

DRAFT – WORKING PAPERS

Health and Disability in Wisconsin – Estimates from Three Population-based Surveys

Office of Health Informatics & Bureau of Community Health Promotion
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These draft working papers, not intended for broad dissemination, were prepared and compiled by staff in the Office of Health Informatics (OHI) and Bureau of Community Health Promotion (BCHP):

Overview

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Table of Contents

Overview.....	1
Introduction	
Definition and Prevalence of Disability	
Disability and Healthiest Wisconsin 2020	
Strengths and Limitations	
Additional Resources	
Estimates from the American Community Survey.....	6
Estimates from the Wisconsin Behavioral Risk Factor Survey.....	18
Estimates from the Wisconsin Family Health Survey.....	28

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Overview

Introduction

While public health has traditionally viewed disability as an undesired health outcome, emerging views recognize that having a disability does not preclude health and wellness. Public health is tasked with addressing the experiences and needs of individuals with disabilities to ensure maximum health and wellness for the state of Wisconsin. And to this end, regular surveillance of the health of people with disabilities is essential.

The Waisman Center, a University Center for Excellence in Developmental Disabilities at the University of Wisconsin-Madison, and the Title V Children and Youth with Special Health Care Needs Program at the Wisconsin Division of Public Health (DPH) organized a conference in June 2011 that highlighted the need for better data on health and disabilities. In response, the DPH Office of Health Informatics and Bureau of Community Health Promotion, Maternal and Child Health Program reviewed sources of existing state and national survey data and produced three self-contained working papers on health and disability among adults in Wisconsin. While disability among children and youth is an important area of focus, the Division's efforts for this paper are restricted to adults. Several resources including the National Survey of Children with Special Health Care Needs, the National Survey of Children's Health, and the Youth Risk Behavior Surveillance System contain information on health indicators for children and youth with disabilities. The Data Resource Center for Child & Adolescent Health website contains useful tools for exploring these datasets (<http://www.childhealthdata.org/home>). Future analyses will consider children and youth.

Demographic/socioeconomic features, health care access and utilization, health status, and health risk factors were evaluated within the following three population-based surveys: the American Community Survey (ACS), the Wisconsin Behavioral Risk Factor Survey (BRFS), and the Wisconsin Family Health Survey (FHS). This overview provides a summary of significant findings. Please note that the following working papers are *drafts* and that comments and questions are welcome (contact information can be found on the final page of the document).

Definition and Prevalence of Disability

In general, disability can be viewed as functional limitations of a person in relation to his or her physical and social environment. Disability can manifest in diverse ways, including through limitations in vision, hearing, mobility, cognition, and/or emotional/mental health. It can vary by age of onset, severity and duration, and personal perception. While each of the three surveys examined in the subsequent working papers defines disability differently (Table 1), all ascertain some degree of self-perceived limitation.

We limited estimates from each survey to adults age 18 and older living in households. The ACS estimates that 12% of the adult household population has at least one disability. The BRFS

and FHS estimates are higher: 18% and 19%, respectively. The BRFSS definition of disability leaves most discretion to the respondent, while the FHS has a broad but detailed list of qualifying questions. Within different age groups the estimates also vary. The FHS estimates that a larger proportion of people ages 65 and over have a disability (44%) than the BRFSS (28%) and the ACS (32%).

Table 1. Case-definition and Wisconsin Prevalence of Disability in Three Population-based Surveys

Survey, Year	Case Definition	Prevalence (%± 95% CI), by Age Group	
American Community Survey, 2009	Deafness or serious difficulty hearing; blindness or serious difficulty seeing – even when wearing glasses; serious difficulty concentrating, remembering or making decisions; serious difficulty walking or climbing stairs; difficulty dressing or bathing; difficulty doing errands alone such as visiting a doctor’s office or shopping	All adults	12 ±<1
		18-64	9 ±<1
		65+	32 ± 1
Behavioral Risk Factor Survey, 2010	Limited in any way in any activities because of physical, mental or emotional problems	All adults	18 ± 1
		18-64	16 ± 2
		65+	28 ± 3
Wisconsin Family Health Survey, 2009	Alone and without special equipment, unable or very difficult to walk a quarter of a mile, walk up 10 steps without resting, stand or be on feet for 2 hours, reach up over head, or stoop, bend or kneel; limited in any way because of periods of memory loss, confusion, or an emotional or mental health problem; unable to work at a job, do work around the house, or go to school due to physical or mental health; trouble eating, dressing, bathing, or using toilet due to physical or mental health	All adults	19 ± 1
		18-64	14 ± 1
		65+	44 ± 4

Disability and Healthiest Wisconsin 2020

The State Health Plan, “Healthiest Wisconsin 2020 - Everyone Living Better, Longer,” represents the third decade of statewide community health improvement planning to benefit the health of everyone in Wisconsin. For the first time, the plan includes health disparities between people with and without disabilities as part of its emphasis on the elimination of health disparities. Health disparities are modifiable differences in the burden of disease or health status experienced by disadvantaged populations – the result of complex social, behavioral, and environmental interactions at the individual and societal level. As articulated in the State Health Plan, Wisconsin seeks to eliminate these gaps and achieve health equity. The three accompanying working papers describe the population in Wisconsin with a disability and highlight differences between individuals with and without a disability.

A number of key findings were identified (all statistically significant as determined by non-overlapping 95% confidence intervals):

Demographic/socioeconomic features

- According to the ACS, African Americans adults are more likely to have a disability (18.4%) than whites (12.3%), and non-Hispanics are more likely than Hispanics (12.6% versus 9.8%).
- Adults ages 18-64 with a disability are over twice as likely to live below 200% of the poverty level (55% versus 19%) and only half as likely to have some type of employment (37% versus 79%; FHS).

Health care access and utilization

- Although adults with and without a disability are equally likely to have some level of continuous health insurance coverage over the past year (~86%), those with a disability are almost twice as likely to have trouble paying medical bills (32% versus 18%) and about four times as likely to not get needed medical care (9% versus 2%; FHS). More adults with a disability than without report not getting medical care due to cost (15% versus 9%; BRFSS).
- Adults with a disability are slightly more likely to have a personal doctor than adults without a disability (91% versus 85%) and about twice as likely to be enrolled in Medicaid/BadgerCare (23% versus 12%; BRFSS).
- Adults with and without a disability are equally likely to have a usual place of care (~91%; FHS).
- Adults with a disability are more likely to have had a check-up in the past year (73% versus 63%), but are also almost three times as likely to have been treated in a hospital emergency department (34% versus 12%; FHS).
- Adults with a disability are less likely to have had dental care within the past year (55% versus 73%), and their reason for dental care is twice as likely to be that “something was wrong, bothering or hurting” (29% versus 12%; FHS).
- Adults ages 18-64 with a disability are more likely to receive a seasonal flu vaccine (43% versus 33%), whereas adults ages 65 and older with and without a disability are equally likely (~71%) to receive it (BRFSS).
- Men ages 40 and older with a disability are more likely to have had a recent prostate-specific antigen (PSA) test (62% versus 48%; BRFSS).
- No significant differences by disability status were found with respect to receiving a cholesterol test (~82%), colonoscopy or sigmoidoscopy (~68%), timely pap smear (~84%), or timely mammogram (~78%; BRFSS).

Health status

- Adults without disabilities are twice as likely as adults with disabilities to report excellent, very good, or good overall health (94% versus 45%; FHS).

- Adults without disabilities are somewhat more likely to live within an excellent or good community, as perceived by household members (90% versus 82%; FHS).

Health risk factors

- Adults with a disability have significantly higher levels of major health risk factors: they are more likely to smoke (25% versus 18%), be obese (36% versus 25%), or have been told they have high cholesterol (46% versus 34%) and/or have high blood pressure (44% versus 24%; BRFS).
- Adults with a disability are less likely to binge drink (15% versus 23%; BRFS)
- Adults with a disability are less likely to report any recent physical activity (67% versus 79%; BRFS).

Strengths and Limitations

The accompanying working papers offer a snapshot of the health of people with a disability in Wisconsin. Each of the three surveys sheds light on different aspects of the health of individuals with disabilities, revealing a number of significant health disparities and areas for improvement. The public health system plays an essential role in the continual monitoring of this population, and more importantly, in responding to the gaps and needs identified.

