## Mobility Device Use in the United States

by

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### INTRODUCTION

Assistive devices—such as wheelchairs, scooters, canes, crutches, and walkers—are effective ways to alleviate the impact of mobility limitations for many people, allowing improved ambulation and independence. Because the U.S. population is aging, the use of assistive devices by people with mobility impairments is of increasing importance. Assistive technology may be responsible for the observed reduction in the level of activity limitation at older ages (Manton, Corder, and Stallard, 1993).

The use of mobility devices has grown in recent years (LaPlante, Hendershot, and Moss, 1992), with the populations using wheelchairs and walkers doubling from 1980 to 1990. Crutch and cane use also increased by 14 percent and 53 percent, respectively, over this period. Growth in the usage of these devices continued from 1990 to 1994 (Russell, Hendershot, LeClere, Howie, and Adler, 1997), far exceeding what could be attributed to the aging of the population. It is likely that improved survival of trauma patients has also contributed to the growth in mobility device use. However, significant improvements in the design of mobility devices, both in function and image, have also fueled this growth. While financing may have become more available, it remains the case that about half of people or their families pay for devices solely on their own. The unmet need for devices is substantial, with the primary barrier being that people simply cannot afford to purchase them.

Although mobility device users represent only a relatively small minority of the population with disabilities, their importance transcends their numbers. Mobility devices, especially wheelchairs, are highly visible signs of disability; they have even become symbols in themselves of the concept of disability. Understanding the magnitude and characteristics of the population using these assistive technologies is therefore of particular importance.

For mobility devices to be used effectively, the environments in which they are used must be accessible. Yet, there is little data on the extent of accessibility barriers faced by people who use these devices.

This report focuses on the population using devices, providing a detailed profile of their demographic characteristics; health and disability status, including diagnoses and impairments, physical functioning, and activities of daily living; and health insurance status. More significantly, the report addresses the accessibility of mobility device users' homes and larger environments, demonstrating that improvements in physical accessibility remain a priority for millions of mobility device users who still experience accessibility barriers.

### **HIGHLIGHTS**

- Just over 6.8 million community-resident Americans use assistive devices to help them with mobility. This group comprises 1.7 million wheelchair or scooter riders and 6.1 million users of other mobility devices, such as canes, crutches, and walkers.
- High levels of mobility device use are observed among African Americans and Native Americans. Asians and Pacific Islanders are the racial group with the lowest device use.
- Less than one-fifth of working-age wheelchair and walker users are employed; the employment rate for crutch users is more than twice as high.
- More than four-tenths of mobility device users are unable to perform their major activity.
- Nearly all wheelchair users report trouble walking, and more than threequarters are unable to walk a quarter of a mile.
- Almost one-third of mobility device users need assistance from another
  person in one or more of the Activities of Daily Living (ADL), compared to
  less than 1 percent of non-users.
- Two-thirds of mobility device users have limitations in one or more of the Instrumental Activities of Daily Living (IADL).
- Osteoarthritis is by far the most prevalent condition associated with mobility device use, affecting 1.2 million mobility device users as the primary cause of disability.
- Stroke and osteoarthritis are the two most prevalent primary conditions among wheelchair and scooter users.
- About half of wheelchair users must use steps to enter or exit their homes. A similar fraction report having difficulty entering or leaving the home.
- Four-fifths of wheelchair users report that their local public transportation system is difficult to use or to get to.
- Among children who use wheelchairs, almost six-tenths are covered under Medicaid. Among working-age wheelchair users, four-tenths are covered under Medicare and three-tenths under Medicaid.

### DATA SOURCE AND ACCURACY

The National Health Interview Survey (NHIS) is a nationally representative household survey conducted annually by the Census Bureau for the National Center for Health Statistics, part of the Centers for Disease Control and Prevention (CDC). Respondents to the 1994 and 1995 NHIS also took part in two supplemental surveys, known collectively as the National Health Interview Survey on Disability (NHIS-D). Developed and funded by a consortium of federal agencies and the Robert Wood Johnson Foundation, the NHIS-D was designed to gather detailed data on the U.S. community-resident population with disabilities (National Center for Health Statistics, 1998).

In Phase I of the NHIS-D, which was administered at the same time as the NHIS core, 202,560 persons were screened for any indication of disability, using an extensive set of criteria including functional limitation, specific disabling diagnoses, perception of disability, and use of disability-related services. A complex set of eligibility criteria was used to identify a sample of persons who fell within one or more of several conceptual or programmatic definitions of disability; these persons were to be interviewed again at a later date as part of the second phase of the NHIS-D.

The Phase II questionnaire, known as the Disability Followback Survey (DFS), contained detailed questions on employment, use of services, benefits, transportation, personal assistance needs, housing characteristics, environmental barriers, and participation in social activities. Data collection began in September 1994 and concluded in April 1997, with interviews taking place between 7 and 26 months following the Phase I interview (median lag between interviews was 13.6 months). The Phase II sample numbers 32,788 persons.

Questions on mobility device use were asked in both phases of the NHIS-D. The bulk of the statistics in this report (those in Tables 1–10 and 14, all of the text tables, and Figures 1–20 and 23–24) are based on the authors' tabulations of the Phase I data. Data from the NHIS core were also used in these tabulations, and the NHIS Family Resources Supplement is the source of the health insurance data in Table 14 and Figures 23–24.

Statistics on accessibility features and problems (Tables 11–13 and Figures 21–22) are based on tabulations of data from Phase II, the Disability Followback Survey. In these tables, the responses to the mobility device questions from Phase II have been used to establish the relevant populations.

The vast majority (96 percent) of those identified in Phase I as mobility device users were selected for the Phase II sample. All long-term wheelchair, scooter, walker, and crutch users were automatically deemed eligible to participate in the DFS (device use expected to last at least one year from the date of the Phase I interview); respondents with one or more severe (or two or more moderate) mobility-related functional limitations were also selected. As a result, nearly all (99 percent) of the Phase I wheelchair and scooter users were eligible for Phase II, as were 98 percent of walker users. Thus, no significant biases are expected in the DFS analysis due to the selection criteria, except for a possible under-representation of some short-term device users.

It is important to note that residents of institutions, such as nursing homes, prisons, and larger residential facilities for persons with mental or physical disabilities, are not sampled in the NHIS. Thus, statistics presented in this report represent only the non-institutional, community-resident population. A small number of respondents moved into institutions during the months between the Phase I and II interviews; although these people have been included in the DFS, the sample essentially remains representative of the non-institutional population only.

Because the estimates in this report are based on a sample of the population, they are subject to sampling error. All sampling errors have been calculated directly using SUDAAN, which takes into account the complex design of the survey. In the data tables, estimates with low statistical reliability (standard error greater than 30 percent of the estimate) are flagged with an asterisk. All comparisons mentioned in the text have been tested for statistical significance, and, unless otherwise stated, are significant at the 95 percent confidence level or greater (p≤.05).

### POPULATION ESTIMATES AND SOCIODEMOGRAPHIC COMPARISONS

Just over 6.8 million Americans living outside of institutions use assistive devices to help them with mobility. This group, which amounts to 2.6 percent of the non-institutional population, comprises 1.7 million wheelchair or scooter riders (0.6 percent of the population) and 6.1 million (2.4 percent of the population) users of other mobility devices, such as canes, crutches, and walkers (see Table 1). Canes are by far the most widely used mobility devices: 4.8 million Americans use them, or 70 percent of mobility device users.¹ Walker use is reported by 1.8 million persons and crutches are used by 566,000 persons.²

Of the 1.7 million wheelchair/scooter users, the vast majority (90 percent, or 1.5 million persons) use manual wheelchairs. Only 155,000 community-resident Americans use electrically powered wheelchairs, and only 142,000 use scooters. Some 291,000 persons use either (or both) of these motorized devices.

Tables 1 through 4 present prevalence esti-

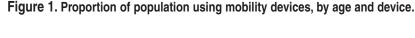
mates of mobility device use broken down by the demographic and socioeconomic characteristics of device users. In Table 1, basic sociodemographic and economic breakdowns are provided for all devices, with separate prevalences for manual wheelchairs, electric wheelchairs, and scooters, and for all three devices combined. Separate prevalence estimates are also provided for cane, crutch, and walker use, as well as for those three devices combined. Tables 2 through 4 provide more extensive sociodemographic and economic data, but device use is broken down less finely: wheelchairs (manual, electric, or both), scooters, canes, crutches, walkers, and any of the above.

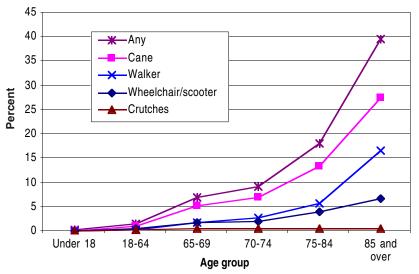
### Age and Gender

As illustrated in Figure 1, the proportion of the population using mobility devices increases sharply with age. While only 0.2 percent of children under age 18 use any kind of mobility device, that

> proportion increases sevenfold, to 1.5 percent, among those of working age (see Table A). Among the elderly, the 14.0 percent overall rate of mobility device use is almost a factor of 10 times that of working-age adults. Just under 40 percent of persons aged 85 or over use mobility devices.

> Cane use is especially prevalent among the elderly, at 10.2 percent of the population aged 65 or over. Some 4.6 percent of elderly persons use walkers, and 3.0 percent use wheelchairs or scooters. In all, nearly two-thirds (64.0 percent) of mobility device use is by





<sup>&</sup>lt;sup>1</sup> The mobility device question in the NHIS-D Phase I asks whether anyone in the family uses any in a list of devices "to get around." Without any contextual reference to mobility impairment, some blind people using white canes reported themselves as cane users. While it could be argued that a white cane is indeed a mobility device, the authors of this report chose not to broaden the scope of the analysis beyond persons with specifically mobility-related impairments. Thus, respondents identified as using white canes, as ascertained by a question asked only about persons with visual impairments, have not been counted as cane users, even when the interviewer was told that they use a cane "to get around." The population estimate of 4,755,000 cane users would have been increased by 75,000 to 4,830,000 if white cane use had not been excluded.

<sup>&</sup>lt;sup>2</sup> The NHIS-D Phase I questionnaire also asks about the use of medically prescribed shoes, but these have not been included as mobility devices for the purposes of this report.

