.9	23.6	37.2	41.1	58.1
Full-Time Previous Year	59.6	23.8	8.6	7.9	8.5	15.3	19.4	35.2
<i>More Than High School</i>								
Reference Period	82.7	49.3	25.4	24.2	25.7	35.8	43.7	61.1
Sometime Previous Year	89.6	59.3	36.2	33.8	34.7	46.2	53.1	69.5
Full-Time Previous Year	61.9	31.3	12.1	12.8	13.6	19.4	26.9	43.7

Source: Author's calculation from 2003 American Community Survey Public Use Microdata Sample (PUMS).
Standard errors for estimates in this Table are located in Appendix Table D-3.

Table 5. 2003 American Community Survey Economic Well Being Estimates, Ages 25 to 61

	No Disability		Participation Restriction		Activity Limitation	Impairment		
	Disability	Disability	Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
All								
% Below Poverty Line	7.7	23.7	29.6	29.7	28.9	30.8	25.0	20.8
Median Inc.-to-Needs	3.81	2.21	1.77	1.77	1.79	1.73	2.10	2.47
Median HH Income	\$60,000	\$34,600	\$28,000	\$28,600	\$28,000	\$27,400	\$32,100	\$38,000
Median HH Size Adj. Inc.	\$35,796	\$21,304	\$17,487	\$17,615	\$17,667	\$17,321	\$20,207	\$23,415
Men								
% Below Poverty Line	6.2	20.5	26.4	26.5	26.2	26.4	22.7	16.8
Median Inc.-to-Needs	3.96	2.40	1.89	1.87	1.89	1.93	2.17	2.75
Median HH Income	\$62,000	\$36,900	\$29,200	\$30,000	\$29,700	\$30,000	\$33,400	\$41,800
Median HH Size Adj. Inc.	\$37,000	\$22,840	\$18,200	\$18,385	\$18,445	\$18,879	\$21,000	\$25,850
Women								
% Below Poverty Line	9.2	26.7	32.6	32.1	31.1	34.7	27.0	26.1
Median Inc.-to-Needs	3.68	2.06	1.66	1.70	1.71	1.57	2.03	2.09
Median HH Income	\$58,980	\$32,140	\$26,600	\$27,400	\$27,000	\$25,400	\$31,101	\$33,000
Median HH Size Adj. Inc.	\$34,790	\$20,011	\$16,700	\$17,130	\$16,971	\$15,876	\$19,658	\$20,223
White								
% Below Poverty Line	6.2	20.5	26.4	26.7	25.6	27.3	21.8	17.2
Median Income-to-Needs	4.08	2.46	1.96	1.97	2.00	1.94	2.32	2.73
Median Household Inc.	\$63,348	\$37,100	\$30,000	\$30,530	\$30,400	\$30,000	\$35,000	\$41,200
Median HH Size Adj. Inc.	\$38,000	\$23,335	\$19,000	\$19,163	\$19,375	\$19,092	\$22,000	\$25,600
Black								
% Below Poverty Line	14.5	36.4	41.8	42.0	36.2	43.9	37.1	37.1
Median Income-to-Needs	2.85	1.48	1.22	1.21	1.49	1.15	1.45	1.47
Median HH Income	\$45,000	\$23,400	\$19,200	\$19,800	\$23,400	\$18,000	\$22,740	\$22,900
Median HH Size Adj. Inc.	\$27,000	\$14,425	\$12,445	\$12,586	\$14,500	\$11,778	\$14,100	\$14,545
Native American								
% Below Poverty Line	15.3	34.7	40.8	36.7	39.1	39.6	35.8	33.9
Median Inc.-to-Needs	2.64	1.52	1.25	1.29	1.23	1.25	1.38	1.61
Median HH Income	\$43,600	\$26,000	\$20,100	\$21,600	\$19,910	\$22,800	\$24,300	\$26,800
Median HH Size Adj. Inc.	\$25,066	\$15,000	\$12,763	\$13,576	\$12,516	\$13,683	\$14,434	\$15,210
Asian								
% Below Poverty Line	8.4	17.7	19.9	16.2	13.2	19.7	19.6	17.3
Median Income-to-Needs	4.10	2.66	2.45	2.59	2.51	2.38	2.61	2.72
Median HH Income	\$69,900	\$48,600	\$44,800	\$48,200	\$43,400	\$43,400	\$47,640	\$50,000
Median HH Size Adj. Inc.	\$38,919	\$26,475	\$24,000	\$24,884	\$24,400	\$23,523	\$26,362	\$28,284

Table 5 (continued). 2003 Economic Well Being Measures, Ages 25 to 61

	No Disability		Participation Restriction		Activity Limitation	Impairment		
	Disability	Disability	Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
<i>Hispanic</i>								
% Below Poverty Line	15.7	30.2	34.4	34.2	37.6	39.2	30.9	29.5
Median Income-to-Needs	2.29	1.70	1.49	1.48	1.39	1.36	1.64	1.71
Median HH Income	\$44,660	\$31,000	\$27,000	\$26,800	\$25,000	\$25,000	\$29,500	\$31,470
Median HH Size Adj. Inc.	\$23,094	\$17,205	\$15,486	\$15,500	\$14,056	\$14,142	\$16,546	\$17,571
<i>Less Than High School</i>								
% Below Poverty Line	21.0	36.5	40.1	38.5	39.5	40.7	37.9	34.6
Median Inc.-to-Needs	1.99	1.39	1.26	1.29	1.27	1.24	1.31	1.41
Median HH Income	\$37,000	\$23,400	\$21,200	\$22,100	\$21,700	\$21,010	\$22,000	\$23,800
Median HH Size Adj. Inc.	\$20,000	\$14,000	\$12,759	\$13,309	\$13,048	\$12,728	\$13,200	\$14,284
<i>High School</i>								
% Below Poverty Line	9.0	22.7	28.2	28.8	27.9	29.0	23.9	18.8
Median Inc.-to-Needs	3.16	2.17	1.81	1.82	1.84	1.81	2.08	2.46
Median HH Income	\$50,900	\$33,400	\$28,300	\$29,000	\$28,500	\$27,800	\$31,500	\$38,000
Median HH Size Adj. Inc.	\$29,861	\$20,860	\$17,718	\$17,961	\$17,750	\$17,748	\$20,000	\$23,100
<i>More Than High School</i>								
% Below Poverty Line	4.6	16.8	22.9	23.0	22.2	23.8	17.7	14.3
Median Inc.-to-Needs	4.61	3.00	2.35	2.38	2.41	2.35	2.85	3.38
Median HH Income	\$71,000	\$45,000	\$35,100	\$36,000	\$35,600	\$35,000	\$42,200	\$50,000
Median HH Size Adj. Inc.	\$43,000	\$28,572	\$22,698	\$22,800	\$22,769	\$22,981	\$27,000	\$31,624

Source: Author's calculation from 2003 American Community Survey Public Use Microdata Sample (PUMS).

Standard errors for estimates in this Table are located in Appendix Table D-4.

Table 6. 2003 ACS State Level Prevalence Rate Estimates, Ages 25 to 61

State	Participation Restriction			Activity Limitation		Impairment	
	Disability	Go-Outside		Self-Care	Mental	Physical	Sensory
		Employment	Home				
Alabama	16.7	10.4	4.6	3.3	5.5	11.5	3.6
Alaska	14.3	6.7	3.1	2.4	5.1	9.3	4.2
Arizona	11.9	7.1	2.9	1.9	3.6	7.0	3.0
Arkansas	17.2	11.1	4.6	3.6	6.0	11.4	4.7
California	10.7	6.0	2.7	1.8	3.8	6.6	2.3
Colorado	9.0	4.4	1.8	1.3	3.0	5.5	2.3
Connecticut	9.2	5.0	2.4	1.5	2.7	5.6	1.9
D. C.	11.8	5.9	2.3	1.5	3.6	7.7	2.3
Delaware	11.5	5.6	2.0	1.5	4.1	7.0	2.6
Florida	11.8	7.0	3.0	2.2	3.9	7.8	2.3
Georgia	12.0	7.1	2.9	2.0	3.8	7.6	2.9
Hawaii	10.3	5.7	2.4	1.4	3.1	6.3	2.2
Idaho	14.7	7.2	2.8	1.8	5.4	8.9	3.8
Illinois	9.2	5.0	2.3	1.7	2.8	5.7	2.1
Indiana	13.3	7.4	3.2	2.3	4.4	8.5	3.6
Iowa	12.2	6.7	2.8	1.8	4.4	7.3	2.9
Kansas	11.2	6.1	2.8	1.9	3.6	6.1	3.5
Kentucky	18.0	11.7	4.8	3.0	6.6	12.5	4.1
Louisiana	15.2	9.4	4.0	2.9	4.9	9.9	3.6
Maine	15.4	9.7	3.9	2.7	5.9	10.0	3.5
Maryland	10.6	5.6	2.8	1.8	3.7	6.4	2.6
Massachusetts	9.7	6.1	2.4	1.5	3.5	5.3	1.7
Michigan	12.4	7.1	3.3	2.5	4.4	7.7	2.6
Minnesota	9.2	4.9	1.9	1.5	3.2	5.6	2.0
Mississippi	19.2	12.2	4.9	4.0	7.1	12.7	4.6
Missouri	12.5	7.3	3.2	2.0	3.9	8.1	2.9
Montana	14.2	7.5	2.7	2.0	4.6	8.5	4.4
Nebraska	12.4	7.0	2.5	1.8	3.8	8.2	3.0
Nevada	10.1	5.3	2.4	1.9	2.5	6.6	2.4
New Hampshire	9.9	5.4	2.5	1.6	3.6	6.1	2.3
New Jersey	8.9	5.1	2.5	1.7	2.8	5.2	2.0
New Mexico	14.5	8.2	2.9	2.6	5.6	9.3	3.0
New York	10.8	6.5	3.1	1.9	3.5	6.9	2.2
North Carolina	14.2	8.5	3.3	2.2	4.5	9.5	3.0
North Dakota	10.9	5.1	2.0	1.2	3.4	6.3	3.1

Table 6 (continued). 2003 ACS State Level Prevalence Rate Estimates, Ages 25 to 61

State	Disability	Participation Restriction		Activity Limitation		Impairment	
		Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
Ohio	13.1	7.8	3.1	2.1	4.6	8.2	2.8
Oklahoma	15.6	8.2	3.8	3.0	5.2	10.6	4.4
Oregon	13.2	7.7	3.1	2.3	5.2	7.7	2.9
Pennsylvania	12.3	7.4	3.0	1.9	4.1	7.6	2.6
Rhode Island	12.0	6.8	2.9	1.8	4.4	7.1	2.7
South Carolina	14.8	8.8	3.5	2.3	4.4	10.1	3.5
South Dakota	9.5	4.7	1.6	1.2	2.7	5.5	2.8
Tennessee	15.1	8.9	3.9	2.6	5.4	9.9	3.6
Texas	10.9	5.8	2.6	1.9	3.4	6.9	2.9
Utah	9.9	4.1	1.7	1.1	3.2	5.5	2.7
Vermont	13.9	7.8	2.6	2.0	4.8	8.2	3.1
Virginia	11.1	6.4	2.5	1.9	3.5	7.3	2.7
Washington	12.7	6.7	3.0	2.0	4.9	7.3	3.3
West Virginia	21.2	14.0	5.1	3.5	7.3	15.1	5.1
Wisconsin	11.4	6.3	2.5	1.8	4.0	6.9	2.8
Wyoming	12.7	6.1	2.2	1.7	3.9	7.4	3.7

Source: Author's calculation from 2003 American Community Survey Public Use Microdata Sample (PUMS).
Standard errors for estimates in this Table are located in Appendix Table D-5.