A number of features make the ACS a useful tool for disability analyses: 1) it utilizes the newly-recommended national standard for ascertainment of disability status in survey instruments (released by the U.S. Department of Health and Human Services in 2011); 2) it collects information on demographic/socioeconomic characteristics, economic well-being, and employment; 3) the sample size and survey design allow users to examine disability statistics at the national, state, metropolitan statistical area, and county levels; and 4) the data are available for public use. The national Behavioral Risk Factor Surveillance System is also a valuable source of disability data: 1) it collects information on demographic characteristics, health issues, behaviors, and health care; 2) the sample size and survey design allow users to examine disability statistics at the national and state level; 3) it is used in several territories, which may not be represented in other sources of disability data; 4) states can elect to include optional modules and/or supplemental state-written questions; and 5) the data are available for public use. Finally, Wisconsin's FHS has several strengths: 1) it collects information on demographic characteristics, health insurance (detailed), health care access and utilization, and health status; and 2) questions are written by and designed to meet the information needs of the Wisconsin Department of Health Services. Both the BRFS and the FHS enable public health programs and researchers to add items to the survey instruments.

There are a number of limitations to the available surveys. First, none are designed to provide focused information on persons with disabilities. Each survey collects limited data on the health of children and youth with disabilities. Alternative data sources, including the National Survey

of Children with Special Health Care Needs (<http://www.childhealthdata.org/>), could be examined for this purpose. Both the BRFSS and FHS are limited to household populations and do not capture populations living in group quarters, e.g., institutions, college dormitories, nursing homes, and correctional facilities. Because the FHS is Wisconsin-specific, it cannot be used to compare Wisconsin to other states. The definition of disability in each survey lacks information on key features: causality, duration, severity, permanence, and type or location of medical condition. While this does not preclude our ability to discern important differences, it does influence our interpretation of these differences. For example, we know from the BRFSS that people with disabilities are more likely to be obese, but we do not know to what degree obesity is the cause of their disability, rather than a consequence. Nonetheless, public health can use this information to tailor programs and activities for greater effectiveness. It is also difficult to capture environmental and social factors that may contribute to or exacerbate a disability, such as discrimination and lack of reasonable accommodations. Lastly, it is important to note that each of the three surveys differ in their methodology. Detailed technical notes can be found within each of the working papers.

Additional Resources

This collection of Wisconsin-specific data on disability and health represents a small subset of what is currently available. Both ACS (<http://www.census.gov/acs/www/>) and BRFSS (<http://www.cdc.gov/BRFSS/>) datasets are available on the internet for public use. Please visit the Wisconsin Division of Public Health website for more information on accessing Family Health Survey data (<http://www.dhs.wisconsin.gov/stats/familyhealthsurvey.htm>). A set of state-specific statistics on people with disabilities and government programs that serve this population is compiled annually by the Rehabilitation Research and Training Center on Disability Statistics and Demographics (StatsRRTC) in the *Disability Statistics Compendium*: <http://www.researchondisability.org/docs/default-document-library/annualcompendium2011.pdf>. Also of potential utility, the Center for Studying Disability Policy has reviewed disability-related information and other key features of 40 existing national surveys sponsored by the federal government, which can be found in their report, *Disability Data in National Surveys*: http://www.mathematica-mpr.com/publications/pdfs/disability/Data_National_Surveys.pdf. And finally, Disability Statistics is an online resource for U.S. disability statistics derived from sources including the American Community Survey (ACS), Current Population Survey (CPS), and the Census. Their website helps orient users to major sources of disability data and publishes state-specific and national *Disability Status Reports*: <http://www.disabilitystatistics.org/>.

Health and Disability in Wisconsin – Estimates from the 2009 American Community Survey

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Overview

The annual American Community Survey (ACS) includes six items assessing serious perceptual, functional and cognitive difficulties that may be considered ‘disabilities.’ This data brief presents estimates of the numbers and proportions of adults living in households in Wisconsin with each measured disability. We also describe the prevalence of each disability by gender, age, ethnicity, race, and income level and the rates of health insurance coverage. The analyses use only survey observations for adults 18 and older who are living in households.

The ACS asks the following about each person in the sampled household or living unit:

- **Hearing:** “Is this person deaf or does he/she have serious difficulty hearing?”
- **Vision:** “Is this person blind or does he/she have serious difficulty seeing even when wearing glasses?”
- **Cognition:** “Because of a physical, mental, or emotional condition, does this person have serious difficulty concentrating, remembering, or making decisions?” (asked if 5 years old or over)
- **Ambulatory:** “Does this person have serious difficulty walking or climbing stairs?” (asked if 5 years old or over)
- **Self-care:** “Does this person have difficulty dressing or bathing?” (asked if 5 years old or over) – an indicator of difficulty with activities of daily living.
- **Independent living:** “Because of a physical, mental, or emotional condition, does this person have difficulty doing errands alone such as visiting a doctor’s office or shopping?” (asked if 15 years old or over) – an indicator of difficulty with instrumental activities of daily living.

Persons with one or more reported disabilities are defined as ‘disabled.’ Recently the U.S. Department of Health and Human Services made these questions the standard operational definition of disability for federal surveys.

Data Source and Methodology

The [American Community Survey](#) is conducted by the U.S. Census Bureau. It has replaced the Census’ decennial “long form” and is designed to provide communities with reliable and timely demographic, social, economic, and housing data. ACS data are collected year-round in every county from approximately 3 million addresses, including both housing units and group quarters.

This data brief used the 2009 ACS Public Use Microdata Sample (PUMS) file for Wisconsin, which contains a record for each person living in the 27,533 addresses sampled. We selected only adults age 18 and older who were living in households for this analysis because this same population is sampled by Wisconsin’s Family Health and Behavioral Risk Factor Surveys. This

excludes the sampled “group quarters” populations of persons in residential schools for people with disabilities, college student housing, adult correctional and juvenile facilities, nursing homes, long-term patients in psychiatric hospitals and hospital units, military quarters and facilities, shelters for people experiencing homelessness, adult group homes, residential treatment centers, religious group quarters, and workers’ group living quarters.

To provide accurate estimates for the Wisconsin population, the data have been adjusted to be consistent with county-level age-, gender-, race- and ethnicity-specific population estimates produced by the Wisconsin Department of Health Services, Division of Public Health, Office of Health Informatics. All estimates are rounded to the nearest 100 people.

Adults with Disabilities who Live in Households in Wisconsin

The 2009 American Community Survey estimates there are 527,300 adults with disabilities living in Wisconsin households, representing 12.5 % of Wisconsin’s 4,211,900 total adult household population that year. Table 1 shows estimated population sizes and percentages (with 95% confidence intervals) for each type of disability measured by the ACS in the adult household population.

Difficulty walking or climbing stairs affects almost 7% of these adults and 52% of all those with a disability. Hearing difficulties, independent living limitations, and cognitive difficulties each affect about 4% of adults.

**Table 1. Estimates for adults with disabilities, by nature of disability
Wisconsin, 2009**

Disability Measure	Number of Adults	Percent of All Adults with Any Disability	Percent of Adult Household Population (4,211,900)
Hearing	167,700	31.8% ± 5.5%	4.0 % ± 0.2%
Vision	78,700	14.9 ± 9.3	1.9 ± 0.2
Cognition	160,200	30.4 ± 6.5	3.8 ± 0.2
Ambulatory	276,300	52.4 ± 4.7	6.6 ± 0.3
Self-care	91,400	17.3 ± 8.2	2.2 ± 0.2
Independent living	181,200	34.4 ± 5.7	4.3 ± 0.2
All with a disability	527,300	100.0%	12.5% ± 0.4%

Source: US Census Bureau, 2009 American Community Survey

Notes: 95% C.I. shown. Includes only adults living in households; some have more than one type of disability.

Demographics of Adults with Disabilities

When interpreting demographic differences, it is particularly important to realize that age differences underlie much of the observed gender and income differences. Of the estimated 527,300 adults with a disability living in households in Wisconsin, more than half were female. Most adults with a disability were under age 65 (57%), although almost a third of those 65+ had one or more disabilities. African-Americans were more likely to report some disability. Lower income strata had notably higher rates of disabilities.