	All Persons		Under 18		18–64		65 and over	
	Number (1000s)	Proportion (percent)						
Any mobility device	6,821	2.62	145	0.21	2,310	1.45	4,366	13.97
Wheelchair or scooter	1,679	0.64	88	0.12	658	0.41	933	2.99
Wheelchair	1,599	0.61	88	0.12	614	0.39	897	2.87
Manual wheelchair	1,503	0.58	79	0.11	560	0.35	864	2.76
Electric wheelchair	155	0.06	18	0.02	90	0.06	47	0.15
Scooter	142	0.05	0	0.00	78	0.05	64	0.21
Other mobility device	6,126	2.35	73	0.10	1,987	1.25	4,065	13.01
Cane	4,755	1.82	19 *	0.03	1,535	0.96	3,200	10.24
Crutches	566	0.22	36	0.05	375	0.24	155	0.50
Walker	1 820	0.70	27	0.04	373	0.23	1 421	4 55

\*Standard error exceeds 30 percent of the estimate.

persons aged 65 or over. Over three-quarters (78.1 percent) of walker users and just over two-thirds (67.3 percent) of cane users are elderly, as are 55.6 percent of wheelchair/scooter users. The vast majority (72.6 percent) of crutch users, however, are non-elderly.

Among working-age adults, canes and wheel-chairs are the most prevalent mobility devices, used by 1.0 percent and 0.4 percent, respectively, of the population aged 18–64. Among youth, wheel-chairs are the most prevalent, at 0.1 percent of the population.

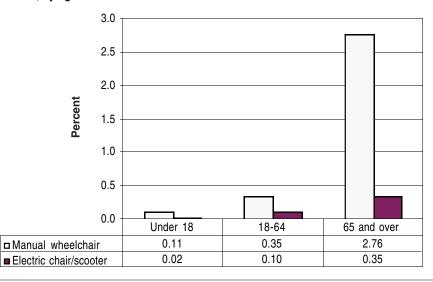
It is interesting to note that, although the pro-

portion of the population using wheelchairs or scooters increases dramatically with age, the increase is far more pronounced for manual wheelchairs than for motorized devices. shown in Figure 2, the rate of manual wheelchair use among the elderly (2.76 percent) is nearly 8 times that for working-age adults (0.35 percent). But the rate for motorized device use (electric wheelchair or scooter) among the elderly (0.35 percent) is only 3.5 times that for working-age adults (0.10 percent). In fact, a substantial majority (62.2 percent) of motorized device users

are non-elderly, and more than two-thirds (69.7 percent) of electric wheelchair users are non-elderly.

As Table B shows, a majority (58.5 percent) of mobility device users are female, with 3.0 percent of the total female population using one or more of these devices, compared to 2.2 percent of males. Since mobility device use is much more prevalent among the older age groups, and since women have greater longevity than men, it is not surprising that more women than men must rely on assistive devices to help with mobility. The female majority holds among wheelchair/scooter users (58.8 percent), cane users (57.6 percent), and especially

Figure 2. Proportion of population using manual wheelchair vs. motorized device, by age.



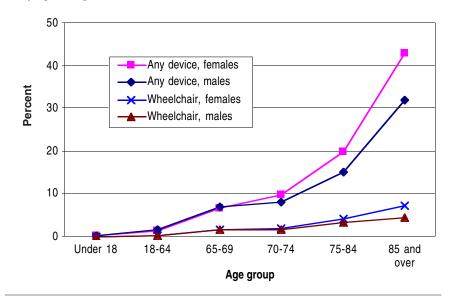
	All Persons		Ma	Males Fer		males	
	Number (1000s)	Proportion (percent)	Number (1000s)	Proportion (percent)	Number (1000s)	Proportion (percent)	Percent female
Any mobility device	6,821	2.62	2,832	2.23	3,989	2.98	58.48
Wheelchair or scooter	1,679	0.64	692	0.54	987	0.74	58.78
Wheelchair	1,599	0.61	658	0.52	941	0.70	58.85
Manual wheelchair	1,503	0.58	606	0.48	897	0.67	59.68
Electric wheelchair	155	0.06	84	0.07	71	0.05	45.81
Scooter	142	0.05	60	0.05	82	0.06	57.75
Other mobility device	6,126	2.35	2,502	1.97	3,624	2.71	59.16
Cane	4,755	1.82	2,014	1.59	2,741	2.05	57.64
Crutches	566	0.22	328	0.26	238	0.18	42.05
Walker	1,820	0.70	508	0.40	1,312	0.98	72.09

Table B. Number of persons and proportion of population using mobility devices, by gender and device used.

among walker users (72.1 percent), with women outnumbering men by more than 2 to 1. Only among users of crutches (42.0 percent female) are men a significant majority.

When prevalence rates are stratified by age, gender differences in mobility device use become less pronounced (see Figure 3 and Table 2). Among working-age adults, the proportion of men using mobility devices is, in fact, somewhat greater than that for women (1.6 vs. 1.3 percent). Among the elderly, women are more likely to use mobility

Figure 3. Proportion of population using mobility devices and wheelchairs, by age and gender.



devices than men (15.8 vs. 11.5 percent). Wheelchair use is about the same for working-age men and women (at 0.4 percent of the population for each group), but elderly women are more likely to use wheelchairs than men (3.2 vs. 2.4 percent of the population).

### Race and Ethnicity

Mobility device use varies by as much as a factor of 3 among racial groups (Table 2). High levels of mobility device use are observed among African Americans, at 3.1 percent of that population, and among Native Americans, at 3.4 percent.<sup>3</sup> The rate

of mobility device use among whites is 2.6 percent. Asians and Pacific Islanders are the racial group with the lowest device use, at 1.0 percent of that population.

Ethnicity is also a significant factor. Persons of Hispanic origin are less likely to use mobility devices than those not of Hispanic origin (1.5 vs. 2.8 percent).

Different age distributions among the racial and ethnic groups may explain some of the variation. But even when only working-age persons are considered (Table 3), mobility device use remains highest for Native Americans (3.8 percent of that population) and lowest

<sup>&</sup>lt;sup>3</sup> The difference in rates between Native Americans and whites is not statistically significant.

for Asians and Pacific Islanders (0.5 percent). The differences in rates are less dramatic among the elderly (Table 4); still, in this group, African Americans have a significantly higher rate of mobility device use than whites (20.6 vs. 13.5 percent).

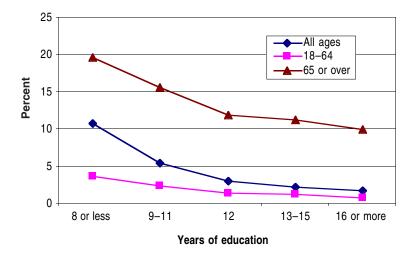
#### **Educational Attainment**

Prevalence of mobility device use varies greatly by educational attainment (Figure 4), as do rates of disability overall (LaPlante and Carlson, 1996). The rate of mobility device use for persons without a high school

education (8 years or less of education: 10.9 percent) is 6 times that of those who have completed college (16 years or more: 1.8 percent). High school graduates with no college education (12 years of education) rank in between, with 3.0 percent using mobility devices.

Since elderly Americans on average have less education than younger persons, the difference in rates is partly explained by different age distributions among those with different levels of education. Still, as shown in Figure 4, elderly persons with no high school education have twice as high a rate of mobility device use as those with college degrees (19.7 vs. 10.0 percent). Among working-age adults, 3.6 percent of those with 8 years or less of education use mobility devices, compared to 0.9 percent of those with 16 or more years.

Figure 4. Proportion of population using mobility devices, by educational attainment.



## **Employment and Labor Force Participation**

Employment, unemployment, and labor force participation rates for working-age adults using mobility devices are shown in Table C. Using data from the NHIS core, we have classified a person as employed if he or she worked at a job or business during the two weeks prior to the interview, including unpaid work in the family farm or business but excluding work around the home. A person is considered unemployed if he or she was on layoff from a job or had no job but was actively looking for work during the two weeks prior to the interview. Anyone who is either employed or unemployed is classified as a labor force participant.

Table C. Labor force participation, employment, and unemployment, by mobility device used, ages 18–64.

	AII persons	No mobility device	Any mobility device	Wheel- chair (Percent	Scooter of Population)	Cane	Crutches	Walker
In labor force	78.8	79.6	27.4	20.4	20.5	25.5	44.5	17.2
Employed	75.4	76.2	24.3	17.4	17.9 *	22.9	38.4	14.5
Unemployed	3.4	3.4	3.0	2.9	1.3 *	2.5	6.1	2.4 *
Unemployment rate †	4.3	4.3	11.1	14.4	6.3 *	10.0	13.8	14.1 *

<sup>\*</sup>Estimate has low statistical reliability (standard error exceeds 30 percent of estimate).

<sup>&</sup>lt;sup>†</sup>The unemployment rate is the proportion of labor force participants who are unemployed.

Mobility device users are much less likely to be working than those who do not use mobility devices: Only one-quarter (24.3 percent) of device users are employed, compared to three-quarters (76.2 percent) of those not using devices. Less than one-fifth of wheelchair and walker users are employed (17.4 and 14.5 percent, respectively). Cane users are slightly more likely to be employed (22.9 percent), and those using crutches are much more likely to have jobs (38.4 percent).

Labor force participation rates follow a similar pattern: 27.4 percent for mobility device users and 20.4 percent for wheelchair users, compared to 79.6 percent for non-users. Although the proportion of mobility device users who are unemployed (3.0 percent) is similar to that of those not using devices (3.4 percent), the unemployment rate (the fraction of labor force participants who are unemployed) is much higher for device users (11.1 percent vs. 4.3 percent). The unemployment rate for wheelchair users is 14.4 percent.

### **Family Income**

Since income is highly related to educational attainment, it is not surprising that mobility device use also varies greatly with family income. As shown in Figure 5, overall mobility device use decreases by more than a factor of 6 between persons with family incomes less than \$10,000 (6.8 percent of whom are device users) and those with family incomes greater than \$35,000 (1.1 percent). Poor persons are more likely to be users of all of the var-

ious mobility devices than more wealthy individuals. For example, a person whose family income is less than \$10,000 is 4.6 times as likely to be a wheelchair user as a person whose family income is \$35,000 or more. For walker users, the ratio is more than 8 to 1.

Again, part of the variation in rates by family income has to do with age, since retired people generally have less income than working-age people. But the association between family income and mobility device use holds up when the elderly and working-age adults are considered separately (see Tables 3 and 4). Just over 4.2 percent of working-age adults with family incomes under \$10,000 use mobility devices, compared to 0.8 percent of those with incomes of \$35,000 or more, a ratio of 5.5 to 1. Among the elderly, the 24.4 percent rate of mobility device use for those with incomes under \$10,000 is 2.5 times that of those with incomes of \$35,000 or more (9.6 percent).