Table 7. 2003 ACS State Level Employment Rate Estimates, Ages 25-61

State	No Disability	Disability	Relative Rate	Participation Restriction		Activity Limitation	Impairment		
				Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
Alabama	79.5	30.9	38.8%	13.5	13.1	17.3	19.8	28.4	37.5
Alaska	79.2	54.0	68.2%	27.5	21.9	27.9	42.5	49.5	63.3
Arizona	77.8	40.2	51.7%	20.7	20.6	14.6	26.1	31.6	49.5
Arkansas	82.3	35.6	43.3%	15.4	15.5	16.4	21.3	27.8	48.9
California	76.6	37.5	49.0%	19.0	18.1	14.5	26.6	32.5	47.4
Colorado	81.0	50.0	61.8%	24.7	30.0	25.5	39.1	45.0	52.0
Connecticut	80.9	43.4	53.7%	21.0	16.3	13.2	35.5	36.3	60.4
D. C.	82.3	45.1	54.8%	19.1	20.7	24.4	33.5	41.2	58.0
Delaware	78.3	41.0	52.4%	16.8	23.7	37.4	30.6	39.9	46.3
Florida	79.0	39.4	49.9%	19.0	18.3	17.9	28.5	34.8	49.7
Georgia	80.2	37.0	46.1%	14.8	13.9	14.9	28.3	32.3	46.9
Hawaii	80.4	44.2	55.0%	25.2	19.8	19.4	33.1	37.5	54.5
Idaho	81.1	51.8	63.8%	25.0	23.1	26.0	47.7	47.0	59.6
Illinois	78.4	40.7	51.9%	18.1	16.2	18.2	27.5	35.9	54.1
Indiana	80.9	43.5	53.8%	20.0	19.9	21.4	32.3	37.5	53.5
Iowa	84.9	45.9	54.0%	23.4	24.5	20.7	32.6	40.7	60.7
Kansas	83.9	43.7	52.2%	20.2	22.3	11.9	28.1	33.2	57.1
Kentucky	78.4	29.1	37.1%	11.8	11.4	12.3	18.6	24.6	33.7
Louisiana	77.5	34.0	43.9%	14.8	14.5	16.7	23.8	29.6	46.3
Maine	84.2	43.0	51.0%	22.9	14.4	22.0	30.4	37.1	52.7
Maryland	82.5	43.5	52.8%	22.6	27.2	26.9	36.6	38.1	54.8
Massachusetts	81.3	36.9	45.4%	20.6	22.6	18.1	31.2	31.0	49.3
Michigan	78.4	38.0	48.4%	18.1	15.6	17.0	29.0	32.0	48.5
Minnesota	84.3	49.7	58.9%	29.7	28.5	30.0	37.1	43.6	65.9
Mississippi	81.2	33.5	41.3%	13.8	9.8	12.5	22.5	26.9	45.0
Missouri	82.8	40.8	49.3%	19.6	19.5	21.5	29.6	35.8	53.9
Montana	82.7	50.7	61.3%	27.7	24.2	32.2	36.7	40.7	66.6
Nebraska	86.5	48.3	55.8%	28.1	32.7	30.6	42.6	43.2	56.1
Nevada	78.6	44.8	57.1%	19.0	18.3	22.6	39.4	36.8	54.9
N. Hampshire	83.9	46.5	55.4%	20.5	17.9	26.3	38.2	37.7	61.8
New Jersey	79.5	40.4	50.8%	21.9	22.0	21.9	27.9	37.0	47.5
New Mexico	77.4	39.0	50.4%	17.8	14.7	16.7	20.9	32.8	52.7
New York	77.7	37.0	47.7%	19.8	18.8	18.9	27.5	33.2	46.0
N. Carolina	80.9	37.0	45.8%	17.5	15.5	14.8	27.6	32.5	47.3
North Dakota	86.1	51.4	59.6%	26.1	24.3	13.4	34.1	40.5	64.5

Table 7 (continued). 2003 Estimated State Level Employment Rates, Ages 25-61

State	No Disability	Disability	Relative Rate	Participation Restriction	Activity Limitation	Impairment			
				Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
Ohio	80.4	38.9	48.4%	19.6	20.1	22.9	28.6	33.3	48.5
Oklahoma	77.4	41.9	54.1%	18.9	17.7	16.5	29.5	33.7	49.7
Oregon	79.8	40.6	50.9%	21.7	20.6	18.1	28.7	36.2	59.6
Pennsylvania	80.1	37.3	46.6%	17.5	17.0	19.1	26.4	31.5	48.6
Rhode Island	83.4	38.1	45.8%	17.0	19.3	19.7	27.7	32.0	45.4
S. Carolina	79.7	35.4	44.4%	16.5	15.5	15.5	22.0	30.6	47.8
South Dakota	85.5	55.7	65.2%	27.8	36.4	31.6	36.7	51.1	69.1
Tennessee	80.6	36.8	45.6%	16.5	11.1	13.2	22.8	31.2	48.1
Texas	77.5	41.0	52.9%	18.1	15.9	17.2	28.2	34.8	49.8
Utah	78.3	50.4	64.3%	23.1	21.8	27.5	38.9	47.5	60.1
Vermont	86.2	48.2	55.9%	26.6	17.4	21.2	38.1	43.1	57.1
Virginia	82.3	40.6	49.3%	19.8	19.8	24.5	30.2	32.7	53.9
Washington	79.0	42.4	53.7%	21.0	18.8	23.4	29.6	35.8	53.2
West Virginia	75.4	27.0	35.8%	8.9	10.2	11.1	14.4	23.2	36.6
Wisconsin	83.4	46.2	55.4%	26.8	22.6	25.1	34.1	41.7	54.1
Wyoming	83.4	54.6	65.5%	28.2	22.2	18.8	41.8	45.3	66.3

Source: Calculations from 2003 American Community Survey Public Use Microdata Sample.
Standard errors for estimates in this Table are located in Appendix Table D-6.

Table 8. ACS State Level Poverty Rate Estimates, Ages 25-61

State	No Disability		Relative Rate	Participation Restriction		Activity Limitation		Impairment	
	Disability	Disability		Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
Alabama	9.8	30.1	3.1	36.1	29.5	31.1	34.9	30.2	23.5
Alaska	6.4	13.8	2.2	18.3	18.9	18.4	18.1	14.3	13.6
Arizona	10.5	22.8	2.2	28.6	28.5	26.8	28.6	23.6	17.2
Arkansas	9.1	25.8	2.8	31.2	30.0	32.6	31.5	26.5	17.5
California	9.1	21.8	2.4	25.7	25.0	28.3	27.7	22.5	20.1
Colorado	5.5	18.3	3.3	24.8	22.1	27.5	23.3	20.6	13.2
Connecticut	4.9	19.1	3.9	27.1	33.4	26.2	22.8	22.7	13.3
D. C.	4.7	17.6	3.7	23.5	18.6	19.5	21.6	17.4	17.4
Delaware	12.7	30.7	2.4	33.6	37.1	25.4	36.8	33.6	28.0
Florida	8.7	22.6	2.6	29.2	28.6	30.7	29.5	23.7	21.1
Georgia	7.6	25.9	3.4	32.0	32.7	30.0	31.4	26.1	22.2
Hawaii	7.0	21.5	3.1	28.8	27.6	30.4	31.3	26.0	21.1
Idaho	8.6	20.9	2.4	27.7	22.3	20.3	26.9	19.6	19.1
Illinois	6.8	22.9	3.4	29.4	29.6	27.8	33.0	24.2	19.9
Indiana	5.8	20.8	3.6	27.6	26.8	21.8	30.3	21.6	18.4
Iowa	5.7	20.9	3.7	28.7	33.0	25.2	29.3	21.7	16.4
Kansas	5.4	20.8	3.8	30.6	29.2	37.6	30.7	23.4	17.6
Kentucky	10.2	30.6	3.0	37.1	34.2	30.6	37.0	31.8	31.2
Louisiana	11.9	31.3	2.6	39.5	44.3	37.9	38.7	31.3	27.2
Maine	5.7	21.5	3.8	27.9	28.5	22.6	29.0	22.4	18.6
Maryland	4.7	18.6	4.0	24.2	21.8	22.1	23.3	19.8	15.7
Massachusetts	5.4	23.8	4.4	28.9	32.1	30.0	34.2	24.7	23.4
Michigan	6.4	22.9	3.6	29.5	30.1	27.8	29.7	24.2	21.2
Minnesota	4.0	18.8	4.7	26.2	22.6	20.6	22.5	20.2	7.8
Mississippi	10.9	31.3	2.9	36.3	38.3	39.1	39.1	33.6	28.2
Missouri	6.0	22.6	3.7	27.0	30.9	28.5	30.3	24.3	15.2
Montana	8.8	23.2	2.6	28.4	22.0	25.6	32.3	24.5	20.5
Nebraska	5.4	26.1	4.9	33.5	30.3	35.8	35.8	28.3	26.3
Nevada	7.5	21.8	2.9	28.3	25.4	30.7	24.0	21.8	25.3
N. Hampshire	4.5	17.3	3.8	23.4	24.5	14.0	23.7	18.4	16.5
New Jersey	5.3	19.0	3.6	23.8	22.8	25.3	26.5	19.7	21.0
New Mexico	11.3	31.3	2.8	40.0	44.7	50.7	41.0	32.6	30.1
New York	8.6	26.5	3.1	31.7	32.3	29.8	34.3	27.6	22.1
N. Carolina	7.9	24.3	3.1	31.5	30.0	28.1	28.5	26.2	22.7
North Dakota	6.6	21.9	3.3	30.5	27.1	23.7	25.2	27.1	11.4

Table 9. 2003 ACS State Level Household Income Estimates, Ages 25-61

State	No Disability		Relative Rate	Participation Restriction		Activity Limitation	Impairment		
	Disability	Disability		Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
Alabama	\$51,000	\$25,700	50.4%	\$21,880	\$24,700	\$22,600	\$21,900	\$25,500	\$28,500
Alaska	\$68,000	\$43,000	63.2%	\$35,060	\$35,900	\$36,320	\$42,150	\$38,100	\$50,400
Arizona	\$55,200	\$35,000	63.4%	\$30,900	\$36,700	\$33,900	\$34,100	\$34,000	\$43,800
Arkansas	\$48,500	\$27,300	56.3%	\$23,400	\$21,370	\$24,200	\$23,000	\$25,800	\$30,800
California	\$65,000	\$40,500	62.3%	\$35,200	\$34,200	\$32,500	\$32,500	\$39,540	\$42,600
Colorado	\$65,000	\$43,100	66.3%	\$31,204	\$35,300	\$27,700	\$37,200	\$39,000	\$45,500
Connecticut	\$76,000	\$46,110	60.7%	\$34,000	\$31,500	\$32,600	\$34,500	\$41,000	\$53,000
D. C.	\$69,100	\$42,000	60.8%	\$38,100	\$38,720	\$40,280	\$39,900	\$40,000	\$46,200
Delaware	\$60,500	\$29,200	48.3%	\$25,300	\$29,210	\$39,000	\$22,100	\$28,300	\$29,400
Florida	\$55,050	\$35,000	63.6%	\$30,000	\$31,300	\$29,000	\$27,800	\$32,950	\$37,300
Georgia	\$58,000	\$31,600	54.5%	\$25,300	\$25,300	\$26,220	\$24,000	\$31,000	\$32,500
Hawaii	\$70,000	\$50,000	71.4%	\$42,700	\$49,340	\$53,800	\$36,100	\$45,000	\$63,660
Idaho	\$53,000	\$33,900	64.0%	\$29,900	\$37,000	\$35,350	\$28,000	\$32,600	\$40,000
Illinois	\$64,500	\$37,000	57.4%	\$30,000	\$31,900	\$30,810	\$27,600	\$34,200	\$42,000
Indiana	\$57,500	\$35,600	61.9%	\$30,000	\$30,000	\$31,600	\$26,600	\$33,000	\$37,700
Iowa	\$56,000	\$32,210	57.5%	\$25,300	\$24,800	\$22,500	\$24,100	\$30,020	\$37,200
Kansas	\$56,500	\$32,800	58.1%	\$25,400	\$28,200	\$25,320	\$25,000	\$30,000	\$35,004
Kentucky	\$50,000	\$25,800	51.6%	\$21,000	\$21,700	\$23,000	\$20,960	\$24,030	\$24,000
Louisiana	\$51,200	\$25,400	49.6%	\$19,990	\$17,000	\$20,700	\$19,300	\$24,960	\$30,000
Maine	\$54,800	\$33,300	60.8%	\$27,900	\$24,700	\$31,700	\$24,000	\$31,800	\$39,600
Maryland	\$77,000	\$45,000	58.4%	\$36,560	\$40,000	\$37,200	\$37,000	\$42,000	\$46,660
Massachusetts	\$77,000	\$40,100	52.1%	\$31,400	\$32,000	\$41,000	\$32,000	\$41,000	\$43,300
Michigan	\$62,500	\$35,230	56.4%	\$28,500	\$29,680	\$29,169	\$30,560	\$32,700	\$42,000
Minnesota	\$67,000	\$43,800	65.4%	\$32,650	\$36,000	\$40,300	\$35,500	\$39,900	\$55,000
Mississippi	\$47,000	\$26,200	55.7%	\$21,700	\$20,840	\$19,600	\$21,200	\$25,000	\$27,100
Missouri	\$57,700	\$33,600	58.2%	\$29,200	\$28,850	\$27,000	\$28,900	\$31,200	\$38,500
Montana	\$48,100	\$28,800	59.9%	\$26,060	\$26,060	\$24,000	\$22,700	\$27,000	\$36,000
Nebraska	\$56,800	\$34,000	59.9%	\$25,700	\$30,100	\$28,400	\$30,000	\$29,200	\$37,100
Nevada	\$58,300	\$40,900	70.2%	\$30,000	\$39,900	\$38,000	\$30,200	\$39,900	\$43,000
N. Hampshire	\$70,800	\$45,800	64.7%	\$35,700	\$30,500	\$40,000	\$32,700	\$40,100	\$52,000
New Jersey	\$80,000	\$45,200	56.5%	\$38,700	\$39,000	\$33,500	\$38,300	\$45,000	\$44,800
New Mexico	\$48,000	\$29,400	61.3%	\$21,700	\$21,100	\$20,400	\$20,704	\$26,500	\$33,000
New York	\$65,000	\$35,000	53.8%	\$29,100	\$30,000	\$33,550	\$25,670	\$32,000	\$42,500
N. Carolina	\$52,000	\$30,800	59.2%	\$24,300	\$24,100	\$25,000	\$27,100	\$29,700	\$31,800
North Dakota	\$53,100	\$33,140	62.4%	\$22,600	\$27,000	\$29,200	\$25,000	\$30,500	\$40,800