Tables 2-8 describe the demographics of adults with disabilities who live in Wisconsin households. For each demographic group (males, for example), we show:

- the estimated number of adults with a disability (e.g., 247,300 males),
- the percent of all persons with a disability that are in that group (e.g., males are 46.9% of all persons with a disability), and
- the percent of the group that has a disability (e.g., 12.0% of males have a disability, with a 95% confidence interval of $\pm 0.6\%$)

Table 2. Demographics of household adults with a disability, Wisconsin, 2009

Demographic Group	Number of Adults	Percent of All Adults with any Disability	Percent of Demographic Group
Male	247,300	46.9%	12.0% \pm 0.6%
Female	280,000	53.1	13.0 \pm 0.6
Age			
18-64	299,600	56.8	8.6 \pm 0.4
65-plus	227,700	43.2	31.7 \pm 1.2
Ethnicity			
Hispanic/Latino	17,100	3.2	9.8 \pm 2.2
Non-Hispanic	510,200	96.8	12.6 \pm 0.4
Race			
White	475,500	90.2	12.3 \pm 0.4
African-American/ Black	39,300	7.5	18.4 \pm 2.6
American Indian	6,300	1.2	16.0 \pm 5.0
Asian	6,900	1.3	8.4 \pm 2.9
Percent of Poverty			
<100%	101,300	19.2	21.9 \pm 1.7
100-199%	129,600	24.6	20.1 \pm 1.2
200-299%	97,200	18.4	13.1 \pm 0.9
300-399%	71,800	13.6	10.7 \pm 1.0
400-Plus	127,400	24.2	7.8 \pm 0.5
All Adults	527,300	100.0%	12.5 % \pm 0.4%

Source: US Census Bureau, 2009 American Community Survey

Note: Includes only adults living in households. 95% C.I. shown.

Hearing Disability

The estimated 167,700 Wisconsin adults with a reported hearing difficulty are disproportionately male (59%). Almost 14% of those aged 65+ are deaf or have serious difficulty hearing. Non-Hispanics and Whites are more likely to report difficulty hearing.

**Table 3. Demographics of household adults with a hearing disability
Wisconsin, 2009**

Demographic Group	Number of Adults	Percent of Adults with Hearing Disability	Percent of Demographic Group
Gender			
Male	98,800	58.9%	4.8% ± 0.3%
Female	68,900	41.1	3.2 ± 0.3
Age			
18-64	68,100	40.6	1.9 ± 0.2
65-plus	99,600	59.4	13.9 ± 0.9
Ethnicity			
Hispanic	3,200	1.9	1.8 ± 0.8
Non-Hispanic	164,500	98.1	4.1 ± 0.2
Race			
White	160,700	95.5	4.1 ± 0.3
African-American/ Black	4,200	2.5	2.0 ± 0.9
American Indian	1,900	1.1	4.8 ± 2.8
Asian	1,600	1.0	1.9 ± 1.3
Percent of Poverty			
<100%	19,800	11.8	4.3 ± 0.7
100-199%	39,200	23.4	6.1 ± 0.7
200-299%	33,200	19.8	4.5 ± 0.5
300-399%	24,600	14.7	3.7 ± 0.5
400-Plus	50,900	30.3	3.0 ± 0.3
All Adults	167,700	100.0%	4.0 % ± 0.2%

Source: US Census Bureau, 2009 American Community Survey

Note: Includes only adults living in households. 95% C.I. shown.

“Is this person deaf or does he/she have serious difficulty hearing?”

Vision Disability

Women are a larger proportion of those with vision-related disabilities than are men. African-Americans are notably more likely than Whites to have a vision-related disability. Vision difficulties are more common among lower income households.

**Table 4. Demographics of household adults with a vision-related disability
Wisconsin, 2009**

Demographic Group	Number of Adults	Percent of Adults with Vision-related Disability	Percent of Demographic Group
Gender			
Male	35,200	44.7%	1.7% ± 0.2%
Female	43,400	55.1	2.0 ± 0.3
Age			
18-64	41,700	53.0	1.2 ± 0.2
65-plus	37,000	47.0	5.2 ± 0.6
Ethnicity			
Hispanic	3,900	5.0	2.2 ± 1.2
Non-Hispanic	74,800	95.0	1.9 ± 0.2
Race			
White	66,400	85.1	1.7 ± 0.2
African-American/ Black	8,900	11.4	4.2 ± 1.5
American Indian	800	1.0	2.1 ± 1.9
Asian	1,900	2.4	2.3 ± 1.9
Percent of Poverty			
<100%	19,300	24.5	4.2 ± 0.9
100-199%	21,600	27.5	3.3 ± 0.6
200-299%	12,900	16.5	1.8 ± 0.4
300-399%	9,700	12.3	1.4 ± 0.4
400-Plus	15,200	19.3	0.9 ± 0.2
All Adults	78,700	100.0%	1.9 % ± 0.2%

Source: US Census Bureau, 2009 American Community Survey

Note: Includes only adults living in households. 95% C.I. shown.

“Is this person blind or does he/she have serious difficulty seeing even when wearing glasses?”

Cognitive Disability

The ACS estimates that 160,200 household adults have serious difficulty concentrating, remembering, or making decisions because of a physical, mental, or emotional condition. A greater proportion of the elderly have serious cognitive difficulties than of the younger adults: 6% and 3%, respectively. However, a greater absolute number of younger than older adults have a cognitive disability and the difference is larger than for the other disabilities: 118,300 vs. 42,000. Cognitive difficulties are reported at disproportionately higher rates among African-Americans and American Indians. The rate declines steadily as household income increases.

**Table 5. Demographics of household adults with a cognitive disability
Wisconsin, 2009**

Demographic Group	Number of Adults	Percent of Adults with a Cognitive Disability	Percent of Demographic Group
Gender			
Male	70,500	44.0%	3.4% ± 0.3%
Female	89,700	56.0	4.2 ± 0.4
Age			
18-64	118,300	73.8	3.4 ± 0.3
65-plus	42,000	26.2	5.8 ± 0.6
Ethnicity			
Hispanic	6,200	3.9	3.6 ± 0.1.2
Non-Hispanic	154,000	96.1	3.8 ± 0.3
Race			
White	137,200	86.7	3.5 ± 0.2
African-American/ Black	16,300	10.3	7.7 ± 1.8
American Indian	2,500	1.6	6.3 ± 3.7
Asian	2,500	1.6	3.0 ± 1.7
Percent of Poverty			
<100%	43,100	26.9	9.3 ± 1.2
100-199%	40,100	25.0	6.2 ± 0.8
200-299%	27,300	17.0	3.7 ± 0.5
300-399%	21,500	13.4	3.2 ± 0.6
400-Plus	28,200	17.6	1.7 ± 0.2
All Adults	160,200	100.0%	3.8 % ± 0.2%

Source: US Census Bureau, 2009 American Community Survey

Note: Includes only adults living in households. 95% C.I. shown.

“Because of a physical, mental, or emotional condition, does this person have serious difficulty concentrating, remembering, or making decisions?”

Ambulatory Disabilities

Serious difficulty walking or climbing stairs is a problem for an estimated 276,300 adults living in households. Ambulatory disability is the largest category measured by the ACS, affecting 7% of adults and half of all those with any disability. Serious mobility impairment affects women significantly more than men and it affects almost one in five persons age 65 and up (19%). The estimated rate of ambulatory disability among African-Americans is significantly higher than among Whites (11% v. 6%). The rate declines steadily as household income increases.

**Table 6. Demographics of household adults with an ambulatory disability
Wisconsin, 2009**

Demographic Group	Number of Adults	Percent of Adults with an Ambulatory Disability	Percent of Demographic Group
Gender			
Male	111,600	40.4%	5.4% ± 0.4%
Female	164,700	59.6	7.7 ± 0.5
Age			
18-64	141,700	51.3	4.1 ± 0.3
65-plus	134,600	48.7	18.7 ± 1.0
Ethnicity			
Hispanic	9,400	3.4	5.4 ± 1.7
Non-Hispanic	266,900	96.6	6.6 ± 0.3
Race			
White	246,400	89.0	6.4 ± 0.3
African-American/ Black	23,600	8.5	11.1 ± 2.0
American Indian	3,600	1.3	9.2 ± 3.7
Asian	3,400	1.2	4.1 ± 2.3
Percent of Poverty			
<100%	53,600	19.4	11.6 ± 1.3
100-199%	74,400	26.9	11.5 ± 1.0
200-299%	52,200	18.9	7.0 ± 0.7
300-399%	36,500	13.2	5.5 ± 0.7
400-Plus	59,500	21.5	3.5 ± 0.3
All Adults	276,300	100.0%	6.6 % ± 0.3%

Source: US Census Bureau, 2009 American Community Survey

Note: Includes only adults living in households. 95% C.I. shown.

“Does this person have serious difficulty walking or climbing stairs?”