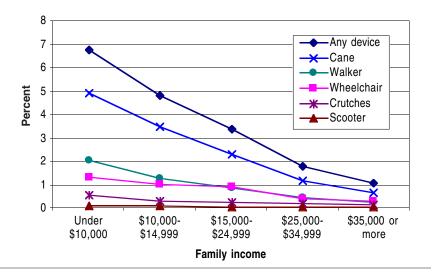
It is interesting to note that, although device use declines as income increases for each of the devices considered in this report, the association is not nearly as strong for motorized devices as for other devices. Electric wheelchairs and scooters are relatively expensive to purchase, and it is likely that poorer persons with mobility impairments may be unable to afford them, using manual devices instead. Figure 6 contrasts the steep decline of manual wheelchair use as income increases to the much more gradual drop in the rate of motorized device use.

Also shown in Tables 2–4 are the rates of mobility device use for persons with family incomes both

above and below the poverty line. Again, mobility device use is greater for those in poverty: 4.0 percent, vs. 2.2 percent for those living above the poverty line. Among working-age adults, the rates are 3.5 percent for those below poverty and 1.2 percent for those above. Among the elderly, 24.9 percent of those in poverty use mobility devices, compared to 12.4 percent of those above poverty.

As shown in Figure 7, mobility device users are significantly more likely to live in poverty than non-users. Overall, more than one-fifth (21.3 percent) of mobility

Figure 5. Proportion of population using various mobility devices, by family income.



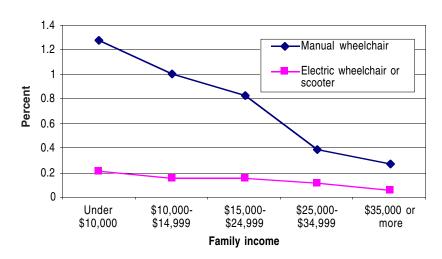
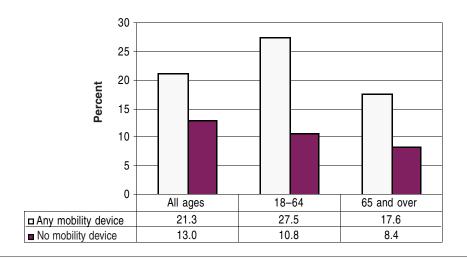


Figure 6. Proportion of population using manual wheelchair vs. motorized device, by family income.

Figure 7. Poverty rate of mobility device users and non-users, by age group.



device users live in poverty, compared to 13.0 percent of the remainder of the population. Among working-age adults, mobility device users are 2.5 times as likely to live in poverty as those not using devices: 27.5 percent vs. 10.8 percent. Elderly persons using mobility devices live in poverty more than twice as often as non-users: 17.6 percent vs. 8.4 percent.

#### **Location and Setting of Residence**

The rate of mobility device use is highest in the South (2.8 percent) and lowest in the West (2.4

percent). Among elderly persons, the highest rates of mobility device use are found in the South (14.7 percent) and West (14.6 percent) and the lowest rates are found in the Northeast (12.7 percent).

Rates of mobility device use are greater in rural areas (3.2 percent) than in metropolitan areas (2.5 percent). In particular, residents of nonfarm rural areas have the highest rate of mobility device use, at 3.3 percent. Some 15.2 percent of elderly persons living in rural areas use mobility devices, compared to 13.6 percent of those living in metropolitan areas in general and 12.9 percent of those living in suburbs.

### **HEALTH AND DISABILITY STATUS**

Tables 5 through 7 present breakdowns of the population using mobility devices by health status, hospitalization history, perceived disability status, degree of activity limitation, degree and nature of functional limitation, and degree and nature of limitation in the activities of daily living (ADL) and instrumental activities of daily living (IADL). Mobility device users of all ages are included in Table 5. In Tables 6 and 7, breakdowns are provided for working-age and elderly adults, respectively.

### Self-Reported Health Status

On average, people who use mobility devices are in much poorer health than those who do not use mobility devices. As Figure 8 shows,<sup>4</sup> a significant majority (58.1 percent) of mobility device users report that their health is fair or poor, compared to only 8.6 percent of the population not using such devices. While only 2.0 percent of the non-deviceusing population report poor health status, 29.5 percent of those using mobility devices say they are in poor health.

The worst health status is found among wheel-chair, scooter, and walker users, with at least one-third of each group reporting poor health (39.9 percent for wheelchair users of any age, 36.4 percent for scooter users, and 36.6 percent for walker users). Nearly two-thirds of each group (65.4 percent of wheelchair users, 63.1 percent of scooter users, and 65.1 percent of walker users) are in either fair or poor health. Only among users of crutches do a majority (54.7 percent) report their health status as good to excellent.

Among the working-age population, an even greater fraction of mobility device users report poor health (35.7 percent of those aged 18–64, compared to 2.2 percent of those not using mobility devices). Fair or poor health status is reported by 62.5 percent of working-age device users, compared to only 8.9 percent of non-users. Walker users are in especially poor health: nearly half (47.3 percent) report their health status as poor and nearly three-quarters (73.3 percent) report either fair or poor health. Scooter and cane users also report poor health quite often, 39.8 and 39.5 percent of the time, respectively.

Among the elderly, the gap in health status between device users and non-users is less pronounced. Some 56.8 percent of device users aged 65 and above report fair or poor health, compared to 22.6 percent of non-users. Just over one-quarter (27.0 percent) report poor health, compared to 5.8 percent of those elderly persons not using mobility devices. It is worth noting that, among the elderly, the variation in health status according to the specific device used follows a different pattern from that among the non-elderly. Elderly persons using wheelchairs report significantly worse health than users of other devices, with 45.3 percent reporting poor health and 72.5 percent reporting fair or poor health. Walker, scooter, and crutch users report the next-worst health status, with 34.4, 32.2, and 30.0 percent in poor health, respectively. Less than onequarter (23.4 percent) of elderly cane users are in poor health.

### **Hospitalization History**

Mobility device users are much more likely than the rest of the population to have been recently hospitalized. Nearly one-third (32.7 percent) of device users had been hospitalized in the year prior to the interview, compared to 6.8 percent of nonusers. More than one-fifth (21.6 percent) of device users had been discharged from the hospital in the six months prior to the interview. These figures suggest that a significant proportion of mobility device users may be using these aids for a relatively short period of time, while recovering from surgery, injury, or disease. In particular, 44.5 percent of walker users, 43.0 percent of wheelchair users, and 35.1 percent of crutch users had been hospitalized during the 12 months prior to the interview.

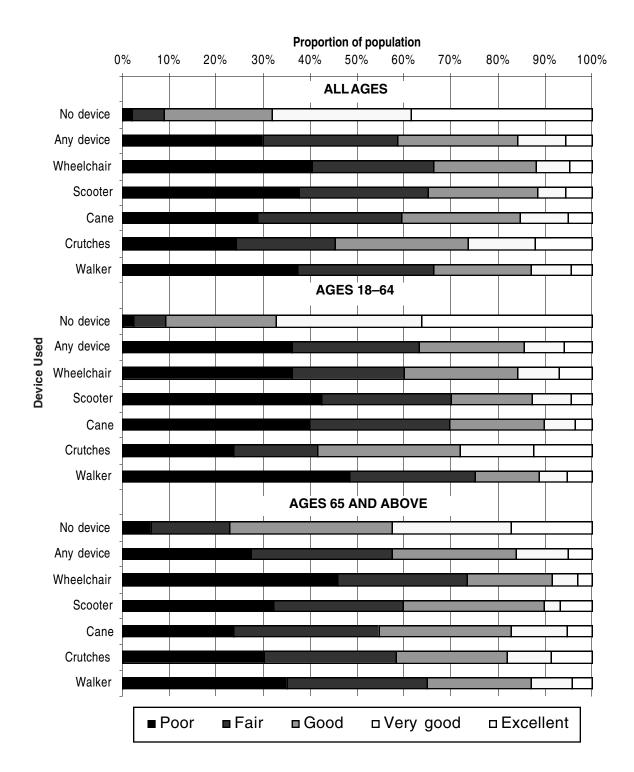
### **Perceived Disability Status**

Tables 5 through 7 present statistics on the proportion of device users who answer either of the following questions in the affirmative: "Do you consider yourself to have a disability?" or "Would other people consider you to have a disability?" We classify someone who answers either or both of these questions in the affirmative as having a perceived disability.

Two-thirds (66.7 percent) of mobility device

 $<sup>^4</sup>$  The very small fraction of persons listed in Tables 5–7 as having "unknown" health status have been excluded from the graph in Figure 8.

Figure 8. Health status of mobility device users and non-users, by age and device.



Note: Figure excludes people with unknown health status.

users have perceived disabilities (Figure 9). This proportion is almost 12 times that of the remainder of the population, only 5.8 percent of whom answer either of the perceived disability questions in the affirmative. Among users of specific devices, scooter and wheelchair users are the most likely to have perceived disabilities, with more than four-fifths of each group (89.8 and 85.0 percent, respectively) reporting that they consider themselves as having a disability or that others would do so. The close association between the use of these devices and perceived disability is not surprising, given that wheelchairs and scooters are both highly visible and very closely associated in many people's minds with the notion of disability.

Nearly three-quarters (73.0 percent) of walker users and just over two-thirds (67.6 percent) of crutch users have perceived disabilities. Among cane users, 63.1 percent answer one or both of the perceived disability questions in the affirmative.

As Figure 9 shows, there are some significant differences in reported disability according to age, with elderly device users generally less likely to view themselves as having disabilities. While three-quarters (77.5 percent) of working-age mobility device users have perceived disabilities, only 60.7 percent of elderly device users say that they have a disability or that other people think they do. The largest gap is among cane users: 78.2 percent of working-age cane users have perceived disabilities, compared to only 56.0 percent of elderly cane users. Elderly persons may associate the need for a cane

merely with getting older, rather than assigning it the label of disability. Walker use is also more associated with perceived disability among workingage adults (81.3 percent) than among the elderly (70.7 percent).