Table 9 (continued). 2003 ACS State Level Household Income Estimates, Ages 25-61

State	No Disability	Disability	Relative Rate	Participation Restriction		Activity Limitation	Impairment		
				Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
Ohio	\$59,000	\$32,000	54.2%	\$26,000	\$25,500	\$26,500	\$24,000	\$30,000	\$38,000
Oklahoma	\$48,000	\$29,000	60.4%	\$24,600	\$24,900	\$23,600	\$23,600	\$26,000	\$26,000
Oregon	\$55,000	\$34,200	62.2%	\$28,200	\$25,200	\$27,000	\$24,800	\$32,000	\$38,800
Pennsylvania	\$60,000	\$32,700	54.5%	\$28,000	\$29,300	\$30,000	\$26,120	\$31,600	\$37,520
Rhode Island	\$68,000	\$35,000	51.5%	\$28,570	\$38,600	\$34,800	\$25,000	\$33,000	\$36,600
S. Carolina	\$53,000	\$30,100	56.8%	\$25,900	\$26,000	\$25,100	\$25,800	\$28,000	\$37,020
South Dakota	\$51,700	\$37,300	72.1%	\$33,500	\$33,500	\$36,270	\$24,200	\$36,600	\$42,000
Tennessee	\$54,000	\$30,000	55.6%	\$24,000	\$24,700	\$24,400	\$22,800	\$28,400	\$33,140
Texas	\$54,000	\$32,000	59.3%	\$24,800	\$23,400	\$22,500	\$23,800	\$29,800	\$32,700
Utah	\$59,460	\$45,120	75.9%	\$33,500	\$34,700	\$36,800	\$44,430	\$44,000	\$49,200
Vermont	\$59,000	\$31,900	54.1%	\$26,090	\$23,000	\$24,000	\$31,360	\$30,300	\$40,500
Virginia	\$67,600	\$37,600	55.6%	\$29,000	\$30,300	\$32,000	\$29,500	\$33,100	\$43,000
Washington	\$62,000	\$41,100	66.3%	\$31,400	\$28,840	\$35,000	\$31,000	\$38,700	\$47,400
West Virginia	\$47,000	\$27,500	58.5%	\$22,310	\$21,800	\$23,400	\$21,400	\$26,500	\$30,300
Wisconsin	\$60,000	\$37,400	62.3%	\$29,050	\$25,000	\$28,400	\$27,800	\$34,900	\$39,300
Wyoming	\$57,100	\$41,000	71.8%	\$31,400	\$30,760	\$29,500	\$30,760	\$42,000	\$43,500

Source: Calculations from 2003 American Community Survey Public Use Microdata Sample.

Table 8 (continued). ACS State Level Poverty Rate Estimates, Ages 25-61

State	No Disability	Disability	Relative Rate	Participation Restriction		Activity Limitation	Impairment		
				Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
Ohio	6.8	24.1	3.6	30.1	32.6	29.0	33.2	26.1	20.9
Oklahoma	9.6	25.5	2.6	30.4	30.9	28.0	30.1	27.0	26.9
Oregon	8.9	23.2	2.6	28.7	31.1	28.2	33.3	22.4	14.5
Pennsylvania	6.2	24.1	3.9	28.9	27.8	25.8	30.8	24.9	20.9
Rhode Island	5.5	26.0	4.8	31.0	27.6	30.6	33.9	27.9	28.8
S. Carolina	8.2	26.2	3.2	28.7	27.2	22.8	33.3	28.2	19.7
South Dakota	6.4	19.2	3.0	24.1	18.2	17.3	26.8	19.7	16.7
Tennessee	7.7	26.1	3.4	32.5	31.2	35.7	34.5	28.5	20.2
Texas	10.6	24.5	2.3	30.1	32.7	32.3	32.3	26.5	24.5
Utah	7.3	15.2	2.1	22.3	23.0	22.9	18.2	16.7	15.2
Vermont	4.9	22.3	4.5	29.4	33.0	28.1	23.1	23.6	13.4
Virginia	4.6	20.3	4.5	25.8	23.0	24.5	25.0	22.3	14.6
Washington	7.3	22.5	3.1	31.3	35.8	29.7	32.1	24.2	16.1
West Virginia	12.1	28.4	2.4	34.4	35.7	31.8	38.9	28.8	24.8
Wisconsin	5.9	20.5	3.5	26.2	31.9	21.5	29.6	21.6	23.6
Wyoming	6.2	17.6	2.8	25.3	23.8	27.7	25.5	19.0	16.1

Source: Calculations from 2003 American Community Survey Public Use Microdata Sample.
Standard errors for estimates in this Table are located in Appendix Table D-7.

Table 10. American Community Survey Time Trend Estimates for Prevalence Rates, Employment Rates and Poverty Rates for Persons Ages 25-61, by Disability

Year	No Disability	Impairment and/or Activity Limitation Disability	Activity Limitation – Self-Care Disability	Impairment – Mental Disability	Impairment – Physical Disability	Impairment – Sensory Disability
Prevalence Rate						
2000	89.2	10.8	1.9	3.9	7.3	2.9
2001	89.4	10.6	1.9	3.8	7.3	2.8
2002	89.2	10.8	1.9	4.0	7.5	2.8
2003	89.3	10.7	2.0	4.0	7.5	2.7
Employment Rate						
2000	80.7	45.2	24.9	33.5	39.1	55.7
2001	80.5	42.5	20.8	30.1	36.0	51.6
2002	79.6	41.0	19.5	28.6	34.8	51.6
2003	79.5	40.0	18.3	28.2	33.8	49.9
Poverty Rate						
2000	7.4	21.9	26.1	27.8	23.5	18.6
2001	7.2	22.1	27.3	28.8	23.7	19.2
2002	7.7	22.4	26.0	29.4	23.6	19.4
2003	7.8	23.9	29.2	31.1	25.3	21.0

Source: Author's calculations from ACS Public Use Microdata Samples from 2000 through 2003.

Table 11. Estimated Population of Persons with Disabilities, by Data Source

	No Disability	Disability	Participation Restriction		Activity Limitation	Impairment		
			Employment	IADL	Self-Care	Mental	Physical	Sensory
<i>Ages 18 to 24</i>								
American Community Survey, 2003	24,194,401	1,667,355	714,229	399,423	187,904	953,448	535,666	356,820
Census 2000	24,790,000	1,442,000	NA	NA	207,000	883,000	456,000	326,000
Current Population Survey, March 2004	26,803,529	816,662	816,662	NA	NA	NA	NA	NA
National Health Interview Survey,2002	25,225,000	2,126,000	927,000	228,000	147,000	786,000	859,000	78,000
Panel Study on Income Dynamics, 2001 / (1)	9,123,000	690,000	690,000	NA	NA	NA	NA	NA
Survey of Income and Program Participation,2002	24,820,000	2,426,337	1,209,000	366,000	146,000	1,076,000	982,000	533,000
<i>Ages 25 to 61</i>								
American Community Survey, 2003	126,649,510	17,146,845	9,854,223	4,227,427	2,925,715	5,745,569	10,819,521	3,944,388
Census 2000	124,493,000	14,005,000	NA	NA	2,627,000	5,218,000	9,447,000	3,346,000
Current Population Survey, March 2004	132,649,606	12,102,093	12,102,093	NA	NA	NA	NA	NA
National Health Interview Survey,2002	115,934,000	23,192,000	13,725,000	3,169,000	1,350,000	4,627,000	14,545,000	2,730,000
Panel Study on Income Dynamics, 2001	117,273,000	20,054,000	20,054,000	NA	NA	NA	NA	NA
Survey of Income and Program Participation,2002	115,900,000	26,620,000	14,420,000	4,931,000	3,362,000	4,394,000	18,790,000	6,490,000

Table 11 (continued). Estimated Population of Persons with Disabilities, by Data Source

	No Disability	Disability	Participation Restriction		Activity Limitation	Impairment		
			Employment	IADL	Self-Care	Mental	Physical	Sensory
<i>Ages 62 to 64</i>								
American Community Survey, 2003	4,941,802	1,795,533	1,111,762	404,875	293,507	393,782	1,292,381	455,364
Census 2000	4,806,000	1,413,000	NA	NA	257,000	348,000	1,134,000	373,000
Current Population Survey, March 2004	5,482,126	1,278,528	1,278,528	NA	NA	NA	NA	NA
National Health Interview Survey,2002	4,239,000	2,045,000	1,281,000	300,000	127,000	144,000	1,466,000	310,000
Panel Study on Income Dynamics, 2001	3,911,000	1,684,000	1,684,000	NA	NA	NA	NA	NA
Survey of Income and Program Participation,2002	3,958,000	2,581,000	1,496,000	567,000	376,000	252,000	2,165,000	672,000
<i>Ages 18 to 64</i>								
American Community Survey, 2003	155,785,713	20,609,733	11,680,214	5,031,725	3,407,126	7,092,799	12,647,568	4,756,572
Census 2000	154,091,000	16,861,000	NA	NA	3,093,000	6,450,000	11,039,000	4,046,000
Current Population Survey, March 2004	164,935,261	14,197,283	14,197,283	NA	NA	NA	NA	NA
National Health Interview Survey,2002	145,399,000	27,363,000	15,934,000	3,697,000	1,626,000	5,558,000	16,871,000	3,119,000
Panel Study on Income Dynamics, 2001	130,309,000	22,429,000	22,429,000	NA	NA	NA	NA	NA
Survey of Income and Program Participation,2002	144,678,000	31,627,000	17,126,000	5,864,000	3,885,000	5,723,000	21,938,000	7,695,000

Source: Authors' Calculations from various data sources.

Note: (1) The PSID only asks this question for the Head and Wife of the Household. Children of the Head and Wife are not asked this question, and the PSID assigns missing values to children for this question. As a result, the population with and without a work limitation is small relative to the other national surveys.

Note: (2) The March 2004 Current Population Supplement collects 2003 calendar year information on Poverty, Median Household Income, and Household Size Adjusted Income. Population and prevalence estimates are collected in March 2004.

Note: Standard errors for ACS estimates are in Appendix Table D-1. Standard errors for other datasets available in respective user guides.

Table 12. Estimated Disability Prevalence Rates, By Data Source

	Disability	Participation Restriction		Activity Limitation	Impairment		
		Employment	IADL	Self-Care	Mental	Physical	Sensory
<i>Ages 18 to 24</i>							
ACS, 2003	6.5	2.8	1.5	0.7	3.7	2.1	1.4
Census 2000	5.5	NA	NA	0.8	3.4	1.7	1.2
CPS, March 2004	3.0	3.0	NA	NA	NA	NA	NA
NHIS, 2002	7.8	3.4	0.8	0.5	2.9	3.1	0.3
PSID, 2001	7.0	7.0	NA	NA	NA	NA	NA
SIPP, 2002	8.9	4.4	1.3	0.5	4.0	3.6	2.0
<i>Ages 25 to 61</i>							
ACS, 2003	11.9	6.9	2.9	2.0	4.0	7.5	2.7
Census 2000	10.1	NA	NA	1.9	3.8	6.8	2.4
CPS, March 2004	8.4	8.4	NA	NA	NA	NA	NA
NHIS, 2002	16.7	9.9	2.3	1.0	3.3	10.5	2.0
PSID, 2001	14.6	14.6	NA	NA	NA	NA	NA
SIPP, 2002	18.7	10.1	3.5	2.4	3.1	13.2	4.6
<i>Ages 62 to 64</i>							
ACS, 2003	26.7	16.5	6.0	4.4	5.8	19.2	6.8
Census 2000	22.7	NA	NA	4.1	5.6	18.2	6.0
CPS, March 2004	18.9	18.9	NA	NA	NA	NA	NA
NHIS, 2002	32.5	20.4	4.8	2.0	2.3	23.3	4.9
PSID, 2001	30.1	30.1	NA	NA	NA	NA	NA
SIPP, 2002	39.5	22.9	8.7	5.8	3.9	33.1	10.3
<i>Ages 18 to 64</i>							
ACS, 2003	11.7	6.6	2.9	1.9	4.0	7.2	2.7
Census 2000	9.9	NA	NA	1.8	3.8	6.5	2.4
CPS, March 2004	7.9	7.9	NA	NA	NA	NA	NA
NHIS, 2002	15.8	9.2	2.1	0.9	3.2	9.8	1.8
PSID, 2001	14.7	14.7	NA	NA	NA	NA	NA
SIPP, 2002	17.9	9.7	3.3	2.2	3.2	12.4	4.4

Source: Authors' calculations from various data sources.