Disabilities Related to Self-Care

An estimated 91,400 adults living in households have difficulty dressing or bathing independently. Among older adults in households, 6% have this challenge. Self-care is an issue for proportionately more African-Americans than for Whites (4.6% v. 2.0%). Again, the rate declines steadily as household income increases. Among all persons with disabilities, only 17% ($\pm 8\%$) have difficulty dressing or bathing independently.

Table 7. Demographics of household adults with a disability related to self-care Wisconsin, 2009

Demographic Group	Number of Adults	Percent of Adults with Self-Care Difficulty	Percent of Demographic Group
Gender			
Male	41,300	45.2%	2.0% \pm 0.2%
Female	50,100	54.8	2.3 \pm 0.3
Age			
18-64	49,000	53.6	1.4 \pm 0.2
65-plus	42,300	46.3	5.9 \pm 0.6
Ethnicity			
Hispanic	2,000	2.2	1.1 \pm 0.7
Non-Hispanic	89,400	97.8	2.2 \pm 0.2
Race			
White	78,400	85.7	2.0 \pm 0.2
African-American/ Black	9,900	10.8	4.6 \pm 1.4
American Indian	1,300	1.4	3.4 \pm 2.6
Asian	2,000	2.2	2.4 \pm 1.9
Percent of Poverty			
<100%	18,900	20.7	4.1 \pm 0.8
100-199%	25,200	27.6	3.9 \pm 0.6
200-299%	16,200	17.7	2.2 \pm 0.4
300-399%	13,700	14.9	2.0 \pm 0.5
400-Plus	17,400	19.0	1.0 \pm 0.2
All Adults	91,400	100.0%	2.2 % \pm 0.2%

Source: US Census Bureau, 2009 American Community Survey

Note: Includes only adults living in households. 95% C.I. shown.

“Does this person have difficulty dressing or bathing?”

Disabilities Related to Independent Living

It is noteworthy that almost two-thirds of all those who have a disability in any of the ways assessed by the ACS nonetheless do not have difficulty living independently (i.e. are able to do errands alone), despite any physical, mental, or emotional conditions that cause difficulties. The other third are an estimated 181,200 adults living in households who are not able to do errands alone, including relatively more women and 12% of older adults. Independent living is an issue for proportionately more African-Americans than Whites (7.1% v. 4.1% of adults). The rates of persons with this disability are higher in lower-income households.

Table 8. Demographics of household adults with a difficulty related to independent living, Wisconsin, 2009

Demographic Group	Number of Adults	Percent of Adults with Difficulty Living Independently	Percent of Demographic Group
Gender			
Male	70,100	38.7%	3.4% ± 0.3%
Female	111,100	61.3	5.2 ± 0.4
Age			
18-64	93,400	51.5	2.7 ± 0.2
65-plus	87,800	48.5	12.2 ± 0.9
Ethnicity			
Hispanic	5,300	2.9	3.0 ± 1.2
Non-Hispanic	175,900	97.1	4.4 ± 0.3
Race			
White	160,400	88.6	4.1 ± 0.2
African-American/ Black	15,200	8.4	7.1 ± 1.7
American Indian	3,000	1.7	7.5 ± 3.9
Asian	2,800	1.5	3.4 ± 2.1
Percent of Poverty			
<100%	39,400	21.7	8.5 ± 1.1
100-199%	48,000	26.5	7.4 ± 0.8
200-299%	33,300	18.4	4.5 ± 0.6
300-399%	24,900	13.7	3.7 ± 0.5
400-Plus	35,600	19.7	2.1 ± 0.3
All Adults	181,200	100.0%	4.3 % ± 0.2%

Source: US Census Bureau, 2009 American Community Survey

Note: Includes only adults living in households. 95% C.I. shown.

“Because of a physical, mental, or emotional condition, does this person have difficulty doing errands alone such as visiting a doctor’s office or shopping?”

The ACS estimates that 56,700 Wisconsin adults who have difficulty doing errands independently are nonetheless living alone. They represent 31% of all adults in households with this disability. Another 12,700 are single parents.

Table 9. Household composition of adults with a difficulty related to independent living, Wisconsin, 2009

Household Composition	Number of Adults	Percent of Adults with Difficulty Living Independently	Percent of Household Type
Minor Children In Household	29,200	16.1%	
Married Couple	16,500	9.1	1.2% ± 0.3%
Male, No Wife Present	3,000	1.7	1.4 ± 1.3
Female, No Husband Present	9,700	5.3	2.7 ± 1.0
No Children In Household	152,000	83.9%	
Married Couple	64,900	35.8	4.3 ± 0.4
Male, No Wife Present	6,300	3.5	7.2 ± 2.1
Female, No Husband Present	17,200	9.5	10.1 ± 1.9
Male, Living Alone	15,800	8.7	5.5 ± 1.1
Male, Not Living Alone	3,800	2.1	2.0 ± 1.0
Female, Living Alone	40,900	22.6	11.9 ± 1.4
Female, Not Living Alone	3,100	1.7	1.9 ± 0.8
All Adults	181,200	100.0%	4.3% ± 0.2%

Source: US Census Bureau, 2009 American Community Survey

Note: Includes only adults living in households. 95% C.I. shown.

“Because of a physical, mental, or emotional condition, does this person have difficulty doing errands alone such as visiting a doctor’s office or shopping?”

Health Insurance Coverage Among Adults with Disabilities

The ACS asks whether each person is covered by any of eight specific sources of health insurance or health coverage plans. The survey estimates that 14% of the 299,600 Wisconsin household adults age 18-64 with some disability have no health insurance. These 41,600 adults represent about 9% of all uninsured adults. By comparison, among all 3,481,500 Wisconsin household adults age 18-64, almost 13% are uninsured. This is not significantly less than the rate among those with a disability.

Table 10 shows respondents’ insurance status by type of disability for this population. The uninsured rates are not significantly different among those with different kinds of disabilities.

**Table 10. Number and percent uninsured by disability type
Adults 18-64 living in households, Wisconsin, 2009**

Disability Measure	Number Uninsured	Percent Uninsured
Hearing	9,600	14.2% ± 3.6%
Seeing	6,500	15.6 ± 5.0
Cognition	15,300	13.0 ± 2.6
Ambulatory	19,400	13.7 ± 2.8
Self-care	5,500	11.2 ± 5.1
Independent living	8,600	9.2 ± 2.5
All disabled adults	41,600	13.9 ± 1.8
All Adults	438,500	12.6% ± 0.5%

Source: US Census Bureau, 2009 American Community Survey

Note: Includes only adults age 18-64 living in households; some have more than one disability. 95% C.I. shown.

Summary

The 2009 American Community Survey (ACS) asked a large sample of Wisconsin residents about difficulties with hearing, vision, cognition (concentrating, remembering, or making decisions), walking or climbing stairs, self-care (dressing and bathing independently), and living independently (doing errands alone) because of a physical, mental, or emotional condition. We described the demographics of those reporting any one of these disabilities.

The ACS data estimate there are 527,300 adults with disabilities living in Wisconsin households, representing 12.5 % of Wisconsin's adult household population that year. Difficulty walking or climbing stairs affects almost 7% of these adults and 52% of all those with a disability. Hearing difficulties, independent living limitations, and cognitive difficulties each affect about 4% of all adults.

In absolute numbers, more than half of the adults with a disability were female and most were under age 65 (57%). Proportionately, however, almost a third of those 65 and older had one or more disabilities. Native Americans and African-Americans were more likely to report some disability. Persons in households in lower income strata had notably higher rates of disabilities.

Hearing. The estimated 167,700 Wisconsin adults with a reported hearing difficulty are disproportionately male (59%). Almost 14% of those aged 65 and older are deaf or have serious difficulty hearing. Non-Hispanic Whites are most likely to report difficulty hearing.

Vision. Females are disproportionately represented among the estimated 78,700 household adults reported to be blind or having serious difficulty seeing, even wearing glasses. African-Americans are notably more likely than Whites to have a vision-related disability. Vision difficulties are more common among lower income households.

Cognition. The ACS estimates that 160,200 household adults have serious difficulty concentrating, remembering, or making decisions because of a physical, mental, or emotional condition. Although 6% of older adults have serious cognitive difficulties, the largest group with this disability is the estimated 118,300 persons who are 18-64. Cognitive difficulties are

reported at disproportionately higher rates among African-Americans and American Indians. The rate declines steadily as household income increases.