### **Activity Limitation**

Limitations in activity are often used to define disability. In the NHIS core, a respondent's major activity is first identified, generally from a list of activities that are expected for someone of the respondent's age, such as attending school, working, doing housework, or taking care of personal needs. The respondent is then asked whether an impairment or health problem keeps him or her from performing that activity; those answering affirmatively have been classified in Tables 5-7 as "unable to do major activity." If the answer is no, the respondent is asked about any limitation in the amount or kind of the major activity that he or she can do because of an impairment or health problem; persons with such limitations are classified as "only limited in major activity" in Tables 5–7. Respondents with no major activity limitation are asked whether they are limited in any activities in any way because of an impairment or health problem; if so, they are classified as "limited only in other activity."

The major activity for a child under 5 years of age is assumed to be play. Attending school is assumed to be the major activity for older children

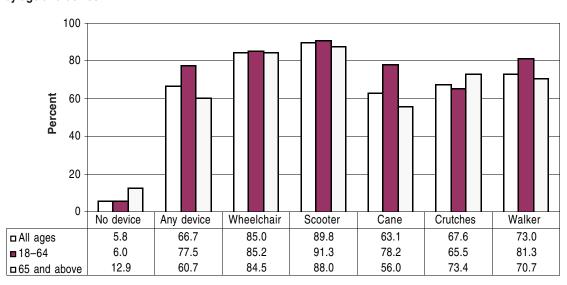


Figure 9. Proportion of mobility device users and non-users with self- or other-perceived disability, by age and device.

(5–17 years of age). Adults aged 18–69 are asked about work as their major activity, unless they indicate that keeping house has been their primary activity, in which case housework is substituted for work. Persons aged 70 and over are asked about self-care (ADL) and home-management activities (IADL) as their major activity, regardless of any other activities they may engage in.

The concept of major activity limitation is therefore highly dependent upon age. Activity limitation as a whole, however, is less age dependent, since all respondents not limited in their major activity are also asked about non-major activities ("any activity in any way").

Figure 10 shows the proportion of mobility device users and non-users who are limited in activity, whether unable to perform major activity, limited in amount or kind of major activity, or limited only in some other activity. As one might expect, mobility device users are much more likely to be limited in activity than non-users, 84.1 percent vs. 13.0 percent of persons of any age. More than fourtenths (43.2 percent) of mobility device users are unable to perform their major activity, compared to only 3.5 percent of persons not using devices. And more than two-thirds (68.9 percent) of mobility device users have some degree of limitation in their major activity, vs. 8.6 percent of non-users.

Scooter and wheelchair users are the most likely to have an activity limitation, with over ninetenths of both groups (96.3 and 93.0 percent of persons of any age) reporting limitation. These groups also have the highest rates of major activity limitation, with 66.1 percent of wheelchair users unable to perform their major activity and an additional 21.8 percent limited in the amount or kind of major activity; for scooter users, the figures are 59.5 percent unable and 27.1 percent limited in amount or kind. Walker users have the next highest rates of activity limitation: 89.0 percent overall, with 52.6 percent unable to perform their major activity and 25.9 percent limited in the amount or kind of major activity. Although cane users are also rather likely to be limited in activity (82.8 percent), only 38.0 percent are unable to perform their major activity.

Overall activity limitation rates are quite similar for the working-age population, but the specifics are different. Because the major activity for working-age adults is defined as either work or housework, as opposed to the often less physically demanding major activities of the elderly and of children, most working-age mobility device users who are limited in activity are limited in their major activity, and most of those are unable to per-

form that activity.

Among persons aged 18–64, 89.6 percent of mobility device users are limited in activity, compared to 13.1 percent of those not using devices. Nearly two-thirds (63.9 percent) of device users are unable to perform their major activity, and an additional 20.3 percent are limited in the amount or kind of major activity they can perform (the corresponding figures for the remainder of the population are 4.3 and 5.0 percent, respectively). Wheelchair, scooter, walker, and cane users all have activity limitation rates greater than 90 percent. All of these groups have high rates of inability to perform the major activity, ranging from 66 to 78 percent.

Among elderly mobility device users, the vast majority (85 percent) are over 69 years of age and are therefore treated in the NHIS as if their major activity were caring for themselves and managing their homes (ADLs and IADLs; see below). Persons unable to perform these activities are considered to have fairly severe disabilities. It is therefore not surprising that a significant majority of elderly mobility device users consider themselves able to perform their major activity. Thus, while 81.4 percent of elderly mobility device users are limited in activity (compared to 30.6 percent of those not using mobility devices), only 33.0 percent are unable to perform their major activity (vs. 6.6 percent of non-users). Wheelchair users are significantly more likely than other device users to be unable to perform their major activity, with twothirds (66.2 percent) reporting this rather severe level of limitation. At the other extreme, only onequarter (25.0 percent) of elderly cane users are unable to perform their major activity.

### **Functional Limitation**

Respondents to the NHIS-D who are at least 18 years of age are asked about any difficulty they might have in eight areas of mobility-related function: lifting a ten-pound object ("lifting something as heavy as 10 pounds, such as a bag of groceries"), climbing a flight of stairs ("walking up 10 steps without resting"), walking one-quarter mile ("walking a quarter of a mile—about 3 city blocks"), standing ("for about 20 minutes"), bending ("bending down from a standing position to pick up an object from the floor, for example, a shoe"), reaching ("reaching up or over the head or reaching out as if to shake someone's hand"), grasping ("using fingers to grasp or handle something, such as picking up a glass from the table"), and holding a pen or pencil. For each of these

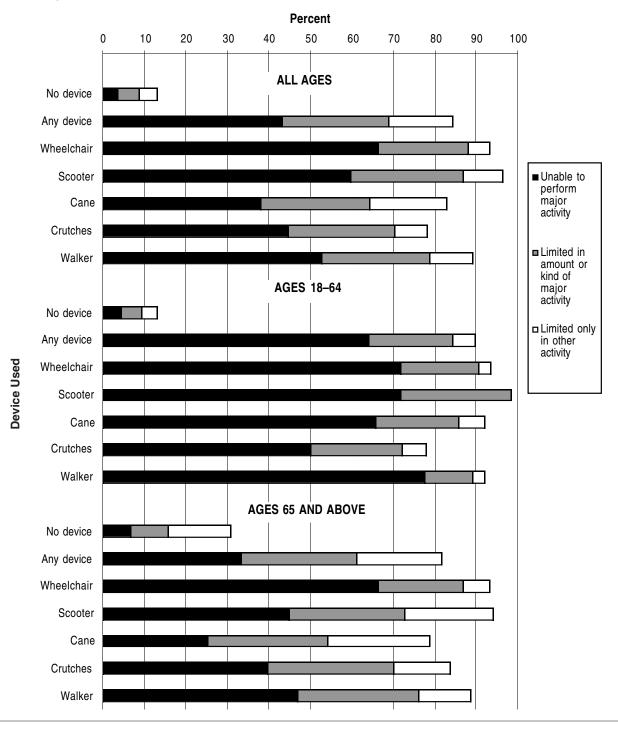


Figure 10. Proportion of mobility device users and non-users limited in activity, by age and device.

items, the degree of difficulty is ascertained (some difficulty, a lot of difficulty, or completely unable). We classified those with some or a lot of difficulty as having "difficulty only" with the given function; those answering "completely unable" are classified as unable to perform the function.

To obtain a summary measure of functional limitation, we estimated the population with any degree of limitation in any of the eight functions in Tables 5–7 ("Limited in 1 or more mobility-related functions"), as well as those unable to perform at least one of the eight functions ("Unable to perform

1 or more functions"). Figure 11 shows the proportion of the population in both of those classifications for each of the mobility devices; also shown is the proportion of the population able to perform all of the functions but limited in at least one of them ("Difficulty only").

As one might expect, the vast majority (88.7 percent) of mobility device users experience mobility-related functional limitation. Mobility device users are 8.5 times as likely to be limited in function

as persons who do not use mobility devices (10.4 percent of whom are limited in function). They are 25 times as likely to be unable to perform one or more of the mobility-related functions as the remainder of the population (54.3 vs. 2.2 percent).

At least four-fifths of the users of each of the mobility devices are classified as having some degree of functional limitation. Wheelchair, scooter, and walker users have the highest likelihood of limitation (96.2, 98.4, and 95.4 percent, respective-

Figure 11. Proportion of mobility device users and non-users with functional limitations, by degree of limitation and device, ages 18 and above.

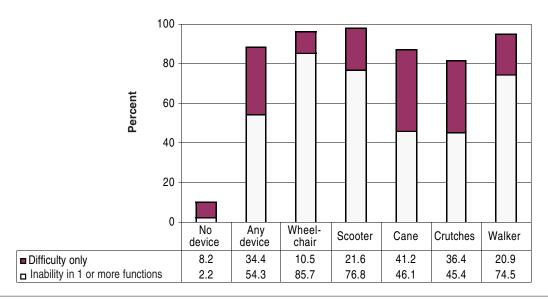
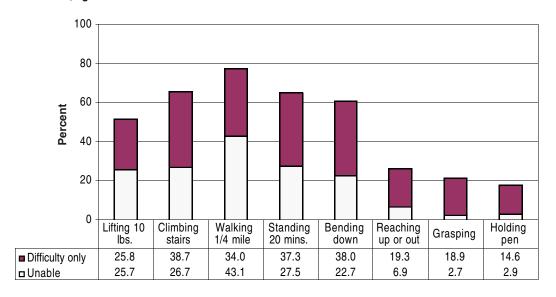


Figure 12. Proportion of mobility device users with functional limitations, by degree and type of limitation, ages 18 and above.



ly). Some 87.3 percent of cane users report functional limitation, as do 81.8 percent of users of crutches.

The variation in the degree of functional limitation is much more pronounced. More than four-fifths of wheelchair users (85.7 percent) are unable to perform one or more of the eight functions, compared to less than half (46.1 and 45.4 percent, respectively) of cane and crutch users. Looked at another way, only 14.3 percent of wheelchair users are able to perform all of the eight mobility-related functions, compared to more than half of cane and crutch users. One-quarter (25.5 percent) of walker users report being able to perform all of the eight functions.

Figure 12 shows the proportion of the mobility device—using population with limitations in each of the eight functions. Device users are most likely to be limited in walking, with more than three-quarters (77.1 percent) having some degree of difficulty with this function and more than four-tenths (43.1 percent) unable to walk one-quarter mile. In each of the following functions, a majority of device users report limitation: climbing stairs (65.4 percent have trouble climbing a flight of stairs without resting), standing for long periods of time (64.8 percent have trouble standing for 20 minutes), bending down (60.8 percent have trouble bending from a standing position), or lifting (51.5 percent have trouble lifting a ten-pound object).