Note: (1) The PSID only asks this question for the Head and Wife of the Household. Children of the Head and Wife are not asked this question, and the PSID assigns missing values to children for this question. As a result, the population with and without a work limitation is small relative to the other national surveys.

Note: (2) The March 2004 Current Population Supplement collects 2003 calendar year information on Poverty, Median Household Income, and Household Size Adjusted Income. Population and prevalence estimates are collected in March 2004.

Note: Standard errors for ACS estimates are in Appendix Table D-1. Standard errors for other datasets available in respective user guides.

Table 13. Estimated Employment Rates for Persons With Disabilities Ages 25 to 61, By Data Source

	No Disability	Disability	Participation Restriction		Activity Limitation	Impairment		
			Employment	IADL	Self-Care	Mental	Physical	Sensory
<i>Reference Period, Ages 25 to 61</i>								
ACS, 2003	79.5	39.3	18.9	17.9	18.3	28.2	33.8	49.9
Census 2000	78.8	41.8	NA	NA	21.7	30.2	35.6	52.1
CPS, March 2004	81.4	19.6	19.6	NA	NA	NA	NA	NA
NHIS, 2002	83.3	47.3	29.8	18.3	14.1	37.1	43.8	58.6
PSID, 2001	83.8	53.2	53.2	NA	NA	NA	NA	NA
SIPP, 2002	82.4	48.9	27.7	20.3	22.8	37.0	46.4	53.5
<i>Some Attachment, Ages 25 to 61</i>								
ACS, 2003	87.1	48.9	28.3	25.8	26.2	37.2	42.8	58.1
Census 2000	86.3	51.9	NA	NA	31.9	40.4	45.4	61.1
CPS, March 2004	86.2	27.9	27.9	NA	NA	NA	NA	NA
NHIS, 2002	88.3	57.9	42.0	25.7	19.9	51.8	53.8	66.6
PSID, 2001	91.9	67.8	67.8	NA	NA	NA	NA	NA
SIPP, 2002	90.6	61.1	41.0	34.1	38.8	46.3	59.0	63.7
<i>Full-Year Full-Time, Ages 25 to 61</i>								
ACS, 2003	59.6	24.5	9.1	9.0	9.4	15.0	20.3	34.5
Census 2000	58.8	27.1	NA	NA	13.1	16.7	22.6	37.4
CPS, March 2004	65.3	9.4	9.4	NA	NA	NA	NA	NA
NHIS, 2002	62.8	29.8	16.3	9.3	6.2	21.3	27.2	43.4
PSID, 2001	70.5	45.1	45.1	NA	NA	NA	NA	NA
SIPP, 2002	58.1	31.2	15.3	12.0	15.0	20.3	29.6	35.6

Source: Authors' calculations from various data sources.

Note: (1) The PSID only asks this question for the Head and Wife of the Household. Children of the Head and Wife are not asked this question, and the PSID assigns missing values to children for this question. As a result, the population with and without a work limitation is small relative to the other national surveys.

Note: (2) The March 2004 Current Population Supplement collects 2003 calendar year information on Poverty, Median Household Income, and Household Size Adjusted Income. Population and prevalence estimates are collected in March 2004.

Note: Standard errors for ACS estimates are in Appendix Table D-3. Standard errors for other datasets available in respective user guides.

Table 14. Economic Well Being Estimates for Persons with Disabilities Ages 25 to 61, By Data Source

	No Disability	Disability	Participation Restriction		Activity Limitation	Impairment		
			Employment	IADL	Self-Care	Mental	Physical	Sensory
<i>Poverty Rates, Ages 25 to 61</i>								
ACS, 2003	7.7	23.7	29.6	29.7	28.9	30.8	25.0	20.8
Census 2000	7.9	23.2	NA	NA	30.0	30.6	24.2	20.1
CPS, March 2004	8.0	28.8	28.8	NA	NA	NA	NA	NA
NHIS, 2002	7.5	21.2	26.5	32.3	30.1	29.8	22.1	20.7
PSID, 2001	4.6	11.8	11.8	NA	NA	NA	NA	NA
SIPP, 2002	6.5	18.8	26.0	26.3	25.1	24.9	19.1	17.6
<i>Median Household Income, Ages 25 to 61</i>								
ACS, 2003	\$60,000	\$34,600	\$28,000	\$28,600	\$28,000	\$27,400	\$32,100	\$38,000
Census 2000	\$56,860	\$33,600	NA	NA	\$27,200	\$26,170	\$32,000	\$37,400
CPS, March 2004	\$61,999	\$27,955	\$27,955	NA	NA	NA	NA	NA
NHIS, 2002	\$55,000 - \$64,000	\$25,000 - \$34,999	\$25,000 - \$34,999	\$20,000 - \$24,999	\$20,000 - \$24,999	\$20,000 - \$24,999	\$25,000- \$34,999	\$35,000- \$44,999
PSID, 2001	\$62,000	\$42,000	\$42,000	NA	NA	NA	NA	NA
SIPP, 2002	\$53,313	\$33,895	\$25,664	\$24,989	\$26,735	\$26,218	\$33,490	\$33,776
<i>Median Adjusted Household Income, Ages 25 to 61</i>								
ACS, 2003	\$35,796	\$21,304	\$17,487	\$17,615	\$17,667	\$17,321	\$20,207	\$23,415
Census 2000	\$33,234	\$20,412	NA	NA	\$16,330	\$16,000	\$19,676	\$22,617
CPS, March 2004	\$36,770	\$17,967	\$17,967	NA	NA	NA	NA	NA
NHIS, 2002	NA	NA	NA	NA	NA	NA	NA	NA
PSID, 2002	\$38,891	\$28,000	\$28,000	NA	NA	NA	NA	NA
SIPP, 2002	NA	NA	NA	NA	NA	NA	NA	NA

Source: Authors' calculations from various data sources.

Note: (1) The PSID only asks this question for the Head and Wife of the Household. Children of the Head and Wife are not asked this question, and the PSID assigns missing values to children for this question.

Note: (2) The March 2004 Current Population Supplement collects 2003 calendar year information on Poverty, Median Household Income, and Household Size Adjusted Income. Population and prevalence estimates are collected in March 2004.

Note: Standard errors for ACS estimates are in Appendix Table D-4. Standard errors for other datasets available in respective user guides.

Appendix A. Sample Design and Computation of Standard Errors

The population estimates reported in the paper are drawn from a sample and, as in any sample, are subject to both sampling error and non-sampling error. Standard errors and confidence intervals are used to describe the magnitude of sampling error and some forms of non-sampling error. The formulas used to compute standard errors and confidence intervals must take into account the sample design.

The purpose of the technical appendix is to provide a brief description of the ACS sample design as well as the ACS PUMS sample design. It will also provide the formulas used to compute standard errors that account for the ACS and ACS PUMS sample design. Standard errors may be used to construct confidence intervals. The Census Bureau uses 90% confidence intervals in their tables. Confidence intervals provide a more intuitive description of the accuracy of the estimates.

Sample Design

ACS. The 2003 ACS sample is based upon a two-stage stratified annual sample designed to identify approximately 810,000 housing units. The first stage of sampling involves the following.

- Dividing the United States into primary sampling units (PSU's) that are made up of a metropolitan area, a large county or a group of smaller counties. All PSU's fall within the boundary of a State.
- PSU's are then grouped into strata based upon information drawn from other sources. These strata are constructed to be as homogeneous as possible with respect to social and economic characteristics considered to be important.
- A pair of PSU's were selected from each stratum.
- The probability of selection for each PSU in the stratum is proportional to its estimated 1996 population.

The second stage of sampling involves the selection of housing units within each PSU. Housing units were systematically drawn from the Master Address File (MAF).

Persons living in Group Quarters were not included in the sample. Details of the 2002 ACS sample may be found in the document “Accuracy of the Data (2002)” at the following website: <http://www.census.gov/acs/www/UseData/Accuracy/Accuracy1.htm>.

Appendix Table A-1 shows the development of the ACS sample for each year. Initially, 890,698 addresses were selected to be potential sample members in 2000, 858,058 addresses were selected to be potential sample members in 2001 and 742,409 addresses were selected to be sample members in 2002. The third column shows the number of addresses actually interviewed. Some of the initial addresses were commercial or non-existent and were not interviewed. Others were non-respondents. The response rate in the ACS is high, between 95%-97% between 2000-2002.

ACS Public Use Microdata Sample (PUMS). The ACS PUMS file consists of a sample drawn from the ACS sample. The sample is selected as follows.

- ACS housing units were classified into three categories: Vacant, Occupied mail/CATI, occupied CAPI.
- Sampling rates were determined separately for each group using the size of ACS housing unit weights compared to ACS housing unit weights in the same State.
- To assure confidentiality, for each State the sampling rates within the three categories were selected to differ based upon categories derived from the size of the household weight.
- Within each State-category-weight cell, the vacant category households were then sorted by reason for vacancy, census tract and weight. The occupied housing units were sorted by tenure of householder, race of householder, census tract and weight.

After stratification and sorting, the census designed a systematic method of selecting household units. Household level weights and person level weights were then constructed in the PUMS to allow a user to create population estimates. It is important to note that the PUMS sampling method is different for the 2000 PUMS. For Details of the ACS PUMS design, see “PUMS Accuracy of the Data (2002)” at the following web address <http://www.census.gov/acs/www/Downloads/2002/AccuracyPUMS.pdf>.

To further assure the privacy of individual and household information, the U. S. Census Bureau applies a “confidentiality edit.” The confidentiality edit involved introducing a small degree of uncertainty into the estimates of ACS characteristics. It

involves matching person records based upon a set of key characteristics and swapping their data. The method used maintains the quality and usefulness of the data.

Sampling and Non-Sampling Error

Both sampling error and non-sampling errors introduce some degree of uncertainty into estimates. Sampling error occurs when population characteristics are estimated based upon a sample and are not based upon the entire population. Because many samples may be drawn from a population, and each sample can produce a different estimate, there is always some degree of uncertainty when samples are used to estimate characteristics of a population. The variability of estimates drawn from samples, sometimes referred to as uncertainty, is described by standard errors. Standard errors are used to construct confidence intervals, which describe the likelihood that a particular estimate falls within a certain range of estimates.

Non-sampling error results from other forms of error and includes errors keying in data, errors editing the data, misinterpretation of questions by respondents, non-random non-response to the survey or survey questions, and other factors. To the degree that the error occurs at random, additional variability will arise in the estimates and the standard errors will describe the variability due to this non-sampling error. However, non-sampling errors may occur in a systematic manner (i.e., non-random errors). Systematic errors that arise in the data collection process are not described by standard errors. Thus, it is important to assess the role of systematic non-sampling errors that may arise in an estimate.

The Census Bureau attempts to minimize systematic errors by researching and analyzing new sampling techniques, questionnaire designs, and data collection and processing procedures. The ACS also uses other methods to minimize systematic error, such as following up on mail non-respondents during the CATI and CAPI phases. Information on potential ACS non-sampling errors that are identified by the Census Bureau are posted on the ACS website under “errata”, which may be found at the following address: <http://www.census.gov/acs/www/UseData/Errata.htm>.

U. S. Census Bureau Methods to Compute Standard Errors

The formulas used to estimate the standard errors of the population estimates depend on the sample design. The sample design produces a “design effect.” The design of the ACS PUMS is relatively complex, and thus the Census Bureau has developed three general formulas that may be used to compute standard errors and the resulting confidence intervals.

The following formulas and procedures were used to estimate standard errors and confidence intervals in this paper.