Ambulatory. Serious difficulty walking or climbing stairs is a problem for an estimated 276,300 adults living in households. Ambulatory disability is the largest category measured by the ACS, affecting 7% of adults and half of all those with any disability. Serious mobility impairment affects women significantly more than men and it affects almost one in five persons age 65 and older (19%). The estimated rate of ambulatory disability among African-Americans is significantly higher than among Whites (11% v. 6%). The rate declines steadily as household income increases.

Self-Care. An estimated 91,400 adults living in households have difficulty dressing or bathing independently. Among older adults in households, 6% have this challenge. Self-care is an issue for proportionately more African-Americans than for Whites (4.6% v. 2.0%). Again, the rate declines steadily as household income increases.

Living Independently. Almost two-thirds of all those who have a disability in any of the ways assessed by the ACS are nonetheless able to do errands alone, despite any physical, mental, or emotional conditions that cause difficulties. The other third are an estimated 181,200 adults living in households who are not able to do errands alone, including a disproportionate number of women and 12% of older adults. Independent living is an issue for proportionately more African-Americans than Whites (7.1% v. 4.1% of adults). The rates of persons with this disability are higher in lower-income households. Examining household composition, the ACS estimates that 72,500 Wisconsin adults who have difficulty doing errands independently (31% of those with this disability) are nonetheless living alone.

Health insurance. The ACS estimates that 14% of the 299,600 Wisconsin household adults age 18-64 with some disability have no health care insurance, which is about the same rate as those without a disability. These 41,600 adults represent about 9% of all uninsured adults.

Overall, the 2009 ACS estimates that one in eight Wisconsin adults living in households (527,300) is challenged by one or more of the six major functional difficulties assessed. While the rate of disabilities increases with age, numbers of adults with disabilities are substantial among those under 65. Persons with disabilities are disproportionately in households with lower incomes. It is noteworthy that fewer than one in five persons with a disability have difficulty dressing or bathing independently (17% \pm 8%) and that two-thirds are able to live independently (doing errands alone: 66% \pm 6%), despite physical, mental, or emotional conditions that cause difficulties.

Health and Disability in Wisconsin – Estimates from the Behavioral Risk Factor Survey

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Overview

Do the individuals with and without disabilities in Wisconsin have differences in their access to health care in general or to preventive care and cancer screening? Do they differ in their rates of chronic disease risk factors or their risk reduction behaviors?

We estimated differences by disability status in adults' access to health care and in health risks overall and in broad age groups using the 2007-2010 Behavioral Risk Factor Surveys (BRFS) of Wisconsin adults living in households. Disabled status is identified here using the standard BRFS question "Are you limited in any way in any activities because of physical, mental or emotional problems?"

The 2010 BRFS survey (N=4,727) estimates that 18% of the adult Wisconsin household population reports a disability to some degree, using this operational definition. Sixteen percent of younger adults age 18-64 and 28% of older adults age 65 plus have some degree of disability.

We first examined the levels of general access to healthcare by people with and without disabilities.

- Individuals with disabilities are essentially as likely to report having health insurance coverage as those without disabilities (91% v. 89%).
- Among those 18-64, individuals with disabilities are significantly more likely to be enrolled in Medicaid or BadgerCare than those without disabilities (26% v. 11%), not surprising since disability may be a criterion for eligibility.
- Adults with disabilities overall are more likely to report having a personal doctor (91% v. 85%).
- Despite high rates of insurance coverage and having a personal physician, the adults with disabilities were significantly more likely to report foregoing some care in the previous year due to cost (15% v. 9%).

We next explored access to preventive care and to cancer screening.

- Individuals with disabilities are not significantly more or less likely to report having a relatively recent physical exam, their cholesterol levels tested, a recent pap smear or a timely mammogram, or a colonoscopy or sigmoidoscopy.
- Adults with disabilities are significantly more likely to have had a recent flu vaccine (51% v. 39%).
- Younger individuals with disabilities are significantly less likely to have had a professional teeth cleaning within the past 12 months (64% v. 74%).

- Men with disabilities are significantly more likely to have had a recent prostate-specific antigen (PSA) test.

Finally, the BRFs allowed us to estimate differences by disability status in rates of major health risk factors and of health protective behaviors.

- Alcohol use: Individuals with disabilities report heavy drinking at about the same rate as those without (6-7%) and are less likely to report having binge drinking episodes (15% v. 23%).
- Smoking: Adults under age 65 with disabilities report significantly higher rates of smoking (33% v. 20%).
- Obesity: A significantly higher percentage of adults with disabilities than without are obese (36% v. 25%) and the differences are significant in both older and younger age groups. For some of those with disabilities, their defining limiting physical problem may well be their obesity itself. Conversely, the estimated 25% of adults *without* disabilities who are obese did not answer affirmatively to the defining question of whether they are limited in any activities because of physical, mental or emotional problems.
- High cholesterol: A significantly higher percentage of adults with disabilities have been told they have high cholesterol (46% v. 34%).
- Hypertension: A strikingly higher percentage of adults with disabilities have been told they have high blood pressure (44% v. 24%). This difference again is significant in both age groups. Rates of reported hypertension rise from about a third of those 18-64 with a disability to two-thirds of the older adults with disabilities. Younger individuals with disabilities and a hypertension diagnosis are significantly more likely to be using medication than their counterparts without a disability (77% v. 67%).
- Exercise: Individuals with disabilities are significantly less likely to report any physical activity or exercise in the past 30 days (67% v. 79%). This may seem an obvious consequence of disability. However, many conditions do not prohibit exercise of some sort and the survey has a very minimal definition of exercise: “Any physical activity or exercise other than regular job in the past 30 days.”
- Seatbelt use: Individuals with disabilities are not more or less likely to report always using seatbelts.

Methods

The Wisconsin Behavioral Risk Factor Survey (BRFS) is a continuously-running telephone survey of state residents ages 18 and older. It is administered in conjunction with the U.S. Centers for Disease Control and Prevention (CDC) as part of its Behavioral Risk Factor Surveillance System. The interviews are conducted by the University of Wisconsin Survey Center.

A sampling contractor provides randomly selected sample telephone numbers, based on sampling criteria defined by staff in the Office of Health Informatics. BRFs interviewers randomly select one adult per sampled household to complete the survey.

The BRFs data used here are from landline phone interviews only (landline and cell phone data will be merged in the near future when the protocol for combined weighting is finalized). CDC

calculates post-survey weights for Wisconsin’s BRFs landline results and provides weighting variables for data analyses. Weighted BRFs results are representative of Wisconsin’s adult population residing in households with landline telephones.

Some survey items are rotated in and out on a biannual basis. For each measure, we used the most recent survey year in which the question was asked. We combined two years of survey data for subpopulations when a single year’s sample was too small for reasonable estimates. Statistically significant differences are indicated where 95% confidence intervals for estimated percentages of persons with and without disabilities do not overlap.

The Population of People with Disabilities

We defined disabled status using the standard BRFs question "Are you limited in any way in any activities because of physical, mental or emotional problems?"

The 2010 BRFs survey estimates that 18% of the adult Wisconsin household population reports a disability to some degree, using this operational definition. Sixteen percent of younger adults age 18-64 and 28% of older adults age 65 plus have some degree of disability.

Table 1. Adults Reporting Some Limitation Indicating a Disability Wisconsin, 2010

Adults in Households	Percent Reporting Some Limitation	Sample N
18-64	16 ± 2	3,303
65+	28 ± 3	1,424
All	18 ± 1	4,727

Source: Office of Health Informatics, 2010 Behavioral Risk Factor Survey. N shows the unweighted sample size. The percentages are based on weighted frequencies. The 95% C.I. is shown.

Access to Healthcare by Individuals with Disabilities

The 2010 BRFs includes four conventional measures of general access to health care. Tables 2A and 2B compare individuals with and without disabilities. Note that statistically significant differences can be identified by 95% confidence intervals that do not overlap.

1. *Having health care insurance:* “Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare?”

Individuals with disabilities are essentially as likely to report having coverage as those without disabilities (91% v. 89%). This is also true among those 18-64 (88% v. 87%).

2. *Enrollment in Medicaid or BadgerCare:* “Do you have health care coverage from Medicaid or BadgerCare?”

Less than one in four adults with disabilities report enrollment in Medicaid or BadgerCare (23%). Among those 18-64, the individuals with disabilities are significantly more likely to be enrolled than those without disabilities (26% v. 11%), not surprising since disabilities may be an eligibility criterion.

3. *Having a personal doctor:* “Do you have one person you think of as your personal doctor or health care provider?”

Adults with disabilities overall are more likely to report having a personal doctor (91% v. 85%).