Wheelchair users are more likely to have trou-

ble in every one of the eight functional limitations than mobility device users overall. As shown in Figure 13, more than nine-tenths (94.2 percent) of wheelchair users report trouble walking, and more than three-quarters (78.5 percent) are unable to walk a quarter of a mile. Limitations in climbing, standing, and bending are also reported more than four-fifths of the time (88.4, 86.8, and 81.2 percent, respectively), and inability to climb ten stairs without resting, stand for 20 minutes, and bend down from a standing position are reported more than half the time (63.7, 61.0, and 55.4 percent). More than two-thirds (71.3 percent) report some degree of limitation in lifting ten-pound objects, and about one-third report limitation in each of the two handrelated activities measured: grasping objects (33.7) percent) and holding a pen or pencil (31.6 percent).

### **Activities of Daily Living**

Respondents to the NHIS-D who are at least 5 years of age are asked about a set of six self-care activities, known in the literature as Activities of Daily Living (ADL): bathing or showering; dressing; eating; getting in or out of bed or chairs (which we label "transferring"); using the toilet, including getting to the toilet ("toileting"); and getting around inside the home. The following facts are ascertained about each of these activities: whether the person gets help from another person to perform the activity "because of a physical, mental, or emotional

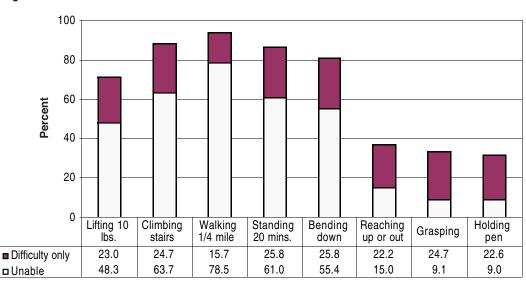


Figure 13. Proportion of wheelchair users with functional limitations, by degree and type of limitation, ages 18 and above.

problem"; whether the person needs to be reminded to do the activity or to have someone close by "because of a physical, mental, or emotional problem"; whether the person uses special equipment to do the activity; and whether the person has difficulty with the activity "because of a physical, mental, or emotional problem." If the person needs assistance, reminding, supervision, or special equipment to perform an ADL, it is assumed that the person has difficulty, without the question being asked.

In Tables 5–7, we have classified those persons getting help from another person, needing reminding, and needing someone close by under "needs assistance" with the activity in question. Persons with any level of difficulty with an activity, including those using special equipment, getting help, or needing reminders or someone close by, are classified as having a limitation in the activity. For summary measures of ADL limitation, we estimated the population with any level of limitation in any of the ADLs and the population needing assistance from another person (gets help, needs reminding, or needs someone close by) in one or more of the ADLs.

Figure 14 shows the proportion of mobility device users who have ADL limitations (any level of limitation in one or more ADLs), who need assistance in one or more ADLs ("Needs help"), and who have limitations but do not need assistance ("Difficulty only"). Nearly half (47.2 percent) of mobility device users have some degree of limitation in at least one ADL, compared to only 1.1 per-

cent of persons who do not use mobility devices. Almost one-third (30.9 percent) of device users need assistance from another person in ADLs, compared to only 0.7 percent of non-users. A mobility device user is 44 times as likely to report an ADL limitation as a person who does not use a mobility device and 42 times as likely to need assistance from another person in ADLs.

In fact, the 2.9 percent of Americans at least 5 years of age who use mobility devices constitute a significant majority of those with ADL limitations. Of the 5.7 million with ADL limitations, 56.2 percent, or 3.2 million people, use mobility devices. Of the 3.8 million needing personal assistance, 55.0 percent are mobility device users, or 2.1 million persons.

Wheelchair users are the most limited in ADLs, with four-fifths (80.2 percent) reporting some degree of difficulty in at least one ADL and more than three-fifths (62.7 percent) needing assistance in at least one ADL. Walker and scooter users are also very likely to be limited in ADLs, with 72.1 and 71.3 percent reporting limitation, respectively, and 50.0 and 37.3 percent reporting assistance needs. Least likely to be limited in ADLs are cane users, of whom 37.8 are limited and only 22.0 percent need assistance from another person.

Figure 15 shows the proportion of mobility device users with limitations in specific ADLs. Bathing is the activity most likely to present difficulty to device users, with more than one-third (37.9 percent) reporting some degree of limitation in

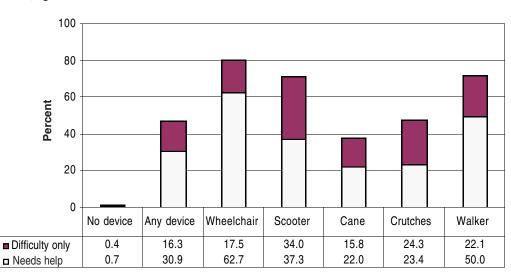


Figure 14. Proportion of mobility device users and non-users with ADL limitations, by degree of limitation and device, ages 5 and above.

bathing. Bathing and dressing are the activities for which mobility device users are most likely to need assistance (26.7 and 20.7 percent, respectively), followed by transferring at 17.0 percent. Only 7.7 percent of mobility device users have difficulty eating.

Wheelchair users are more likely to report limitation in each of the ADLs (Figure 16) than are mobility device users overall. Again, bathing is the activity most likely to present problems (72.0 percent are limited in bathing). A majority of wheelchair users are limited in dressing (54.6 percent), transferring (55.4 percent), toileting (52.6 percent), and getting around inside the home (59.6 percent). Again, eating is the ADL least likely to present

problems (23.3 percent limited).

Assistance is most often needed in bathing (58.4 percent of wheelchair users), dressing (50.0 percent), and transferring (43.7 percent). More than one-third of wheelchair users need help with getting around inside (37.6 percent), and a similar proportion need assistance in toileting (37.5 percent). Wheelchair users are relatively unlikely to need assistance with eating (20.1 percent).

### **Instrumental Activities of Daily Living**

The Instrumental Activities of Daily Living (IADL) are a set of everyday activities associated

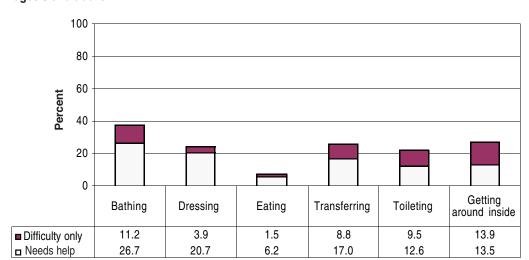
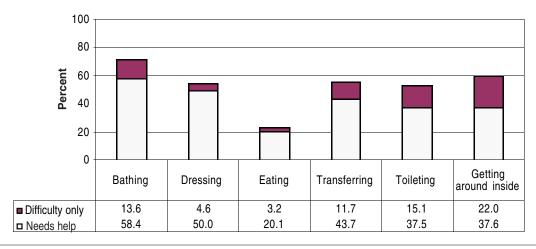


Figure 15. Proportion of mobility device users with ADL limitations, by degree and type of limitation, ages 5 and above.

Figure 16. Proportion of wheelchair users with ADL limitations, by degree and type of limitation, ages 5 and above.



with managing a home. The NHIS-D asks about these IADLs for persons aged 18 or over: preparing meals, shopping ("for personal items, such as toilet items or medicine"), managing money ("such as keeping track of expenses or paying bills"), using the telephone, doing heavy housework ("heavy work around the house like scrubbing floors, washing windows, and doing heavy yard work"), and doing light housework ("light work around the house like doing dishes, straightening up, light cleaning, or taking out the trash"). For each activity, the following information is obtained: whether the person gets help or supervision from another person in performing the activity "because of a physical, mental, or emotional problem" and whether the person has

difficulty performing the activity "because of a physical, mental, or emotional problem." Again, difficulty is assumed if the person needs help or supervision.

More than two-thirds (68.1 percent) of mobility device users have one or more IADL limitations, compared to only 5.5 percent of those not using mobility devices (Figure 17). The vast majority of those limited in IADLs need assistance in at least one IADL (62.0 percent of mobility device users are reported as getting help or supervision, compared to 4.6 percent of non-users). Wheelchair, scooter, and walker users are the most likely to have IADL limitations, with more than four-fifths of each group reporting limitation (86.4, 87.1, and 82.6 percent, respectively) and more than three-quarters of

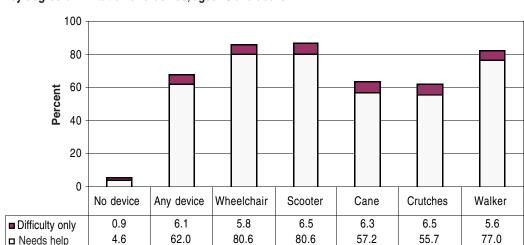
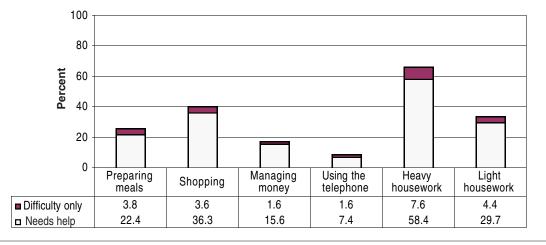


Figure 17. Proportion of mobility device users and non-users with IADL limitations, by degree of limitation and device, ages 18 and above.

Figure 18. Proportion of mobility device users with IADL limitations, by degree and type of limitation, ages 18 and above.



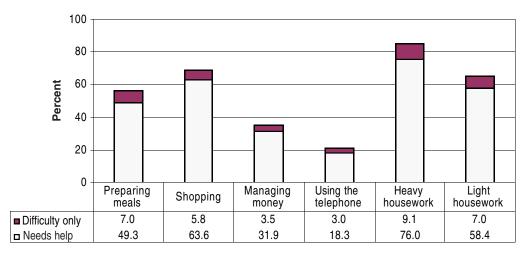


Figure 19. Proportion of wheelchair users with IADL limitations, by degree and type of limitation, ages 18 and above.

each group needing help in IADLs (80.6, 80.6, and 77.0 percent). A majority of cane and crutch users have IADL limitations (63.5 and 62.2 percent, respectively), most of whom need assistance (57.2 and 55.7 percent of the users of those devices).

As shown in Figure 18, heavy housework is the IADL in which mobility device users are most likely to experience limitation, with two-thirds (66.0 percent) reporting some degree of limitation and more than half (58.4 percent) needing help in this activity. Device users are far less likely to report limitation in the other IADLs. Shopping (39.9 percent), light housework (34.1 percent), and preparing meals (26.2 percent) are the only other IADLs in which limitation affects one-quarter or more of device users in general.