Population Estimates. Equation (4) shows the “Design Factor Method” used to compute the standard error of the disability population estimate.

$$\textbf{Equation (1)} \quad SE(\hat{Y}) = 1.2 * DF * \sqrt{142 * \hat{Y} \left(1 - \frac{\hat{Y}}{N}\right)}$$

Table A-2002 in “PUMS Accuracy of the Data (2002)” shows that the Design Factor (DF) is equal to 1.1 for the 2002 ACS disability population. N is the total PUMS population for the geographic area (e.g., United States, New York, etc.). \hat{Y} is the PUMS estimate of a sub-population (e.g., the population with a disability).

The standard error for the proportion estimate is shown in equation (5).

$$\textbf{Equation (2)} \quad SE(\hat{P}) = 1.2 * DF * \sqrt{\frac{142}{B} * \hat{P} * (1 - \hat{P})}$$

\hat{P} is the estimated proportion. Table A-2002 in “PUMS Accuracy of the Data (2002)” shows that the Design Factor (DF) is equal to 1.1 for the 2002 ACS disability population. B is the base of the estimated proportion.

Calculations for Prevalence Rates by Subgroups and for the Composition of Characteristics among those with and without disabilities. Equations (1) and (2) are also used for the calculation of prevalence rates by demographic, socio-economic and income groups. In this case, the DF recommended by the Census Bureau is the larger among the specified characteristics. For example, the standard error calculation for the disability prevalence rate among the population of Hispanic ethnic background would use the design factor for Hispanic ethnic background (DF=2.9) rather than the design factor for disability (DF=1.1).

Standard Error Calculations for Medians. The Census Bureau provides information that allows one to approximate standard errors for some medians, means, per capita amounts and ratios (other than proportions). The standard error calculation involves using Census Bureau provided parameters for the particular statistic (e.g., parameters specific to median household income) and the following equation.

$$SE(estimate) = 1.2 \times \sqrt{a + b \times \text{Log}(N)}$$

In the equation, a and b are parameters provided by the U. S. Census Bureau for a particular statistic (e.g., median household income) and Log (N) is the natural log of the population size for the area. The parameter values associated with a specific ACS statistic are available in the “PUMS Accuracy of the Data (2002)” publication that may be downloaded from the Census Bureau website:

<http://www.census.gov/acs/www/Downloads/2002/AccuracyPUMS.pdf> .

This method limits one’s ability to calculate standard errors for means and medians of many characteristics because the Census Bureau parameters are only provided for a limited set of characteristics. Unfortunately, the Census Bureau does not provide parameter values for our calculation of the median person’s household income, the median family income-to-needs ratio, and median household size adjusted income. It is important to note that standard errors exist for these characteristics, but the information from the Census Bureau that is necessary to estimate the standard error is not readily available.

Confidence Intervals

The standard error calculations are used to construct 95% confidence intervals around the population estimates. A confidence interval may be interpreted as the level of certainty that an estimate falls between a lower bound and an upper bound estimate.

The lower bound of the confidence interval is approximately 1.96 times the standard error subtracted from the estimate. The upper bound of the confidence interval is approximately 1.96 times the standard error added to the point estimate. The confidence interval may be interpreted as follows, “we are 95% certain that the estimate falls between the lower bound estimate and the upper bound estimate.”

Appendix Table A-1. ACS Household Sample Sizes		
Year	Initial Addresses Selected (a)	Addresses Interviewed (b)
2000	890,698	587,519
2001	858,058	601,875
2002	742,409	512,768
2003	828,590	572,447

Source: U. S. Census Bureau, Using the Data Quality Measures

<http://www.census.gov/acs/www/UseData/sse/index.htm>

(a) This initial number includes addresses later determined to be commercial or nonexistent, and housing units that are not interviewed due to refusals or other reasons.

(b) After excluding addresses determined to be commercial or non-existent, response rates are: 95.1% in 2000, 96.7% in 2001, 97.7% in 2002, and 96.7% in 2003.

Appendix B. Tables Used for Construction of Poverty Measures

Appendix Table B-1 is used to construct the official U. S. Census Bureau poverty levels for each family in the ACS. It shows the 1982 poverty thresholds based upon family size and age. Family income is compared to the income amount for the particular type of family specified in Appendix Table B-1. If family income is below the amount shown in Table B-1 then the family is considered to be in poverty. Family income is defined as the sum of all income from the previous year for all family members age 15 and older who reside in the household at the time of enumeration. Income sources are shown in Table 1. For further information, see

<http://www.census.gov/hhes/www/poverty/povdef.html#1>

Table B-1. Poverty Thresholds for 2003 by Size of Family and Number of Related Children Under 18 Years (Dollars)

Size of Family Unit	Weighted average thresholds	Related children under 18 years								
		None	One	Two	Three	Four	Five	Six	Seven	Eight or more
One person (unrelated individual)	9,393									
Under 65 years	9,573	9,573								
65 years and over	8,825	8,825								
Two persons	12,015									
Householder under 65 years	12,384	12,321	12,682							
Householder 65 years and over	11,133	11,122	12,634							
Three persons	14,680	14,393	14,810	14,824						
Four persons	18,810	18,979	19,289	18,660	18,725					
Five persons	22,245	22,887	23,220	22,509	21,959	21,623				
Six persons	25,122	26,324	26,429	25,884	25,362	24,586	24,126			
Seven persons	28,544	30,289	30,479	29,827	29,372	28,526	27,538	26,454		
Eight persons	31,589	33,876	34,175	33,560	33,021	32,256	31,286	30,275	30,019	
Nine persons or more	37,656	40,751	40,948	40,404	39,947	39,196	38,163	37,229	36,998	35,572

Source: U. S. Census Bureau Website accessed April 5, 2005.

Appendix C. Further Details on Differences in the ACS Over time.

C1. Differences Across 2000 ACS PUMS Estimates and 2000 ACS Summary Tables

There are statistically significant differences between the estimates from the 2000 American Factfinder estimates and the 2000 ACS PUMS estimates. The differences are relatively large compared to the small, and statistically insignificant, differences between the 2001 ACS American Factfinder estimates and ACS PUMS estimates as well as the 2002 ACS Factfinder estimates and ACS PUMS estimates. The small, statistically insignificant, differences result from the methodology used to assure the confidentiality of respondents in the ACS PUMS. Appendix Table B-1 shows the differences in estimates for the prevalence of disability and the disability employment rates between the 2000 ACS American Factfinder estimates and the 2000 PUMS estimates. The differences are compared to the differences in estimates for the same statistics in the 2002 ACS PUMS and 2002 American Factfinder.

There are two reasons for the differences between the 2000 ACS Factfinder tables and the 2002 ACS PUMS. First, the PUMS is a sample from the ACS data and the Census Bureau used methods to assure survey participants confidentiality. The resulting sampling error and the confidentiality edit non-sampling error may lead to small difference between the numbers reported in the two data sets. Second, in 2002 the Census Bureau applied a new edit and weighting methodology to the 2000 ACS American Factfinder tables. The Census Bureau did not apply the new edit and weighting methodology to the 2000 ACS PUMS data (Census, 2004). Without additional information from the Census Bureau, it is not possible to separate the impact of these two factors on the differences between the 2000 ACS Factfinder Estimates and 2000 ACS PUMS estimates.

Appendix Table C-1. Description of Differences Across 2000 ACS Summary Tables and 2000 ACS PUMS Compared to Differences in 2002 ACS Summary Tables and ACS PUMS

	2000 Population Estimates			2000 Percentage Estimates			2002 Population Estimates			2002 Percentage Estimates		
	ACS Summary	ACS PUMS	Absolute Value of Diff.	ACS Summary	ACS PUMS	Absolute Value of Diff.	ACS Summary	ACS PUMS	Absolute Value of Diff.	ACS Summary	ACS PUMS	Absolute Value of Diff.
Population 21 - 64 yrs	157,800,683	157,938,988	138,305				163,416,288	164,195,981	779,693			
Number and Percent of Population												
Disability	21,707,866	22,306,775	598,909	13.8%	14.1%	0.4%	22,543,754	22,596,316	52,562	13.8%	13.8%	0.0%
Sensory Disability	4,438,098	4,562,863	124,765	2.8%	2.9%	0.1%	4,576,285	4,586,910	10,625	2.8%	2.8%	0.0%
Physical Disability	11,314,516	11,576,283	261,767	7.2%	7.3%	0.2%	12,328,656	12,344,874	16,218	7.5%	7.5%	0.0%
Mental Disability	5,964,529	6,175,440	210,911	3.8%	3.9%	0.1%	6,530,094	6,542,946	12,852	4.0%	4.0%	0.0%
Self-care Disability	2,880,765	3,007,864	127,099	1.8%	1.9%	0.1%	3,133,211	3,130,421	2,790	1.9%	1.9%	0.0%
Go-outside-home Disability	6,552,284	6,864,487	312,203	4.2%	4.3%	0.2%	6,715,472	6,707,317	8,155	4.1%	4.1%	0.0%
Employment Disability	11,941,693	12,289,583	347,890	7.6%	7.8%	0.2%	12,433,705	12,459,905	26,200	7.6%	7.6%	0.0%
Number and Percent Employed												
Disability	10,244,420	10,921,426	677,006	47.2%	49.0%	1.8%	10,100,146	10,140,196	40,050	44.8%	44.9%	0.1%
Sensory Disability	2,255,825	2,411,237	155,412	50.8%	52.8%	2.0%	2,241,501	2,250,891	9,390	49.0%	49.1%	0.1%
Physical Disability	3,919,196	4,314,423	395,227	34.6%	37.3%	2.6%	4,083,023	4,095,820	12,797	33.1%	33.2%	0.1%
Mental Disability	1,823,988	2,051,796	227,808	30.6%	33.2%	2.6%	1,873,186	1,885,666	12,480	28.7%	28.8%	0.1%
Self-care Disability	553,979	717,069	163,090	19.2%	23.8%	4.6%	590,145	590,405	260	18.8%	18.9%	0.0%
Go-outside-the-home Disability	2,324,415	2,656,739	332,324	35.5%	38.7%	3.2%	2,237,151	2,236,392	759	33.3%	33.3%	0.0%
Employment Disability	4,843,720	5,306,646	462,926	40.6%	43.2%	2.6%	4,540,703	4,556,831	16,128	36.5%	36.6%	0.1%

C2. Changes to the 2003 ACS Questions

Table C-2 compares prevalence and employment rate estimates for each year in the ACS from 2000 to 2003. In 2003, the ACS changed the structure of the “go-outside-the-home” and “employment” disability questions as described in section V of this guide. These questions were not asked for younger persons and the disability prevalence rates for younger persons do not appear to be affected by the change. Table A-2 shows how the change may have affected prevalence rates for persons ages 18 and older. Between 2002 and 2003, the prevalence rate for persons ages 18 to 24 dropped from 7.7 percent to 6.5 percent. This 1.2 percentage point drop is 4 times larger than the drop in any other year. For the population ages 25 to 61, the prevalence rate dropped from 13.7 percent to 11.9 percent. This 1.8 percent drop is 3 times larger than the drop between any of the other years. The Table suggests that the decline in the disability prevalence estimate is likely due to a decline in estimates from the two questions that were changed—the go-outside-the home disability question and the employment disability question.

For the older age groups, the prevalence of a disability also declined. However, the table suggests that it is likely due to a decline in the go-outside the home disability rather than an employment disability. This may result from the fact that older persons are less likely to be working and may be less likely to report “yes” to an interpretation of question 16d as “Are you working at a job or business?” Thus, most of the reduction in the disability prevalence rate may be due to the interpretation of 16c as “Are you going outside the home alone to shop or visit a doctor's office?” It is important to note that this is a hypothesis that has not been rigorously tested and there is no direct evidence that these questions were misinterpreted by respondent.