4. *Not obtaining health care due to cost:* “Was there a time in the past 12 months when you needed to see a doctor but could not because of the cost?”

Despite high rates of insurance coverage and having a personal physician, the adults with disabilities were significantly more likely to report foregoing some care in the previous year due to cost (15% v. 9%). The gap was somewhat wider for the younger persons (19% v. 10%) than for those age 65 and over, although the difference for the older adults is striking (7% v. 2%), considering that 99% report having insurance coverage. The differences are significant for both age groups.

**Table 2A. General access to healthcare by disability status
Wisconsin, 2010**

Measures of General Access to Care	% of Persons with a Disability	% of Persons without a Disability
Has insurance	91 ± 3	89 ± 2
Enrolled Medicaid/ BadgerCare	23 ± 4 *	12 ± 2
Has personal doctor	91 ± 3 *	85 ± 2
Did not get care due to cost	15 ± 3 *	9 ± 2

Source: Office of Health Informatics, 2010 Behavioral Risk Factor Survey

* Statistically significant difference between people with and without a disability (p<.05).

**Table 2B. General access to healthcare by disability status and age
Wisconsin, 2010**

Measures of General Access to Care	Age 18-64		Age 65 and higher	
	% of Persons with a Disability	% of Persons without a Disability	% of Persons with a Disability	% of Persons without a Disability
Has insurance	88 ± 4	87 ± 2	99 ± 1	99 ± 1
Enrolled Medicaid/ BadgerCare	26 ± 5 *	11 ± 2	17 ± 4	15 ± 3
Has personal doctor	88 ± 4	83 ± 3	97 ± 2	95 ± 2
Did not get care due to cost	19 ± 4 *	10 ± 2	7 ± 3 *	2 ± 1

Source: Office of Health Informatics, 2010 Behavioral Risk Factor Survey

* Statistically significant difference between people with and without a disability ($p < .05$).

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Access to Preventive Care and Cancer Screening

The BRFS includes measures of access to preventive health care and cancer screening procedures. Tables 3A and 3B compare adults with and without disabilities.

1. *Recent routine checkup (within past two years):* “About how long has it been since you last visited a doctor for a routine checkup?” (2010 BRFS)

Individuals with disabilities are slightly more likely to report having a relatively recent physical exam, although the difference is not statistically significant.

2. *Cholesterol levels tested:* “Have you ever had your blood cholesterol levels tested?” (2007 and 2009 BRFS)

Adults with disabilities are about as likely as others to have had their cholesterol levels tested.

3. *Seasonal flu vaccine:* “Have you had a flu shot or flu mist in the past 12 months?” (2008 and 2010 BRFS)

Adults with disabilities are significantly more likely to have had a recent flu vaccine (51% v. 39%). The difference in rates is entirely among the adults under 65 (43% v. 33%).

4. *Dental care within last 12 months:* “About how long has it been since you last had professional teeth cleaning?” (2008 and 2010 BRFS)

Younger individuals with disabilities are significantly less likely to have had a professional teeth cleaning within the past 12 months (64% v. 74%). The difference among older adults is similar but did not reach statistical significance.

5. *Pap smear within past 3 years:* “About how long has it been since you last had a pap smear?” (Asked of women age 18+ with an intact cervix. 2008 and 2010 BRFS)

Women with disabilities are about as likely as others to have had a recent pap smear.

6. *Mammogram within past 2 years:* “About how long has it been since you last had a mammogram?” (women age 50+; 2008 and 2010 BRFS)

Women with disabilities are about as likely as others to have had a timely mammogram

7. *Prostate-specific antigen (PSA) test within past 2 years:* “About how long has it been since you last had a PSA test?” (men age 40+; 2008 and 2010 BRFS)

Men with disabilities are significantly more likely to have had a recent PSA test.

8. *Ever had a colonoscopy or sigmoidoscopy*: “Have you ever had a colonoscopy or sigmoidoscopy?” (age 50+; 2008 and 2010 BRFs)

Adults with disabilities overall have these procedures at about the same rate as others.

**Table 3A. Access to preventive care and cancer screening, by disability status
Wisconsin**

Preventive Care and Cancer Screening	% of Persons with a Disability	% of Persons without a Disability
Recent routine checkup	86 ± 3	81 ± 2
Cholesterol tested	85 ± 6	80 ± 3
Flu vaccine	51 ± 5 *	39 ± 3
Dental care	68 ± 5	75 ± 2
Pap smear	81 ± 5	86 ± 3
Mammogram (age 50+)	76 ± 3	80 ± 2
PSA test (age 40+)	62 ± 5 *	48 ± 3
Colonoscopy or sigmoidoscopy (age 50+)	70 ± 3	67 ± 2

Source: Office of Health Informatics, 2007 - 2010 Behavioral Risk Factor Surveys

Note: Estimates based on most recent one or two years in which question was asked.

* Statistically significant difference between people with and without a disability (p<.05).

**Table 3B. Access to preventive care and cancer screening,
by disability status and age, Wisconsin**

Preventive Care and Cancer Screening	Age 18-64		Age 65 and higher	
	% of Persons with a Disability	% of Persons without a Disability	% of Persons with a Disability	% of Persons without a Disability
Recent routine checkup	82 ± 4	79 ± 2	96 ± 2	92 ± 2
Cholesterol tested	82% ± 4	77% ± 2	96% ± 3	96% ± 1
Flu vaccine	43 ± 4 *	33 ± 2	72 ± 4	71 ± 3
Dental care	64 ± 4 *	74 ± 2	71 ± 5	79 ± 3
Pap smear	86 ± 4	87 ± 2	59 ± 7	65 ± 5

Source: Office of Health Informatics, 2007 - 2010 Behavioral Risk Factor Surveys

Note: Estimates based on most recent one or two years in which question was asked.

* Statistically significant difference between people with and without a disability (p<.05).

Risk Factors for Chronic Diseases and Risk Reduction Behaviors

The BRFs began decades ago as a tool to measure and track chronic disease risk factors. It has standard measures of risk factors and of risk reduction behaviors. Tables 4A and 4B compare persons with and without disabilities.

1. *Smoking*: Has smoked at least 100 cigarettes in lifetime and currently smokes on some or all days. (2010 BRFs)

Adults with disabilities who are under age 65 report significantly higher rates of smoking (33% v. 20%).

2. *Heavy Drinking*: Men reporting more than 2 drinks per day average over the past 30 days. For women, the measure is more than 1 drink per day. (2010 BRFSS)

Individuals with disabilities report heavy drinking at about the same rate as those without (6-7%).

3. *Binge Drinking*: Men reporting 5 or more drinks on one occasion in the past 30 days. For women, the measure is 4 or more drinks per day. (2010 BRFSS)

Adults with disabilities overall are less likely to report having binge drinking episodes (15% v. 23%).

4. *Overweight*: A body mass index between 25.0 and 29.9, calculated from self-reported height and weight. (2010 BRFSS)

Adults with disabilities are not more or less likely to be overweight than those without. The older individuals with disabilities are somewhat less likely to be overweight (38% v. 45%), but not to a statistically significant degree.

5. *Obese*: A body mass index 30.0 or higher based on self-reported height and weight. (2010 BRFSS)

A significantly higher percentage of adults with disabilities are obese (36% v. 25%). This is true both among adults age 18-64 (37% v. 26%) and among those 65 and older (33% v. 20%). For some of those with disabilities, their defining limiting physical problem may well be their obesity itself. Conversely, the estimated 25% of adults *without* disabilities who are obese did not answer affirmatively to the defining question of whether they are limited in any activities because of physical, mental or emotional problems.

6. *High cholesterol*: Reports having been diagnosed with high cholesterol. (2007 and 2009 BRFSS)

A significantly higher percentage of adults with disabilities have been told they have high cholesterol (46% v. 34%). This difference is consistent and significant in both age groups.

7. *Hypertension/high blood pressure*: Reports having been diagnosed with high blood pressure. (2007 and 2009 BRFSS)

A strikingly higher percentage of adults with disabilities have been told they have high blood pressure (44% v. 24%). This difference again is significant in both age groups. Rates of reported hypertension rise from about a third of those 18-64 with a disability to two-thirds of the older adults with disabilities.

8. *BP medication*: Taking medication for hypertension, if diagnosed. (2007 and 2009 BRFSS)

Individuals with disabilities who have a hypertension diagnosis are somewhat more likely to report taking medication to control it. Younger individuals with disabilities and a hypertension diagnosis are significantly more likely to be using medication than their counterparts without a disability (77% v. 67%).