Wheelchair users (Figure 19) are very likely to be limited in heavy housework: 85.1 percent are limited to some degree and 76.0 percent need help performing this IADL. Limitations in shopping and light housework are reported by about two-thirds of wheelchair users (69.4 and 65.4 percent, respectively), and a substantial majority need help in these activities (63.6 and 58.4 percent). A limitation in preparing meals is also reported by a majority of wheelchair users (56.3 percent); half (49.3 percent) need help in this activity.

Overall, three-quarters (73.1 percent) of mobility device—using adults and nine-tenths (92.1 percent) of wheelchair-using adults experience some degree of limitation in at least one of the self-care or home-management activities (ADLs or IADLs). Some 65.9 percent of adults who use mobility devices need assistance from another person in one or more of the activities, as do 86.7 percent of adults who use wheelchairs.

# HEALTH CONDITIONS AND IMPAIRMENTS ASSOCIATED WITH MOBILITY DEVICE USE

Tables 8 through 10 list the principal health conditions and impairments associated with the use of mobility devices. Because respondents to the NHIS-D are not asked to specify the condition that necessitates their use of a mobility device, it is not possible to directly attribute a person's device use to a particular condition. Instead, the conditions listed are those mentioned by respondents as the main cause of their disability, defined in terms of either functional or activity limitation, as described below.

There are two sources of relevant condition information available in the survey, one in the NHIS-D and one in the NHIS core. The former is obtained by asking those adult (18 years of age or older) respondents who indicate that they have one or more mobility-related functional limitations to indicate the main cause of that limitation. The latter is obtained by asking all respondents limited in any activity to specify all conditions that limit their activity; they are then asked to identify the main condition causing their activity limitation. In Tables 8–10, we have used the condition causing functional limitation whenever it is available (namely, for adults with functional limitations that have been captured in the survey); when no information about the condition causing functional limitation is available (for children and adults without identified functional limitations), the main condition

causing activity limitation has been used instead.

Conditions have been classified according to the scheme developed in LaPlante and Carlson (1996). We have listed the subset of specific conditions, along with a few broader categories of conditions, whose prevalence among mobility device users is sufficient to yield statistically reliable population estimates for persons with that condition using any mobility device. Because all condition information is self-reported, and because interviewers do not attempt to elucidate additional details once a condition is stated, specific conditions may tend to be undercounted in the survey in favor of broader, catch-all categories. For example, a person reporting merely "heart trouble" cannot be classified as having a specific condition such as angina or hypertensive disease, but instead would be coded under the category "other forms of heart disease."

Table 8 shows the principal conditions associated with mobility device use for all ages; Table 9 shows the conditions for working-age adults (aged 18–64) and Table 10 shows conditions associated with mobility device use among elderly persons.

### **All Ages**

Table D ranks the leading ten conditions associated with mobility device use among persons of

Condition	Persons (1000s)	Proportion of device users (%
All conditions	6,321	100.00
1 Osteoarthrosis and allied disorders	1,189	18.81
2 Cerebrovascular disease	442	6.98
3 Orthopedic impairment of lower extremity	367	5.80
4 Orthopedic impairment of back or neck	273	4.32
5 Intervertebral disc disorders	237	3.75
6 Senility without mention of psychosis	236	3.73
7 Other forms of heart disease	210	3.32
8 Rheumatoid arthritis and other inflammatory polyarthropathies	201	3.18
9 Orthopedic impairment of hip and/or pelvis	185	2.92
O Chronic injuries or late effects of injuries	131	2.07

all ages. These conditions account for more than half (54.9 percent) of mobility device use. Osteoarthritis is by far the most prevalent condition, affecting 1.2 million mobility device users as the primary cause of disability and accounting for 18.8 percent of mobility device use. Next are cerebrovascular disease (affecting 442,000 persons) and orthopedic impairments of the lower extremity (367,000), followed by two conditions related to the back: orthopedic impairments of the back or neck (273,000), and intervertebral disc disorders (237,000 persons). These two back-related conditions, taken together, are responsible for disability in 0.5 million mobility device users.

Table E lists the top-ranked conditions associ-

ated with wheelchair or scooter use. Just under half (49.3 percent) of wheelchair/scooter users specify one of the ten listed conditions as their primary cause of disability. Cerebrovascular disease (likely to be reported as "stroke"), which affects 180,000 wheelchair/scooter users, and osteoarthritis, affecting 170,000 persons, are the two most prevalent primary conditions among this group. Although these conditions are commonly associated with aging, other highly prevalent conditions are not: multiple sclerosis (82,000 persons), absence or loss of lower extremity (60,000), paraplegia (59,000), and orthopedic impairments of lower extremity (59,000).

Because of the relatively small numbers of

Table E. Leading conditions<sup>†</sup> associated with wheelchair or scooter use, all ages.

Condition	Persons (1000s)	Proportion of device users (%)
All conditions	1,629	100.00
1 Cerebrovascular disease	180	11.05
2 Osteoarthrosis and allied disorders	170	10.43
3 Multiple sclerosis	82	5.02
4 Absence or loss of lower extremity	60	3.68
5 Paraplegia (paralysis of both legs)	59	3.63
6 Orthopedic impairment of lower extremity	59	3.62
7 Other forms of heart disease	54	3.30
8 Cerebral palsy	51	3.11
9 Rheumatoid arthritis and other inflammatory polyarthropathies	49	3.00
10 Diabetes	39	2.40

<sup>†</sup>Conditions reported as the main cause of functional or activity limitation (see text).

Table F. Leading conditions<sup>†</sup> associated with cane use, all ages.

Condition	Persons (1000s)	Proportion of device users (%)
All conditions	4,384	100.00
1 Osteoarthrosis and allied disorders	976	22.26
2 Cerebrovascular disease	294	6.70
3 Orthopedic impairment of lower extremity	270	6.17
4 Orthopedic impairment of back or neck	226	5.16
5 Intervertebral disc disorders	218	4.97
6 Senility without mention of psychosis	172	3.92
7 Other forms of heart disease	152	3.46
8 Rheumatoid arthritis and other inflammatory polyarthropathies	142	3.23
9 Orthopedic impairment of hip and/or pelvis	132	3.00
10 Absence or loss of rib, bone, joint, or muscle of trunk	100	2.29

<sup>1</sup>Conditions reported as the main cause of functional or activity limitation (see text).

people using electric wheelchairs and scooters, it is not possible to present statistically reliable prevalence estimates of conditions associated specifically with the use of these two devices. It is possible, however, to note broad differences among conditions associated with the use of manual wheelchairs, electric wheelchairs, and scooters. While manual wheelchair users are most likely to have age-related diseases of the circulatory or musculoskeletal system, electric wheelchair users are most likely to have some form of paralysis, such as quadriplegia, cerebral palsy, or paraplegia. These forms of paralysis are not highly associated with scooter use, however; instead, scooter users are most likely to have diseases of the nervous system, such as multiple sclerosis and amyotrophic lateral sclerosis, or diseases of the musculoskeletal system, such as osteoarthritis, rheumatoid arthritis, and spondylosis.

Osteoarthritis is the top-ranked condition responsible for disability among users of both canes and walkers (Tables F and G). More than one-fifth (22.3 percent) of cane users and nearly one-fifth (19.1 percent) of walker users mention osteoarthritis as the main cause of functional or activity limitation, or 976,000 and 335,000 persons, respectively. For both cane and walker users, cerebrovascular disease and orthopedic impairments of the lower extremity are also highly prevalent. Cerebrovascular disease is the primary cause of disability among 294,000 cane users and 136,000 walker users; orthopedic impairment of the lower extremity affects 270,000 cane users and 91,000 walker users. Back problems, senility, heart dis-

ease, hip problems, and rheumatoid arthritis are also prevalent among both cane and walker users.

The top four conditions associated with the use of crutches (Table H) all have similar prevalence: osteoarthritis is the main cause of disability for 59,000 crutch users; orthopedic impairments of the lower extremity affect 55,000 persons; absence or loss of lower extremity affects 47,000 persons; and late effects of injury are the main cause of limitation among 40,000 crutch users.

### **Leading Conditions by Age Group**

Osteoarthritis, the most prevalent main cause of disability among mobility device users at all ages, remains the leading condition for both of the age groups shown in Tables I and J. Among working-age adults, it is the primary cause of disability for 228,000 persons, accounting for 10.5 percent of mobility device use; among the elderly, osteoarthritis is responsible for a much larger proportion (23.7 percent) of mobility device use, affecting 957,000 persons.

Among working-age adults, the next three conditions all have similar prevalences: intervertebral disc disorders are the primary cause of disability among 176,000 mobility device users; orthopedic impairments of the back or neck affect 162,000 persons; and orthopedic impairments of the lower extremity affect 140,000 persons. Taken together, the two back-related conditions (disc disorders and orthopedic impairments) are responsible for mobility device use among 337,000 persons, making the general category of "back

Condition	Persons (1000s)	Proportion of device users (%
All conditions	1,752	100.00
1 Osteoarthrosis and allied disorders	335	19.09
2 Cerebrovascular disease	136	7.75
3 Orthopedic impairment of lower extremity	91	5.20
4 Senility without mention of psychosis	81	4.64
5 Orthopedic impairment of hip and/or pelvis	75	4.29
6 Other forms of heart disease	73	4.15
7 Rheumatoid arthritis and other inflammatory polyarthropathies	62	3.54
8 Orthopedic impairment of back or neck	54	3.09
9 Chronic injuries or late effects of injuries	50	2.83
0 Parkinson's disease	43	2.47

Table H. Leading conditions	<sup>†</sup> associated with the use of crutches, all ages.
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Condition	Persons (1000s)	Proportion of device users (%)
All conditions	492	100.00
1 Osteoarthrosis and allied disorders	59	11.92
2 Orthopedic impairment of lower extremity	55	11.09
3 Absence or loss of lower extremity	47	9.45
4 Chronic injuries or late effects of injuries	40	8.04
5 Orthopedic impairment of back or neck	25	4.98
6 Rheumatoid arthritis and other inflammatory polyarthropathies	21	4.33
7 Cerebral palsy	20	4.02
8 Orthopedic impairment of hip and/or pelvis	19	3.92
9 Intervertebral disc disorders	17	3.43
10 Other paralysis	11 *	2.32 *

<sup>&</sup>lt;sup>†</sup>Conditions reported as the main cause of functional or activity limitation (see text). \*Standard error exceeds 30 percent of the estimate.