Appendix Table C-2. Prevalence Estimates by Disability Concept

	Disability	Participation Restriction		Activity Limitation	Impairment		
	At least 1 of the 6	Employment ^a	Go-Outside Home ^a	Self-Care	Mental	Physical	Sensory
Ages 5 +							
2000	15.8	9.7	6.4	2.5	4.9	8.8	4.2
2001	15.6	9.5	6.1	2.5	4.8	8.9	4.2
2002	15.8	9.8	6.2	2.6	5.1	9.0	4.2
2003	14.2	9.8	4.9	2.7	5.1	9.0	4.1
Ages 5 to 17							
2000	6.5	NA	NA	0.8	4.7	1.3	1.2
2001	6.3	NA	NA	0.8	4.7	1.3	1.2
2002	6.6	NA	NA	0.8	4.9	1.3	1.2
2003	6.3	NA	NA	0.8	5.1	1.2	1.1
Ages 18 to 24							
2000	8.1	3.9	2.6	0.6	3.4	2.1	1.4
2001	7.8	3.7	2.3	0.7	3.3	2.1	1.4
2002	7.7	3.5	2.4	0.7	3.5	2.0	1.3
2003	6.5	2.8	1.5	0.7	3.7	2.1	1.4
Ages 25 to 61							
2000	14.1	7.8	4.3	1.9	3.9	7.3	2.9
2001	13.5	7.4	4.0	1.9	3.8	7.3	2.8
2002	13.7	7.6	4.1	1.9	4.0	7.5	2.7
2003	11.9	6.9	2.9	2.0	4.0	7.5	2.7
Ages 62 to 64							
2000	29.1	15.7	8.9	4.2	5.7	18.7	6.7
2001	28.9	15.1	8.7	4.2	5.6	19.2	7.0
2002	29.7	15.9	8.7	4.7	6.2	20.4	7.2
2003	26.7	16.5	6.0	4.4	5.8	19.2	6.8
Ages 65+							
2000	40.6	22.0	18.1	8.9	10.2	29.9	16.0
2001	42.2	23.4	18.4	9.1	10.4	30.7	16.4
2002	42.5	24.1	18.4	9.2	10.8	30.8	16.6
2003	39.9	28.2	16.4	9.4	11.0	30.4	16.1

Notes: (a) The *employment* and *go-outside the home* participation restrictions are asked only for those ages 15 and older.

Appendix Table C-3 shows the change in employment rate estimates that has occurred over time in the ACS. The decline in employment between 2002 and 2003 for the working age population is 7.1 percentage points. For the two questions that changed, the employment disability question and the go-outside-the-home disability question, the employment rates dropped by almost 50 percent. Such a large decline in one year is surprising and it is possible that it is being driven in part by the change in the disability questions. However, it is important to note that there is no direct evidence that this decline is purely due to the change in population reporting an employment disability or a go-outside-the-home disability.

Appendix Table C-3. Employment Estimates by Disability Concept

		Disability	Participation Restriction	Activity Limitation	Impairment			
		At least 1 of the 6	Employment ^a	Go-Outside Home ^a	Self-Care	Mental	Physical	Sensory
Ages 25 to 61								
	2000	50.6	44.1	39.8	24.9	33.5	39.1	55.7
	2001	47.7	39.2	35.2	20.8	30.1	36.0	51.6
	2002	46.4	37.5	34.5	19.5	28.6	34.8	51.6
	2003	39.3	18.9	17.9	18.3	28.2	33.8	49.9
Ages 25 to 61, Men								
	2000	55.2	47.0	45.2	27.0	37.0	41.8	61.8
	2001	52.7	42.4	40.7	22.5	33.3	38.8	57.8
	2002	50.6	40.2	39.8	20.9	30.9	36.5	58.1
	2003	43.4	20.8	19.4	19.6	30.9	35.6	56.4
Ages 25 to 61, Women								
	2000	46.0	41.1	35.1	23.1	30.2	36.7	47.1
	2001	43.0	36.0	30.6	19.4	27.1	33.6	43.4
	2002	42.4	34.8	30.0	18.4	26.7	33.3	42.7
	2003	35.5	17.2	16.9	17.3	25.8	32.3	41.3

Notes: (a) The *employment* and *go-outside the home* participation restrictions are asked only for those ages 15 and older.

Appendix D. Estimated Standard Errors

Table D-1. Standard Errors for 2003 ACS Population and Prevalence Estimates by Disability Concept

	Disability		Participation Restriction		Activity Limitation	Impairment		
	No Disability	At least 1 of the 6	Employment ^a	Go-Outside Home ^a	Self-Care	Mental	Physical	Sensory
<i>All, Age 5-99</i>								
Population Estimate	106277	89695	69948	50484	41164	56366	73150	50861
Prevalence Rate	0.03	0.03	0.03	0.02	0.02	0.02	0.03	0.02
<i>Ages 5 to 17</i>								
Population Estimate	100665	28614	6274	5096	10203	25608	12611	12060
Prevalence Rate	0.05	0.05	0.08	0.06	0.02	0.05	0.02	0.02
<i>Ages 18 to 24</i>								
Population Estimate	73990	20251	13277	9934	6816	15333	11501	9390
Prevalence Rate	0.08	0.08	0.05	0.04	0.03	0.06	0.04	0.04
<i>Ages 25 to 61</i>								
Population Estimate	131586	63131	48510	32099	26766	37319	50741	31021
Prevalence Rate	0.04	0.04	0.03	0.02	0.02	0.03	0.03	0.02
<i>Ages 62 to 64</i>								
Population Estimate	34661	21010	16553	10002	8517	9864	17841	10606
Prevalence Rate	0.27	0.27	0.22	0.14	0.12	0.14	0.24	0.15
<i>Ages 65 and older</i>								
Population Estimate	68400	56439	47787	36753	27953	30116	49559	36358
Prevalence Rate	0.13	0.13	0.12	0.10	0.08	0.08	0.12	0.10

Source: Author's calculation from 2003 American Community Survey Public Use Microdata Sample (PUMS).

Notes: (a) The *employment* and *go-outside the home* participation restrictions are asked only for those ages 15 and older.

Appendix Table D-2. Standard Errors for 2003 ACS Demographic Characteristics by Disability

Characteristic	No Disability	Disability	Participation Restriction	Activity Limitation	Impairment			
		At least 1 of the 6	Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
Age								
% 5 to 14	0.04	0.07	NA	NA	0.13	0.16	0.05	0.10
% 15 to 24	0.04	0.06	0.07	0.10	0.11	0.13	0.05	0.10
% 25 to 34	0.04	0.06	0.08	0.11	0.12	0.11	0.07	0.10
% 35 to 44	0.04	0.08	0.11	0.14	0.18	0.14	0.10	0.13
% 45 to 54	0.04	0.09	0.13	0.17	0.21	0.15	0.12	0.16
% 55 to 64	0.03	0.10	0.13	0.17	0.22	0.14	0.13	0.17
% 65 to 74	0.02	0.09	0.12	0.17	0.21	0.12	0.12	0.18
% 75 to 84	0.02	0.09	0.13	0.20	0.23	0.14	0.12	0.20
% 85 or older	0.01	0.06	0.10	0.17	0.20	0.11	0.09	0.16
Gender								
% Male	0.05	0.13	0.17	0.23	0.29	0.21	0.16	0.24
% Female	0.05	0.13	0.17	0.23	0.29	0.21	0.16	0.24
Race								
% Asian	0.02	0.04	0.05	0.09	0.09	0.06	0.05	0.07
% Black	0.03	0.09	0.12	0.17	0.22	0.16	0.11	0.15
% Native American	0.01	0.03	0.04	0.05	0.07	0.05	0.03	0.05
% White	0.04	0.11	0.14	0.20	0.26	0.19	0.13	0.19
% Some Other Race	0.03	0.06	0.07	0.10	0.13	0.11	0.07	0.10
Ethnicity								
% Hispanic	0.04	0.08	0.10	0.14	0.17	0.13	0.09	0.14
Education								
% Less than High School	0.04	0.16	0.23	0.35	0.41	0.30	0.21	0.34
% High School/GED	0.06	0.18	0.24	0.36	0.43	0.31	0.23	0.37
% Some College	0.06	0.17	0.22	0.33	0.41	0.29	0.22	0.35
% Four Year College Graduate or more	0.06	0.13	0.15	0.24	0.29	0.20	0.15	0.28

Source: Author's calculation from 2003 American Community Survey Public Use Microdata Sample (PUMS).

Appendix Table D-3. Standard Errors for ACS 2003 Employment Rates, Ages 25 to 61

% Employed During...	No Disability	Disability	Participation Restriction	Activity Limitation	Impairment			
		At least 1 of the 6	Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
<i>All</i>								
Reference Period	0.05641	0.18555	0.19621	0.29358	0.35579	0.29533	0.22623	0.396
Sometime Previous Year	0.04681	0.18989	0.22574	0.33477	0.40444	0.31722	0.2366	0.39071
Full-Time Previous Year	0.06858	0.16326	0.14388	0.21862	0.26816	0.23404	0.19229	0.37659
<i>Men</i>								
Reference Period	0.067	0.270	0.294	0.465	0.548	0.441	0.336	0.520
Sometime Previous Year	0.045	0.272	0.335	0.528	0.622	0.468	0.350	0.500
Full-Time Previous Year	0.090	0.249	0.229	0.368	0.427	0.368	0.296	0.516
<i>Women</i>								
Reference Period	0.088	0.253	0.262	0.377	0.467	0.395	0.305	0.596
Sometime Previous Year	0.078	0.263	0.304	0.432	0.530	0.430	0.321	0.605
Full-Time Previous Year	0.098	0.210	0.178	0.265	0.340	0.294	0.250	0.528
<i>White</i>								
Reference Period	0.142	0.493	0.528	0.796	0.972	0.797	0.603	1.023
Sometime Previous Year	0.118	0.500	0.603	0.900	1.094	0.849	0.626	1.000
Full-Time Previous Year	0.177	0.438	0.381	0.579	0.735	0.636	0.515	0.990
<i>Black</i>								
Reference Period	0.502	1.251	1.215	1.811	1.336	1.858	1.507	3.010
Sometime Previous Year	0.402	1.331	1.447	2.142	1.418	2.080	1.618	3.123
Full-Time Previous Year	0.585	1.052	0.903	1.367	1.123	1.390	1.244	2.637

Appendix Table D-3 (continued). Standard Errors for ACS 2003 Employment Rates, Ages 25 to 61

% Employed During...	No Disability	Disability	Participation Restriction	Activity Limitation	Impairment			
		At least 1 of the 6	Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
<i>Native American</i>								
Reference Period	2.045	3.967	4.001	5.993	6.539	5.916	4.446	7.491
Sometime Previous Year	1.679	4.202	4.745	6.663	7.321	6.600	4.879	7.634
Full-Time Previous Year	2.324	3.361	3.080	4.503	4.921	4.430	3.694	6.445
<i>Asian</i>								
Reference Period	0.756	3.328	4.232	5.466	8.245	5.805	4.724	7.011
Sometime Previous Year	0.666	3.347	4.564	5.949	9.325	6.283	4.921	6.887
Full-Time Previous Year	0.848	3.059	3.586	4.643	6.440	4.779	4.225	6.822
<i>Hispanic</i>								
Reference Period	0.447	1.469	1.617	2.319	2.854	2.346	1.831	3.151
Sometime Previous Year	0.387	1.519	1.904	2.716	3.444	2.564	1.933	3.155
Full-Time Previous Year	0.506	1.289	1.302	1.911	2.232	1.921	1.565	2.910
<i>LT High School</i>								
Reference Period	0.263	0.449	0.418	0.612	0.732	0.632	0.519	1.007
Sometime Previous Year	0.236	0.490	0.511	0.730	0.892	0.709	0.583	1.062
Full-Time Previous Year	0.280	0.358	0.297	0.435	0.488	0.468	0.403	0.833
<i>High School</i>								
Reference Period	0.150	0.433	0.443	0.674	0.806	0.708	0.523	0.942
Sometime Previous Year	0.125	0.446	0.515	0.771	0.935	0.759	0.552	0.929
Full-Time Previous Year	0.177	0.381	0.326	0.489	0.615	0.566	0.444	0.900
<i>More Than High School</i>								
Reference Period	0.093	0.403	0.489	0.747	0.876	0.712	0.508	0.806
Sometime Previous Year	0.075	0.396	0.540	0.826	0.955	0.740	0.511	0.761
Full-Time Previous Year	0.119	0.374	0.367	0.582	0.688	0.587	0.454	0.820

Source: Author's calculation from 2002 American Community Survey Public Use Microdata Sample (PUMS).