9. *Exercise*: Any physical activity or exercise other than regular job in the past 30 days. (2010 BRFSS)

Individuals with disabilities are significantly less likely to report any physical activity or exercise in the past 30 days (67% v. 79%). The difference also is significant in both age groups.

10. *Seatbelt use*: Reports “always” using a seatbelt. (2010 BRFSS)

Individuals with disabilities are not notably more or less likely to report always using seatbelts.

Table 4A. Risk factors for chronic diseases and risk reduction behaviors, by disability status Wisconsin, 2009 or 2010

Preventive Care and Cancer Screening	% of Persons with a Disability	% of Persons without a Disability
Smoking	25 ± 4 *	18 ± 2
Heavy drinking	7 ± 3	6 ± 1
Binge drinking	15 ± 4 *	23 ± 2
Overweight	34 ± 4	37 ± 3
Obesity	36 ± 4 *	25 ± 2
High cholesterol	46 ± 5 *	34 ± 3
Diagnosed high BP	44 ± 5 *	24 ± 2
Taking BP medication (if diagnosed)	84 ± 5	76 ± 5
Exercise	67 ± 4 *	79 ± 2
Seatbelt use always	74 ± 4	76 ± 2

Source: Office of Health Informatics, 2009 and 2010 Behavioral Risk Factor Surveillance Survey

Note: Estimates based on most recent one or two years in which question was asked.

* Statistically significant difference between people with and without a disability (p<.05).

Table 4B. Risk factors for chronic diseases and risk reduction behaviors, by disability status and age Wisconsin, 2007+2009 or 2010

Preventive Care and Cancer Screening	Age 18-64		Age 65 and higher	
	% of Persons with a Disability	% of Persons without a Disability	% of Persons with a Disability	% of Persons without a Disability
Smoking	33 ± 6 *	20 ± 3	8 ± 3	6 ± 2
Heavy drinking	9 ± 4	7 ± 1	3 ± 2	3 ± 1
Binge drinking	20 ± 5	26 ± 3	4 ± 2	6 ± 2
Overweight	32 ± 5	36 ± 3	38 ± 6	45 ± 4
Obesity	37 ± 5 *	26 ± 3	33 ± 6 *	20 ± 3
High cholesterol	42 ± 4 *	30 ± 2	56 ± 5 *	47 ± 3
Diagnosed high BP	34 ± 4 *	18 ± 1	67 ± 5 *	54 ± 3
Taking BP medication (if diagnosed)	77 ± 5 *	67 ± 4	95 ± 2	93 ± 2
Exercise	70 ± 5 *	80 ± 3	60 ± 6 *	76 ± 3
Seatbelt use always	72 ± 5	75 ± 3	80 ± 5	84 ± 3

Source: Office of Health Informatics, 2007, 2009, and 2010 Behavioral Risk Factor Surveillance Survey

Note: Estimates based on most recent one or two years in which question was asked.

* Statistically significant difference between people with and without a disability (p<.05).

Summary

We estimated differences by disability status in adults' access to health care and in health risks overall and in broad age groups using the 2007-2010 Behavioral Risk Factor Surveys (BRFS) of Wisconsin adults living in households. Disabled status was identified here using the standard BRFS question "Are you limited in any way in any activities because of physical, mental or emotional problems?"

The 2010 BRFS survey estimates that 18% of the adult Wisconsin household population reports a disability to some degree. Sixteen percent of younger adults age 18-64 and 28% of older adults age 65 plus report some degree of disability.

General access to health care. Individuals with disabilities are as likely to have health insurance coverage as those without disabilities and are more likely to report having a personal doctor. Nonetheless, adults with disabilities were significantly more likely to report foregoing some care in the previous year due to cost.

Access to preventive care and to cancer screening. Individuals with disabilities are as likely as those without to report having a relatively recent physical exam, a cholesterol level test, a recent pap smear, a timely mammogram, or a colonoscopy or sigmoidoscopy. Adults with disabilities are significantly more likely to have had a recent flu vaccine and men with disabilities are significantly more likely to have had a recent PSA test. However, younger individuals with disabilities are significantly less likely to have had a professional teeth cleaning within the past 12 months.

Health risk factors and of health protective behaviors. Individuals with disabilities have notably higher rates of almost all measured major health risk factors: smoking (if age 18-64), obesity, high cholesterol, and hypertension. The exception is their use of alcohol: they report heavy drinking at about the same rate as those without disabilities and are less likely to engage in binge drinking. Regarding behaviors that promote health, they are less likely to exercise, equally likely to use seatbelts, and, if a younger person with high blood pressure, more likely to report using medication to control it.

The overall picture is that adults with disabilities living in Wisconsin households have generally equal access to health care (with the important exception of some cost-related deterrents) and generally equal or better access to cancer screening and preventive care (with the notable exception of dental care). However, they have significantly higher rates of most behavioral health risk factors than those without a self-identified disability.

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Health and Disability in Wisconsin – Estimates from the Family Health Survey

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Overview

This data brief includes estimates from the Family Health Survey of the population of adults living in Wisconsin households. The percent of individuals with and without disability by demographic or health measure are presented overall and by age; 95% confidence intervals (\pm) are included next to percentage estimates and statistically significant differences between groups (as determined by non-overlapping 95% confidence intervals) are indicated with an asterisk.

Disability was defined as an answer of “very difficult” or “unable to do this at all” to any of the questions one through five below, or an answer of “yes” to any of questions six through nine. All questions are asked of/about each adult member in the household. Questions one through five ask about difficulties that persons may have doing certain activities because of a health problem, and “health problem” means any physical, mental or emotional problem or illness (not including pregnancy).

1. “First, by yourself, and without any special equipment, how difficult is it for you to walk a quarter of a mile or about 3 city blocks? Would you say: not difficult, somewhat difficult, very difficult, or are you unable to do this at all?”
2. “By yourself, and without any special equipment, how difficult is it for you to walk up 10 steps without resting? Would you say: not difficult, somewhat difficult, very difficult, or are you unable to do this at all?”
3. “By yourself, and without any special equipment, how difficult is it for you to stand or be on your/her/his feet for about 2 hours? Would you say: not difficult, somewhat difficult, very difficult, or are you/ is s/he unable to do this at all?”
4. “By yourself, and without any special equipment, how difficult is it for you to stoop, bend or kneel? Would you say: not difficult, somewhat difficult, very difficult, or are you unable to do this at all?”
5. “By yourself, and without using any special equipment, how difficult is it for you to reach up over your/her/his head? Would you say: not difficult, somewhat difficult, very difficult, or are you/ is s/he unable to do this at all?”
6. “Are you limited in any way because of difficulties due to periods of memory loss or periods of confusion?”

7. “Are you limited in any way because of an emotional or mental health condition?”
8. “Does your physical or mental health keep you from working at a job, doing work around the house, or going to school?”
9. “Do you have trouble eating, dressing, bathing, or using the toilet because of a physical or mental health problem?”

Table 1. Adults with a disability, Wisconsin 2009

	% with a Disability	Weighted Population Size Estimate	Sample Size
All adults	19 (±1)	4,229,000	4691
18-64	14 (±1)	3,493,000	3686
65+	44 (±4)	736,000	1005

Source: Office of Health Informatics, 2009 Wisconsin Family Health Survey

- The overall prevalence of disability among Wisconsin adults is 19%. Among adults ages 18-64 the prevalence is 14% and among adults ages 65 and older it is 44%.

Demographic information

Table 2. Demographic information by disability status and age, Wisconsin 2009

Measure	Age 18-64			Age 65+		
	% of people with a disability	% of people without a disability		% of people with a disability	% of people without a disability	
Below 200% of the poverty level	55 (±5)	19 (±2)	*	59 (±6)	33 (±5)	*
Any employment	37 (±5)	79 (±2)	*	N/A	N/A	

Source: Office of Health Informatics, 2009 Wisconsin Family Health Survey

* Statistically significant difference between people with and without a disability

- Adults with a disability ages 18-64 are twice as likely as individuals without a disability to live below 200% of the poverty level (55% and 19%, respectively). A similar disparity exists among adults ages 65 and older.
- Adults with a disability ages 18-64 are less than half as likely as individuals without a disability to have some type of employment (37% and 79%, respectively).

Disability and perceived health status

The Family Health Survey includes the following question on how individual health is perceived:

Overall health: “In general, would you say your/your household member's health is excellent or very good, good, fair or poor?”