Table I. Leading conditions<sup>†</sup> associated with mobility device use, ages 18-64.

Condition	Persons (1000s)	Proportion of device users (%)
All conditions	2,169	100.00
1 Osteoarthrosis and allied disorders	228	10.53
2 Intervertebral disc disorders	176	8.09
3 Orthopedic impairment of back or neck	162	7.44
4 Orthopedic impairment of lower extremity	140	6.46
5 Cerebrovascular disease	100	4.60
6 Multiple sclerosis	98	4.50
7 Rheumatoid arthritis and other inflammatory polyarthropathies	92	4.25
8 Absence or loss of lower extremity	71	3.28
9 Chronic injuries or late effects of injuries	69	3.19
10 Diabetes	54	2.47
<sup>†</sup> Conditions reported as the main cause of functional or activity limitation (see text).		

Table J. Leading conditions<sup>†</sup> associated with mobility device use, ages 65 and over.

Condition	Persons (1000s)	Proportion of device users (%)
All conditions	4,040	100.00
1 Osteoarthrosis and allied disorders	957	23.68
2 Cerebrovascular disease	342	8.46
3 Senility without mention of psychosis	233	5.77
4 Orthopedic impairment of lower extremity	226	5.60
5 Other forms of heart disease	163	4.03
6 Orthopedic impairment of hip and/or pelvis	155	3.83
7 Orthopedic impairment of back or neck	112	2.76
8 Rheumatoid arthritis and other inflammatory polyarthropathies	107	2.65
9 Absence or loss of rib, bone, joint, or muscle of trunk	102	2.51
10 Osteoporosis	83	2.04

Table K. Leading conditions associated with wheelchair or scooter use, ages 18-64.

Condition	Persons (1000s)	Proportion of device users (%)
All conditions	635	100.00
1 Multiple sclerosis	58	9.16
2 Paraplegia (paralysis of both legs)	45	7.01
3 Cerebrovascular disease	44	6.99
4 Quadriplegia (paralysis of entire body or four limbs)	32	4.96
5 Osteoarthrosis and allied disorders	31	4.82
6 Absence or loss of lower extremity	29	4.53
7 Cerebral palsy	29	4.50
8 Rheumatoid arthritis and other inflammatory polyarthropathies	21	3.34
9 Diabetes	21 *	3.28 *
10 Orthopedic impairment of back or neck	20	3.12

<sup>&</sup>lt;sup>†</sup>Conditions reported as the main cause of functional or activity limitation (see text).

Table L. Leading conditions<sup>†</sup> associated with wheelchair or scooter use, ages 65 and over.

Condition	Persons (1000s)	Proportion of device users (%)
All conditions	916	100.00
1 Osteoarthrosis and allied disorders	139	15.21
2 Cerebrovascular disease	136	14.81
3 Other forms of heart disease	43	4.73
4 Orthopedic impairment of lower extremity	39	4.28
5 Parkinson's disease	30	3.22
6 Absence or loss of lower extremity	29	3.21
7 Rheumatoid arthritis and other inflammatory polyarthropathies	26	2.86
8 Hemiplegia (paralysis of one side of body, including limbs)	25	2.72
9 Emphysema	23	2.52
10 Other circulatory system disorders	23	2.51
<sup>†</sup> Conditions reported as the main cause of functional or activity limitation (see text).		

problems" even more prevalent than osteoarthri-

problems" even more prevalent than osteoarthritis in this group.

Among the elderly, cerebrovascular disease ranks a distant second to osteoarthritis, affecting 342,000 persons as the primary cause of disability. Next are senility, affecting 233,000 persons, and orthopedic impairments of the lower extremity, which affect 226,000 elderly mobility device users. Heart disease, hip problems, back problems, and rheumatoid arthritis are also

prevalent in this group.

The most prevalent main conditions associated with wheelchair/scooter use among workingage adults (Table K) are multiple sclerosis (58,000 persons), paraplegia (45,000), and cerebrovascular disease (44,000). Among the elderly (Table L), 30 percent of wheelchair/scooter users cite either osteoarthritis (139,000 persons) or cerebrovascular disease (136,000) as their primary cause of functional or activity limitation.

<sup>\*</sup>Standard error exceeds 30 percent of the estimate.

## **ACCESSIBILITY FEATURES AND PROBLEMS**

In the Disability Followback Survey (DFS), Phase II of the National Health Interview Survey on Disability, adult respondents are asked various questions about their environments. Questions focus on features in the home that might make it more accessible to persons limited in mobility, as well as on difficulties in using the home, difficulties encountered outside the home, and difficulties associated with using public transportation.

Population estimates of mobility device users having such accessibility features and encountering such difficulties are presented in Tables 11–13, along with the proportion of users of each device who have accessibility features or encounter access problems. For comparison, statistics are also presented on persons in the DFS sample who are not mobility device users; note that these estimates are not representative of the non-device-using population in general, but only of the subset of adults who would be eligible to participate in the

DFS, based on an actual or potential disability (see Data Source and Accuracy). Table 11 presents statistics for adults of any age. Table 12 contains data for working-age adults, and Table 13 presents data for elderly adults.

#### Within and Around the Home

As Figure 20 shows, a minority of mobility device users (39.3 percent) live in homes with all rooms on one level ("counting basements and stepdown living areas as separate levels"). But more than four-fifths of device users (85.8 percent) live in homes with a bedroom, a bathroom, and the kitchen all on the same floor.

In response to questions about "special features to assist persons who have physical impairments or health problems," only a relatively small proportion of mobility device users responded affirmatively to each of the features mentioned.

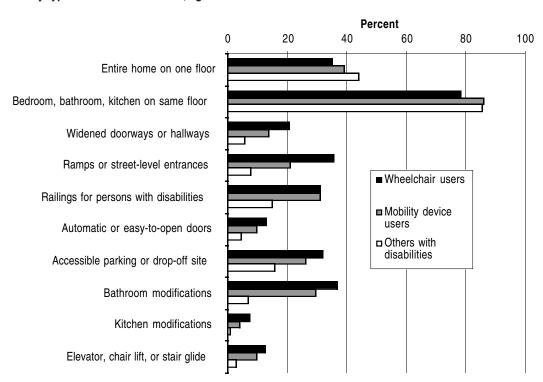


Figure 20. Proportion of mobility device users and non-users with home accessibility features, by type of feature and device, ages 18 and above.

Device users in general are most likely to have railings as an accessibility feature (31.0 percent), bathroom modifications (29.6 percent), or accessible parking (26.4 percent). Ramps or street-level entrances are the next most common accessibility feature among device users (21.0 percent), with the remaining features considerably less likely to be found in the home: automatic or easy-open doors (9.7 percent); elevator, chair lift, or stair glide (9.6 percent), and kitchen modifications (4.0 percent).

Wheelchair users are more likely than device users overall to have accessibility features: bathroom modifications, ramps or street-level entrances, accessible parking, and railings are each mentioned about one-third of the time (36.5, 35.5, 32.0 and 31.2 percent, respectively). Widened doorways or hallways are a feature in 20.6 percent of wheelchair users' homes. Again, the remaining features occur considerably less often: automatic or easy-open doors (12.8 percent); elevator, chair lift, or stair glide (12.7 percent), and kitchen modifications (7.4 percent).

Bathroom modifications are the accessibility feature most likely to be reported as needed but not present in the homes of mobility device users (Table 11). Some 8.9 percent of device users and 11.6 percent of wheelchair users lack this needed feature.

Although the vast majority of mobility device users can move between the essential rooms of

their homes without using steps, leaving the home presents much more of a problem. As shown in Figure 21, a majority of mobility device users (62.1 percent) and half of wheelchair users (49.2 percent) must use steps to enter or exit their homes. A slight majority of wheelchair users (52.1 percent) and two-fifths of mobility device users in general (40.2 percent) report having difficulty entering or leaving the home. And even within the home, problems are frequently encountered: 47.0 percent of wheelchair users and 31.9 percent of mobility device users have difficulty reaching or opening cabinets; 35.5 percent of wheelchair users and 19.2 percent of mobility device users have difficulty using the bathroom; and 33.1 percent of wheelchair users and 16.3 percent of mobility device users have difficulty opening or closing doors in the home.

#### Outside the Home

Outside the home, one-third of wheelchair and scooter users (33.2 and 34.1 percent, respectively) report wheelchair accessibility problems (see Table 11). These figures exclude problems involving public transportation, which is the subject of a separate set of questions. Users of other devices are much less likely to report accessibility problems with those devices: only 3.2 percent of mobility device users report problems with assistive devices other than wheelchairs.

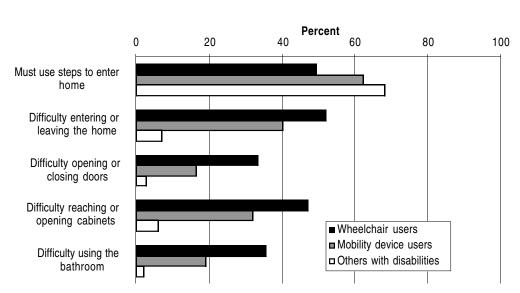


Figure 21. Proportion of mobility device users and non-users with home accessibility difficulties, by type of difficulty and device, ages 18 and above.

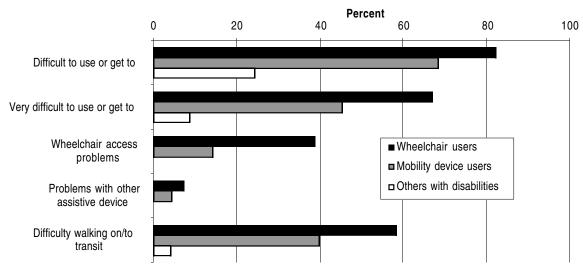


Figure 22. Proportion of mobility device users and non-users experiencing public transportation difficulties, by type of difficulty and device, ages 18 and above.

Note: Statistics exclude persons living in areas without public transportation systems.

#### **Public Transportation**

Four-fifths of wheelchair users (82.0 percent) report that their local public transportation system is difficult to use or to get to (see Figure 22); two-thirds (66.9 percent) say it is very difficult to use or get to. Among mobility device users in general, the proportions are two-thirds (68.3 percent) reporting difficulty and nearly one-half

(45.2 percent) reporting "very difficult" access. Some 38.7 percent of wheelchair users specifically report wheelchair access problems, and 39.9 percent of mobility device users and 58.1 percent of wheelchair users report that difficulty walking is or would be a problem for them in using public transit. Device users living in areas without public transportation systems have been excluded from these statistics.