Appendix Table D-4. Standard Errors for ACS 2003 Economic Well Being Measures, Ages 25 to 61

	No Disability	Disability	Participation Restriction		Activity Limitation	Impairment		
			Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
<i>All</i>								
% Below Poverty Line	0.037	0.161	0.23	0.35	0.42	0.3	0.21	0.32
Median Income-to-Needs	NA	NA	NA	NA	NA	NA	NA	NA
Median Household Income	NA	NA	NA	NA	NA	NA	NA	NA
Median HH Size Adj. Inc.	NA	NA	NA	NA	NA	NA	NA	NA
<i>Men</i>								
% Below Poverty Line	0.048	0.22	0.32	0.52	0.61	0.42	0.29	0.39
Median Income-to-Needs	NA	NA	NA	NA	NA	NA	NA	NA
Median Household Income	NA	NA	NA	NA	NA	NA	NA	NA
Median HH Size Adj. Inc.	NA	NA	NA	NA	NA	NA	NA	NA
<i>Women</i>								
% Below Poverty Line	0.057	0.234	0.32	0.47	0.57	0.43	0.29	0.53
Median Income-to-Needs	NA	NA	NA	NA	NA	NA	NA	NA
Median Household Income	NA	NA	NA	NA	NA	NA	NA	NA
Median HH Size Adj. Inc.	NA	NA	NA	NA	NA	NA	NA	NA
<i>White</i>								
% Below Poverty Line	0.087	0.404	0.59	0.91	1.08	0.78	0.52	0.77
Median Income-to-Needs	NA	NA	NA	NA	NA	NA	NA	NA
Median Household Income	NA	NA	NA	NA	NA	NA	NA	NA
Median HH Size Adj. Inc.	NA	NA	NA	NA	NA	NA	NA	NA
<i>Black</i>								
% Below Poverty Line	0.42	1.308	1.69	2.58	1.39	2.27	1.62	3.03
Median Income-to-Needs	NA	NA	NA	NA	NA	NA	NA	NA
Median Household Income	NA	NA	NA	NA	NA	NA	NA	NA
Median HH Size Adj. Inc.	NA	NA	NA	NA	NA	NA	NA	NA

Appendix Table D-4 (continued). Standard Errors for ACS 2003 Economic Well Being Measures, Ages 25 to 61

	No Disability	Disability	Participation Restriction		Activity Limitation	Impairment		
			Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
<i>Native American</i>								
% Below Poverty Line	1.678	4.043	5.39	7.68	8.73	6.89	4.93	7.23
Median Income-to-Needs	NA	NA	NA	NA	NA	NA	NA	NA
Median Household Income	NA	NA	NA	NA	NA	NA	NA	NA
Median HH Size Adj. Inc.	NA	NA	NA	NA	NA	NA	NA	NA
<i>Asian</i>								
% Below Poverty Line	0.471	2.57	3.67	4.39	6.4	5.08	3.91	5.3
Median Income-to-Needs	NA	NA	NA	NA	NA	NA	NA	NA
Median Household Income	NA	NA	NA	NA	NA	NA	NA	NA
Median HH Size Adj. Inc.	NA	NA	NA	NA	NA	NA	NA	NA
<i>Hispanic</i>								
% Below Poverty Line	0.371	1.396	1.98	2.89	3.74	2.61	1.8	2.89
Median Income-to-Needs	NA	NA	NA	NA	NA	NA	NA	NA
Median Household Income	NA	NA	NA	NA	NA	NA	NA	NA
Median HH Size Adj. Inc.	NA	NA	NA	NA	NA	NA	NA	NA
<i>LT High School</i>								
% Below Poverty Line	0.228	0.498	0.63	0.91	1.15	0.79	0.62	1.04
Median Income-to-Needs	NA	NA	NA	NA	NA	NA	NA	NA
Median Household Income	NA	NA	NA	NA	NA	NA	NA	NA
Median HH Size Adj. Inc.	NA	NA	NA	NA	NA	NA	NA	NA
<i>High School</i>								
% Below Poverty Line	0.103	0.374	0.52	0.82	0.99	0.71	0.48	0.74
Median Income-to-Needs	NA	NA	NA	NA	NA	NA	NA	NA
Median Household Income	NA	NA	NA	NA	NA	NA	NA	NA
Median HH Size Adj. Inc.	NA	NA	NA	NA	NA	NA	NA	NA

Appendix Table D-4 (continued). Standard Errors for ACS 2003 Economic Well Being Measures, Ages 25 to 61

			Participation Restriction		Activity Limitation	Impairment		
	No Disability	Disability	Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
More Than High School								
% Below Poverty Line	0.051	0.301	0.47	0.73	0.83	0.63	0.39	0.58
Median Income-to-Needs	NA	NA	NA	NA	NA	NA	NA	NA
Median Household Income	NA	NA	NA	NA	NA	NA	NA	NA
Median HH Size Adj. Inc.	NA	NA	NA	NA	NA	NA	NA	NA

Source: Author's calculation from 2003 American Community Survey Public Use Microdata Sample (PUMS).

Appendix Table D-5. 2002 Standard Errors for Prevalence Rates for Each State by Disability Type, Ages 25 to 61

State	Disability	Participation Restriction		Activity Limitation	Impairment		
		Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
Alabama	0.39625	0.3236	0.22336	0.18901	0.24152	0.33883	0.19734
Alaska	0.96235	0.68431	0.47493	0.41634	0.60533	0.79859	0.54927
Arizona	0.3148	0.24987	0.16294	0.13346	0.18153	0.24855	0.16565
Arkansas	0.5244	0.43603	0.28962	0.25706	0.33017	0.44089	0.29486
California	0.11576	0.08884	0.06045	0.0494	0.07122	0.09302	0.05657
Colorado	0.29167	0.20928	0.13688	0.11625	0.17336	0.23374	0.15155
Connecticut	0.34158	0.25738	0.18198	0.14305	0.19297	0.2722	0.16146
D. C.	0.80102	0.58611	0.37051	0.3048	0.4635	0.65906	0.36882
Delaware	0.91479	0.65959	0.40116	0.34739	0.57119	0.73418	0.45998
Florida	0.17861	0.14078	0.09368	0.0816	0.10731	0.14822	0.08357
Georgia	0.24339	0.19272	0.12551	0.10554	0.14334	0.19808	0.12651
Hawaii	0.60633	0.4635	0.30312	0.23087	0.34452	0.48277	0.29363
Idaho	0.69479	0.50847	0.326	0.26158	0.44372	0.55864	0.37459
Illinois	0.18102	0.13657	0.09302	0.08051	0.10339	0.1454	0.08916
Indiana	0.30848	0.23797	0.16035	0.13485	0.18549	0.25282	0.168
Iowa	0.43355	0.33199	0.21776	0.17417	0.27175	0.34544	0.22348
Kansas	0.43409	0.32945	0.22709	0.18574	0.25712	0.3297	0.25444
Kentucky	0.42142	0.353	0.23375	0.18811	0.27263	0.36329	0.21819
Louisiana	0.38665	0.31452	0.21007	0.181	0.2332	0.32145	0.19914
Maine	0.6936	0.56797	0.37174	0.31099	0.45256	0.57745	0.35435
Maryland	0.28695	0.21469	0.1536	0.12334	0.1754	0.2288	0.14969
Massachusetts	0.25602	0.20713	0.13315	0.10448	0.1593	0.1942	0.11238
Michigan	0.23166	0.18111	0.12491	0.109	0.14459	0.18789	0.11206
Minnesota	0.28571	0.21384	0.13621	0.12112	0.17367	0.2276	0.13792
Mississippi	0.53398	0.44389	0.29275	0.2666	0.34718	0.45149	0.28344
Missouri	0.31256	0.24655	0.1664	0.13146	0.18334	0.25836	0.15852
Montana	0.82416	0.62045	0.38562	0.32983	0.49312	0.65752	0.48688
Nebraska	0.56691	0.44061	0.26825	0.22979	0.32777	0.47181	0.29575
Nevada	0.44509	0.3308	0.22703	0.20129	0.23065	0.36596	0.22689
N. Hampshire	0.5741	0.43508	0.29918	0.24175	0.35671	0.46049	0.28878
New Jersey	0.21375	0.16507	0.11771	0.0978	0.12331	0.16715	0.10462
New Mexico	0.58694	0.45736	0.28178	0.26368	0.38271	0.48537	0.28288
New York	0.15682	0.12462	0.08729	0.06869	0.09246	0.12793	0.07397
North Carolina	0.26803	0.21438	0.13657	0.11379	0.15908	0.22516	0.1307
North Dakota	0.89323	0.63157	0.39602	0.31522	0.52108	0.69444	0.49638

Appendix Table D-5 (continued). 2002 Standard Errors for Prevalence Rates for Each State by Disability Type, Ages 25 to 61

State	Disability	Participation Restriction		Activity Limitation	Impairment		
		Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
Ohio	0.22422	0.17784	0.11572	0.09633	0.1387	0.18264	0.11026
Oklahoma	0.44303	0.33415	0.23348	0.20765	0.27052	0.37507	0.25129
Oregon	0.39683	0.31242	0.2037	0.17575	0.26113	0.31298	0.1969
Pennsylvania	0.21043	0.16707	0.10963	0.08792	0.1268	0.1691	0.10209
Rhode Island	0.6974	0.54072	0.35817	0.28819	0.4393	0.55068	0.34805
South Carolina	0.39121	0.31129	0.20274	0.16512	0.22631	0.33116	0.20314
South Dakota	0.77567	0.56349	0.33029	0.28642	0.43124	0.60276	0.4345
Tennessee	0.32697	0.26082	0.17703	0.14493	0.20673	0.27302	0.17053
Texas	0.14959	0.11212	0.07681	0.06634	0.08718	0.12169	0.08011
Utah	0.45924	0.30493	0.19706	0.16185	0.27243	0.3495	0.2477
Vermont	0.96198	0.74762	0.4401	0.39169	0.59309	0.76294	0.48352
Virginia	0.25445	0.19893	0.1271	0.10968	0.14944	0.21066	0.13125
Washington	0.29501	0.22077	0.15119	0.12315	0.19058	0.23094	0.15763
West Virginia	0.67818	0.57536	0.36344	0.3059	0.43065	0.59483	0.36363
Wisconsin	0.30487	0.23375	0.14856	0.12659	0.18865	0.24285	0.1592
Wyoming	1.05053	0.7552	0.46309	0.40865	0.6118	0.82439	0.59608

Source: Author's calculation from 2002 American Community Survey Public Use Microdata Sample (PUMS).

Appendix Table D-6. Standard Errors for 2003 ACS State Level Employment Rates, Ages 25-61

State	No Disability		Participation Restriction	Activity Limitation	Impairment			
	Disability	Disability	Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
Alabama	0.4697	1.1999	1.1279	1.663	2.2214	1.8089	1.4118	2.7165
Alaska	1.2042	3.6144	4.756	6.4682	8.0287	5.9985	4.4953	6.4759
Arizona	0.4309	1.3835	1.4797	2.3147	2.4801	2.2462	1.7067	2.8127
Arkansas	0.5829	1.601	1.5056	2.3547	2.7274	2.3188	1.8441	3.1894
California	0.1675	0.5528	0.599	0.8786	0.988	0.8519	0.6805	1.2202
Colorado	0.4198	1.7056	2.1003	3.4602	3.8856	2.8912	2.1569	3.3986
Connecticut	0.4878	1.93	2.1538	2.7962	3.279	3.4128	2.3961	4.1875
D. C.	1.0086	3.5854	3.9958	6.6405	8.5904	6.1468	4.4116	8.1327
Delaware	1.2562	4.1615	4.5258	8.6305	11.375	6.4961	5.2909	8.7986
Florida	0.2402	0.7865	0.8232	1.2439	1.4217	1.2621	0.9447	1.8101
Georgia	0.3179	1.0426	0.995	1.5234	1.8712	1.7276	1.2717	2.1779
Hawaii	0.8362	3.0835	3.6155	5.163	6.7573	5.3435	3.8604	6.666
Idaho	0.8316	2.5601	3.1626	4.9076	6.4027	4.2192	3.2865	4.9526
Illinois	0.2706	1.0172	1.0806	1.5411	1.8696	1.6749	1.2597	2.1754
Indiana	0.3834	1.2328	1.3337	2.0189	2.4763	2.0306	1.5095	2.4024
Iowa	0.5067	1.8898	2.1606	3.4158	4.0455	2.9597	2.4023	3.7788
Kansas	0.5376	2.0423	2.2382	3.4271	3.2734	3.2549	2.6243	3.6234
Kentucky	0.4985	1.1767	1.0356	1.5982	2.0748	1.6635	1.3355	2.5568
Louisiana	0.488	1.3053	1.2446	1.9018	2.3507	2.0609	1.5592	2.8453
Maine	0.7617	2.4225	2.5961	3.4163	4.849	3.6399	2.9282	5.1071
Maryland	0.3752	1.4246	1.651	2.4895	3.106	2.3496	1.7897	2.8599
Massachusetts	0.3551	1.3401	1.4144	2.3193	2.7375	2.1363	1.7334	3.2993
Michigan	0.3092	0.9721	1.0149	1.4174	1.6884	1.5202	1.1822	2.1816
Minnesota	0.3764	1.623	2.0281	3.1939	3.6555	2.6635	2.0606	3.3116
Mississippi	0.5897	1.46	1.3382	1.8207	2.2324	2.13	1.685	3.1498
Missouri	0.3816	1.316	1.3857	2.0967	2.7701	2.1838	1.5909	2.7723
Montana	0.9648	3.1344	3.8702	6.1057	7.8196	5.327	3.988	5.2818
Nebraska	0.6293	2.4444	2.9145	5.1152	5.8857	4.3848	2.9804	4.8951
Nevada	0.6395	2.3147	2.5229	3.6742	4.4967	4.5708	2.7838	4.7329
N. Hampshire	0.7433	3.0333	3.3193	4.6503	6.6452	4.92	3.7523	6.1183
New Jersey	0.3172	1.2332	1.3728	1.9546	2.3604	2.0179	1.5825	2.6594
New Mexico	0.7547	2.1366	2.2268	3.4394	3.8781	2.871	2.5601	4.8339
New York	0.2224	0.7403	0.7876	1.1222	1.4361	1.2073	0.9045	1.6963
North Carolina	0.3259	0.9847	1.0009	1.5389	1.8202	1.621	1.168	2.2199
North Dakota	1.0488	4.3317	5.555	8.7924	8.818	7.3329	5.6131	7.7854