Table 3A. Perceived health by disability status, Wisconsin 2009

Measure	% of adults with a disability	% of adults without a disability	
Excellent, very good, or good overall health	45 (±4)	94 (±1)	*

Source: Office of Health Informatics, 2009 Wisconsin Family Health Survey
 * Statistically significant difference between people with and without a disability

Table 3B. Perceived health, by disability status and age, Wisconsin 2009

Measure	Age 18-64			Age 65+		
	% of people with a disability	% of people without a disability		% of people with a disability	% of people without a disability	
Excellent, very good, or good overall health	42 (±5)	95 (±1)	*	50 (±6)	92 (±2)	*

Source: Office of Health Informatics, 2009 Wisconsin Family Health Survey
 * Statistically significant difference between people with and without a disability

- Adults without a disability are about twice as likely as adults with a disability to report excellent or very good overall health (94% and 45%, respectively). A similar disparity exists in both age groups.

Disability and social connectedness

The Family Health Survey includes the following question on how the respondent perceives their community:

Social connectedness: “Overall, how would you rate your community as a place to live - excellent, good, fair, or poor?” (household-level response)

Table 4A. Perceived social connectedness by disability status, Wisconsin 2009

Measure	% of adults with a disability	% of adults without a disability	
Excellent or good community (household-level)	82 (±3)	90 (±1)	*

Source: Office of Health Informatics, 2009 Wisconsin Family Health Survey
 * Statistically significant difference between people with and without a disability

Table 4B. Perceived social connectedness, by disability status and age, Wisconsin 2009

Measure	Age 18-64		*	Age 65+		*
	% of people with a disability	% of people without a disability		% of people with a disability	% of people without a disability	
Excellent or good community (household-level)	79 (± 4)	89 (± 1)	*	87 (± 4)	95 (± 2)	*

Source: Office of Health Informatics, 2009 Wisconsin Family Health Survey
 * Statistically significant difference between people with and without a disability

- Adults with a disability were less likely to live in a community perceived as an excellent or good place to live than adults without a disability (82% and 90%, respectively). A similar disparity exists in both age groups. This may reflect the relationship between household income and disability status described above.

Disability and healthcare access/utilization

The Family Health Survey includes the following questions on healthcare access and utilization:

Has usual place of care: “Is there one particular clinic, health center, doctor's office or other place that you yourself usually go to/your household member usually goes to if you are/he/she is sick or need/needs advice about your/his/her health?”

Did not get needed care: “In the past 12 months, who in your household needed medical care or surgery, but did not get it?”

Had a check-up within the past year: “About how long has it been since you/your household member visited a doctor for a routine physical exam?”

Treated in emergency room (ER) in past year: “Have you/has anyone in your household been treated at a hospital emergency room during the past 12 month?”

Had dental care within past year: “How long ago did you/your household member last visit the dentist or other dental care provider?”

Reason for dental care: “What was the reason you/your household member went to the dentist or other dental care provider at that time? Was it for a cleaning, checkup, or examination, treatment of a condition that the dentist discovered at an earlier visit, or something was wrong, bothering or hurting you/him/her?”

Table 5A. Healthcare access and utilization by disability status, Wisconsin 2009

Measure	% of adults with a disability	% of adults without a disability	
Has usual place of care	93 (± 2)	89 (± 2)	
Did not get needed care	9 (± 3)	2 (± 1)	*
Check-up within the past year	73 (± 4)	63 (± 2)	*
Treated in ER in past year	34 (± 4)	12 (± 1)	*
Had dental care within past year	55 (± 4)	73 (± 2)	*
Reason for dental care – Cleaning, checkup, exam	47 (± 4)	76 (± 2)	*
Reason for dental care – Something wrong or hurting	29 (± 4)	12 (± 1)	*

Source: Office of Health Informatics, 2009 Wisconsin Family Health Survey
 * Statistically significant difference between people with and without a disability

Table 5B. Healthcare access and utilization by disability status and age, Wisconsin 2009

Measure	Age 18-64		Age 65+			
	% of people with a disability	% of people without a disability	% of people with a disability	% of people without a disability		
Usual place of care	91 (± 3)	88 (± 2)		96 (± 2)	98 (± 1)	
Did not get needed care	13 (± 4)	2 (± 1)	*	2 (± 2)	**	
Check-up within the past year	68 (± 6)	60 (± 2)		82 (± 5)	84 (± 4)	
Treated in ER in past year	37 (± 6)	12 (± 1)	*	30 (± 5)	12 (± 3)	*
Dental care within past year	57 (± 6)	73 (± 2)	*	52 (± 6)	73 (± 4)	*
Reason for dental care – Cleaning, checkup, exam	50 (± 6)	77 (± 2)	*	44 (± 6)	69 (± 4)	*
Reason for dental care – Something wrong or hurting	31 (± 6)	12 (± 1)	*	26 (± 5)	13 (± 3)	*

Source: Office of Health Informatics, 2009 Wisconsin Family Health Survey
 * Statistically significant difference between people with and without a disability
 ** Fewer than 5 responses in numerator

- Among all measures of healthcare access and utilization examined, a statistically significant difference was found between adults with and without disability, with the exception of having a usual place of medical care. Regardless of disability, older adults were more likely to have had a check-up within the past year than younger adults.
- Adults with a disability were more likely to not get needed care (9% and 2%, respectively) and to have been treated in the emergency room within the past year (34% and 12%, respectively) than adults without a disability.
- Adults with a disability were less likely to have received dental care within the past year (53% and 73%, respectively) and to visit the dentist for a cleaning, check-up, or exam (47% and 76%, respectively). They were more likely, however, to visit the dentist when

something was wrong or causing pain (29% and 12%, respectively), as compared to adults without a disability. A similar disparity exists in both age groups.

Disability and health insurance

The Family Health Survey includes the following questions on health insurance:

Continuous health insurance coverage over past year: (constructed variable)

Trouble paying medical bills: “During the past 12 months, has anyone in your household had any problems paying medical bills?”

Table 6A. Health insurance by disability status, Wisconsin 2009

Measure	% of adults with a disability	% of adults without a disability	
Continuous coverage over past year	87 (±3)	86 (±2)	
Trouble paying medical bills	32 (±4)	18 (±2)	*

Source: Office of Health Informatics, 2009 Wisconsin Family Health Survey
 * Statistically significant difference between people with and without a disability

Table 6B. Health insurance by disability status and age, Wisconsin 2009

Measure	Age 18-64			Age 65+		
	% of people with a disability	% of people without a disability		% of people with a disability	% of people without a disability	
Continuous coverage over past year	81 (±5)	85 (±2)		98 (±2)	99 (±1)	
Trouble paying medical bills	41 (±5)	19 (±2)	*	18 (±5)	7 (±2)	*

Source: Office of Health Informatics, 2009 Wisconsin Family Health Survey
 * Statistically significant difference between people with and without a disability

- A similar proportion of adults with and without a disability had continuous health insurance coverage over the past year (~86%). However, fewer adults ages 18-64 had continuous coverage than adults ages 65 and older, regardless of disability.
- Adults with a disability ages 18-64 are twice as likely as individuals without a disability to have trouble paying medical bills (41% and 19%, respectively). Although the disparity persists among adults ages 65 and older, the proportion having trouble paying medical bills is smaller – about half as many adults ages 65 and older have trouble paying medical bills than adults ages 18-64.

Methods notes

The Wisconsin Family Health Survey (FHS) collects information about health insurance coverage, health status, health problems and use of health care services among Wisconsin residents. This survey began in 1989 and has been conducted annually since then. This report is based on responses collected in 2009. The survey results presented in this analysis are representative of Wisconsin household residents, who constitute approximately 97 percent of all persons residing in the state. (Non-household residents, including persons living in nursing homes, dormitories, prisons and other institutions, constitute the remaining 3 percent not represented by this survey.) Trained interviewers telephone a random sample of households and ask to speak with the household member most knowledgeable about the health of all household members. This respondent provides information for all people living in the household at the time of the interview. In 2009, the FHS interviewed respondents in 2,461 households; these households included 6,066 people. Background characteristics, such as age, race, sex, poverty status, employment status and education, are also obtained for everyone in the household.

The tables in this report show estimated percentages of Wisconsin residents based on survey responses. These estimates should not be treated as precise results because they are derived from a sample. Statistical significance was determined by non-overlapping 95% confidence intervals. Confidence intervals and weighting procedures are described in detail in the Technical Notes section of the 2009 Wisconsin Health Insurance Coverage Report: <http://www.dhs.wisconsin.gov/stats/pdf/09healthinsurance.pdf>.

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