Appendix Table D-6 (continued). Standard Errors for 2003 ACS State Level Employment Rates, Ages 25-61

State	No Disability	Disability	Participation Restriction		Activity Limitation	Impairment		
			Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
Ohio	0.2828	0.8943	0.9462	1.5027	1.904	1.4037	1.0905	1.9715
Oklahoma	0.5551	1.5224	1.6703	2.3881	2.6202	2.4438	1.7734	2.8948
Oregon	0.5052	1.5838	1.7418	2.6826	2.9749	2.3178	2.0268	3.3732
Pennsylvania	0.2729	0.8808	0.8961	1.3824	1.8112	1.393	1.0815	1.9775
Rhode Island	0.8519	3.0082	3.0872	4.9979	6.2915	4.5849	3.7597	6.4973
South Carolina	0.4803	1.3679	1.3823	2.1278	2.626	2.1697	1.6012	2.929
South Dakota	0.9807	4.2771	5.4449	10.142	11.332	7.737	5.6603	7.3609
Tennessee	0.3926	1.1365	1.135	1.4571	1.9289	1.6495	1.3468	2.4051
Texas	0.2127	0.7177	0.7704	1.0861	1.3012	1.1729	0.8732	1.4223
Utah	0.6677	2.446	3.2031	4.9186	6.4918	4.1661	3.2881	4.6171
Vermont	1.0341	3.739	4.3985	6.5913	8.0161	6.1978	4.8244	7.8143
Virginia	0.3285	1.1962	1.2728	2.0348	2.5544	1.983	1.4095	2.4625
Washington	0.386	1.2256	1.3955	1.9941	2.666	1.8293	1.5646	2.4383
West Virginia	0.8047	1.6002	1.264	2.2379	2.7787	2.1607	1.7987	3.5543
Wisconsin	0.3794	1.4152	1.6852	2.5571	3.1208	2.263	1.8015	2.8367
Wyoming	1.2576	4.4084	5.7511	8.8375	9.4403	7.8688	5.7854	7.7458

Source: Calculations from 2002 American Community Survey Public Use Microdata Sample.

Appendix Table D-7. Standard Errors for State Level Poverty Rates for 2002 Population living in Households, Ages 25-61

State	No Disability	Disability	Participation Restriction		Activity Limitation	Impairment		
			Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
Alabama	0.34609	1.19115	1.58494	2.24883	2.7177	2.16472	1.43759	2.37904
Alaska	0.72506	2.49851	4.12014	6.1141	6.932	4.67228	3.14366	4.60299
Arizona	0.31827	1.18428	1.6494	2.5823	3.1105	2.31274	1.55969	2.12116
Arkansas	0.43789	1.46236	1.93115	2.97959	3.4516	2.62978	1.81565	2.42385
California	0.11361	0.47132	0.667	0.98853	1.2641	0.86193	0.60641	0.97977
Colorado	0.24457	1.32002	2.10359	3.12964	3.9801	2.50482	1.75334	2.29903
Connecticut	0.26741	1.53022	2.34961	3.57251	4.2578	2.99209	2.08702	2.90464
D. C.	0.56143	2.7455	4.31548	6.37851	7.9271	5.36103	3.39702	6.2488
Delaware	1.01438	3.90042	5.72273	9.80778	10.2319	6.79944	5.10411	7.91876
Florida	0.16608	0.6736	0.95347	1.45433	1.7107	1.27468	0.84398	1.47788
Georgia	0.21107	0.94632	1.30703	2.06453	2.4078	1.77977	1.19401	1.81372
Hawaii	0.53624	2.54875	3.77059	5.79113	7.8631	5.26557	3.49688	5.46039
Idaho	0.59444	2.08158	3.26785	4.85044	5.8762	3.74476	2.61259	3.9699
Illinois	0.16561	0.87054	1.27847	1.9082	2.1701	1.76305	1.12536	1.74265
Indiana	0.22721	1.00979	1.48859	2.23904	2.4958	1.99659	1.28207	1.86467
Iowa	0.32657	1.54285	2.30855	3.73493	4.3379	2.87268	2.01407	2.86698
Kansas	0.33115	1.67017	2.56966	3.74267	4.898	3.33935	2.36016	2.78544
Kentucky	0.36741	1.19327	1.54937	2.38619	2.9069	2.06182	1.44495	2.50569
Louisiana	0.37851	1.27768	1.71108	2.68107	3.0558	2.35615	1.58433	2.54008
Maine	0.48374	2.01081	2.77003	4.39156	4.8926	3.59102	2.52837	3.98047
Maryland	0.2081	1.1183	1.69024	2.31109	2.9057	2.06379	1.46801	2.08886
Massachusetts	0.20603	1.18258	1.58715	2.59059	3.2574	2.18756	1.61555	2.79187
Michigan	0.18347	0.84135	1.20251	1.78936	2.0127	1.53166	1.08497	1.78387
Minnesota	0.20352	1.26723	1.95131	2.962	3.2264	2.3028	1.6685	1.87786
Mississippi	0.46965	1.434	1.86484	2.97418	3.2944	2.48906	1.79561	2.84924
Missouri	0.24049	1.11953	1.55041	2.44526	3.0406	2.19879	1.42278	1.9963
Montana	0.72271	2.64628	3.90041	5.91316	7.3101	5.16914	3.49277	4.51907
Nebraska	0.41456	2.14964	3.05978	5.01146	6.1233	4.25121	2.71066	4.34334
Nevada	0.40935	1.9202	2.89549	4.13978	4.9576	3.99577	2.38247	4.13314
N. Hampshire	0.42006	2.29929	3.47941	5.22341	5.2382	4.30768	2.99749	4.67057
New Jersey	0.17561	0.98628	1.41511	1.98136	2.4795	1.9856	1.30411	2.16834
New Mexico	0.57162	2.03103	2.85387	4.8336	5.2038	3.47151	2.55668	4.44158
New York	0.15001	0.6763	0.91932	1.34263	1.6785	1.28395	0.85877	1.41245
North Carolina	0.22355	0.87481	1.22292	1.9475	2.3049	1.63646	1.09653	1.86156

Appendix Table D-7 (continued). Standard Errors for State Level Poverty Rates for 2002 Population living in Households, Ages 25-61

State	No Disability	Disability	Participation Restriction		Activity Limitation	Impairment		
			Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
North Dakota	0.75396	3.58646	5.82417	9.11289	10.9926	6.71741	5.07937	5.17751
Ohio	0.179	0.78444	1.09275	1.75906	2.0555	1.46356	1.017	1.6034
Oklahoma	0.39217	1.34414	1.96256	2.88993	3.1685	2.45774	1.66568	2.56661
Oregon	0.3582	1.3612	1.91144	3.07332	3.4773	2.41273	1.7588	2.42052
Pennsylvania	0.16461	0.77904	1.06932	1.64642	2.0168	1.45925	1.00658	1.60963
Rhode Island	0.51996	2.71652	3.80164	5.66185	7.2932	4.85193	3.61392	5.9064
South Carolina	0.32761	1.25799	1.68348	2.61542	3.0458	2.46902	1.56317	2.33199
South Dakota	0.68143	3.39067	5.19961	8.13941	9.2255	7.10934	4.50118	5.94224
Tennessee	0.26485	1.03524	1.4327	2.14468	2.7288	1.87006	1.31293	1.93162
Texas	0.15664	0.62748	0.91851	1.39328	1.6141	1.21876	0.80901	1.22333
Utah	0.4216	1.75643	3.16421	5.0143	6.1129	3.29756	2.458	3.38358
Vermont	0.6497	3.11689	4.53655	8.17974	8.8083	5.38145	4.13773	5.38154
Virginia	0.17937	0.98027	1.39812	2.14768	2.5529	1.87125	1.25039	1.74222
Washington	0.24663	1.03521	1.58874	2.44587	2.8772	1.87073	1.39748	1.79745
West Virginia	0.60913	1.62592	2.10805	3.53626	4.116	3.00237	1.9316	3.18422
Wisconsin	0.23973	1.14599	1.67346	2.84809	2.9584	2.17971	1.50267	2.41878
Wyoming	0.81524	3.36852	5.55343	9.05904	10.8099	6.95658	4.55624	6.01711

Source: Calculations from 2002 American Community Survey Public Use Microdata Sample.

Appendix E. State Sample Sizes

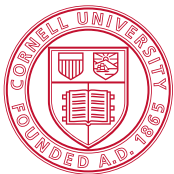
Appendix Table E-1. 2003 Sample Size for Each State by Disability Type, Ages 25 to 61

State	Disability	Participation Restriction		Activity Limitation	Impairment		
		Employment	Home	Self-Care	Mental	Physical	Sensory
Alabama	1360	836	384	280	454	938	296
Alaska	649	313	139	111	229	404	175
Arizona	1082	649	271	173	337	646	265
Arkansas	857	555	216	178	301	573	220
California	6468	3669	1665	1056	2249	3920	1333
Colorado	823	419	174	120	260	500	187
Connecticut	626	329	160	100	192	382	127
D. C.	593	305	124	87	174	386	111
Delaware	443	230	90	63	154	273	91
Florida	3699	2185	933	678	1244	2424	721
Georgia	2017	1215	499	342	651	1280	479
Hawaii	572	318	147	78	181	334	133
Idaho	645	334	136	87	223	396	176
Illinois	2191	1187	540	390	645	1355	480
Indiana	1604	903	398	281	520	1009	398
Iowa	1133	630	254	160	371	684	266
Kansas	851	458	192	140	256	479	242
Kentucky	2476	1666	689	430	906	1736	573
Louisiana	1638	1020	431	311	533	1079	398
Maine	677	435	171	122	257	434	150
Maryland	1283	699	331	195	414	766	291
Massachusetts	1227	746	300	180	435	674	224
Michigan	2476	1458	662	474	884	1553	506
Minnesota	966	505	194	153	312	591	208
Mississippi	1991	1263	527	405	729	1312	486
Missouri	1334	796	342	218	423	871	291
Montana	690	353	130	103	200	421	209
Nebraska	744	419	172	106	223	478	184
Nevada	556	305	130	97	155	361	119
N. Hampshire	542	297	130	84	200	332	128
New Jersey	1470	844	424	276	460	874	296
New Mexico	662	384	148	111	243	433	141
New York	3743	2274	1044	649	1198	2355	736
North Carolina	2218	1332	526	370	700	1486	501
North Dakota	506	244	104	66	149	300	142

Appendix Table E-1. 2003 Sample Size for Each State by Disability Type, Ages 25 to 61

State	Disability	Participation Restriction		Activity Limitation	Impairment		
		Employment	Go-Outside Home	Self-Care	Mental	Physical	Sensory
Ohio	2957	1782	713	501	995	1872	623
Oklahoma	1008	540	245	187	330	671	272
Oregon	871	507	189	139	314	519	195
Pennsylvania	2864	1735	741	479	944	1761	605
Rhode Island	646	392	168	100	231	382	125
South Carolina	1130	680	283	187	342	759	280
South Dakota	695	355	115	86	205	401	198
Tennessee	1740	1034	465	304	623	1144	399
Texas	3861	2104	960	693	1205	2475	995
Utah	573	256	96	69	192	326	139
Vermont	635	368	126	101	216	376	144
Virginia	1616	936	386	275	513	1047	387
Washington	1548	841	366	239	567	898	376
West Virginia	1806	1206	456	306	640	1275	444
Wisconsin	1257	701	266	209	425	779	282
Wyoming	608	310	117	88	196	364	167

Source: Author's calculation from 2003 American Community Survey (PUMS).



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