### **HEALTH INSURANCE**

Respondents to Phase I of the NHIS-D were also asked about health insurance coverage during the same interview, as part of the NHIS Family Resources Supplement. Table 14 presents population estimates for mobility device users and non-users who are covered by various public and private health insurance plans.<sup>5</sup> Note that many people have more than one source of health insurance; thus, the categories are not mutually exclusive.

As shown in Figure 23, mobility device users in all age categories are very likely to have some form of health insurance. Roughly one-tenth of children and working-age adults who use mobility devices are uninsured (9.6 and 12.5 percent, respectively), while less than 1 percent of elderly device users lack some form of coverage. Public health insurance programs are crucial to mobility device users in all age groups. Among children,

46.2 percent are covered under Medicaid, compared to 48.1 percent with private insurance. And among working-age adults, 45.8 percent have private coverage, or about half of those with insurance. One-third (33.6 percent) of working-age device users are covered under Medicare and one-quarter (25.5 percent) under Medicaid. Among the elderly, the vast majority (95.3 percent) are covered under Medicare, but many also have private plans (65.7 percent of elderly mobility device users), in many cases so-called Medigap plans.

Wheelchair users are even more likely to be covered under public insurance than are mobility device users overall (see Figure 24). Among children, 58.9 percent are covered under Medicaid, while only 36.9 percent have private insurance. Working-age wheelchair users are covered under Medicare 41.9 percent of the time, private insurance 45.1 percent, and Medicaid 31.8 percent of the time. Among the elderly, 94.7 percent of wheelchair users are covered under Medicare, with private insurance plans held by 61.2 percent of this population.

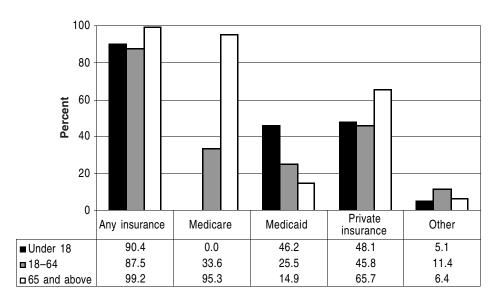


Figure 23. Health insurance coverage of mobility device users, by age and type of coverage.

<sup>&</sup>lt;sup>5</sup> Respondents with unknown health insurance status (nonresponse to the Family Resources Supplement) have been excluded from the tabulations. Thus, overall population estimates in Table 14 are slightly lower than those in Tables 1–4.

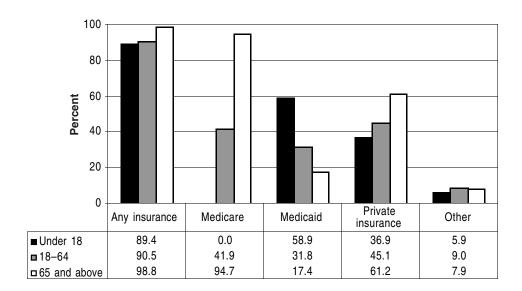


Figure 24. Health insurance coverage of wheelchair users, by age and type of coverage.

## **CONCLUSIONS**

As a group, the 6.8 million community-resident Americans who use mobility devices differ in many significant ways from the population at large. They experience severe functional and activity limitations in much greater proportions, and they are more than 40 times as likely to need assistance with self-care activities as their counterparts who do not use mobility devices. A majority are in poor or indifferent health, and many have experienced a recent hospitalization. Many are affected by debilitating health conditions, such as arthritis, stroke, or serious back problems; others have long-term conditions and impairments, such as multiple sclerosis or some form of paralysis.

A majority of the population using mobility devices is elderly, but there is a substantial minority who are of working-age. Members of this group are very unlikely to have jobs and, partly as a consequence, are substantially more likely than the remainder of the population to live in poverty. At all ages, income levels for mobility device users tend to be low, as do levels of educational attainment.

Women are more likely to use mobility devices than men, and African Americans more likely than whites, who are in turn much more likely than Asians and Pacific Islanders to be device users. Latinos are less likely to use mobility devices than people not of Hispanic origin.

Most mobility device users, especially those using wheelchairs and scooters, perceive themselves as having disabilities. Given the extent of functional and activity limitation they experience, this fact comes as no surprise. But to the extent that disability is seen as a result of environmental factors, the high rate of self-identification as disabled is even more easily understood. This report provides ample evidence that mobility device users face access barriers on a daily basis. A majority of device users, for example, cannot leave their homes without using steps; half of wheelchair users face the same obstacle. Few have the home accessibility features that would facilitate basic household tasks, not to mention moving about inside. And the vast majority report difficulty with public transit; for many, the difficulty is insurmountable.

Despite recent changes in society that have led to greater attention to environmental accessibility and to opportunities for employment and independent living for people with disabilities, it remains clear that the population using mobility devices continues to face substantial challenges in achieving these goals.

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Table 1. Number of persons and proportion of population using mobility devices, by type of device, gender, age, and family income: United States civilian noninstitutionalized population, all ages.

								Whee	Chair	Wheelchair or scoote	oter					Other	lidom	Other mobility device	رزر		
	Total	No mobility	billity	Any m	ny mobility	Any	^	Manual	lar	Electric	ric	Scooter	ier	Any		Cane	8	Crutches	sequ	Walker	er
		device	e	de	device			wheelchair		wheelchair	hair										
	Number (1000s)	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%
All persons	260,763	253,942	97.38	6,821	2.62	1,679	0.64	1,503	0.58	155	90.0	142	0.05	6,126	2.35	4,755	1.82	566	0.22	1,820	0.70
<b>Gender</b> Males Females	127,033 133,730	124,201 129,741	97.77 97.02	2,832	2.23	692 987	0.54	909	0.48	84	0.07	82	0.05	2,502 3,624	1.97	2,014	1.59 2.05	328 238	0.26	508 1,312	0.40
Age																					
Under 18	70,349	70,204	99.79	145	0.21	88 ÷	0.12	4 0 4	0.11	<u>*</u>	* 0.02	0 0	0.00	73	0.10	19 *	0.03	98 .	0.05	27	0.04
5-13	35.091	34,994	99.92	· 86	0.00	0 99	0.03	5 19	0.03	۰ ۲			00.0	o 45	0.04	4 œ	0.02	, 24 c	0.00	° %	0.06
14-17	14,880	14,850	99.80	30	0.20	12 *	* 0.08	* •	* 90.0	*	* 40.0		0.00	21	0.14	*	0.02	12 *	* 80.0	*	0.01
18-64	159,169	156,859	98.55	2,310	1.45	658	0.41	260	0.35	96			0.05	1,987	1.25	1,535	96.0	375	0.24	373	0.23
18-24	25,107	25,022	99.66	84	0.34	48	0.19	43	0.17	* =		*	* 10.0	52	0.21	20	0.08	35	0.13	* ∞	0.03 *
25-34	41,073	40,883	99.54	189	0.46	22	0.14	40	0.10	20	0.05		0.00	151	0.37	88	0.21	22	0.14	23	90.0
35-44	41,930	41,436	98.82	494	1.18	135	0.32	119	0.28	16	* 40.0	4	0.03	416	0.99	317	0.76	106	0.25	21	0.12
45-54	30,317	29,686	97.92	631	2.08	171	0.56	143	0.47	* 20	0.07		0.08	222	1.84	445	1.47	94	0.31	103	0.34
55-64	20,742	19,831	95.60	912	4.40	247	1.19	212	1.04	22	0.10		0.19	812	3.91	299	3.21	86	0.41	189	0.91
65 and over	31,245	26,879	86.03	4,366	13.97	933	2.99	864	2.76	47	0.15		0.21	4,065	13.01	3,200	10.24	155	0.50	1,421	4.55
69-59	9,698	9,034	93.15	664	6.85	170	1.75	151	1.55	*	* 80.0		0.22	610	6.29	491	5.07	26	0.58	160	1.65
70-74	8,658	7,865	90.84	793	9.16	173	2.00	154	1.78	16	0.18 *	13 *	0.15 *	729	8.41	594	98.9	36	0.41	233	2.69
75-84 85 and over	10,194	8,352	81.93	1,842	18.07	410	4.02	387	3.79	9 9 *	0.18	*	0.25	1,702	16.69	1,372	13.46 27.56	49	0.49	582	5.71
omooni viimo	Î																				
Under \$10.000	23.254	21.684	93.25	1.571	6.75	325	1.40	297	1.28	27	* 11		* 01.0	1,453	6.25	1,147	4.93	126	0.54	476	2.05
\$10,000-\$14,999	18,670	17,774	95.20		4.80	204	1.09	188	1.01	*	* 90.0	80	0.10	822	4.40	652	3.49	61	0.33	244	1.30
\$15,000-\$24,999	39,983	38,635	96.63	<u> </u>	3.37	377	0.94	332	0.83	4	0.10		90.0	1,184	2.96	930	2.33	112	0.28	347	0.87
\$25,000-\$34,999	36,154	35,495	98.18	629	1.82	169	0.47	141	0.39	50	0.05		0.07	588	1.63	432	1.20	74	0.21	162	0.45
\$35,000 or more	106,642	105,507	98.94	1,135	1.06	320	0.30	286	0.27	36	0.03		0.03	966	0.93	730	0.68	134	0.13	267	0.25
Unknown	36,060	34,847	96.64	1,213	3.36	285	0.79	259	0.72	20	0.05		0.05	1,082	3.00	864	2.39	29	0.16	325	06.0
Source: National Health Interview Survey on Disability	Health In	terview Su	rvey on	Disability	/, 1994–95	95															
*Estimate has low statistical reliability (standard error	/ statistica	reliability	(standa		exceeds	30	percent of	estimate)	<i>-</i> :												

Table 2. Number of persons and proportion of population using mobility devices, by type of device and sociodemographic characteristics: United States civilian noninstitutionalized population, all ages.

	Total	No mol devi	•	Any m	obility	Whee	Ichair	Scoo	oter	Ca	ane	Cruto	hes	Walk	er
	Number (1000s)	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%
All persons	260,763	253,942	97.38	6,821	2.62	1,599	0.61	142	0.05	4,755	1.82	566	0.22	1,820	0.70
Gender															
Males Females	127,033 133,730	124,201 129,741	97.77 97.02	2,832 3,989	2.23 2.98	658 941	0.52 0.70		0.05 0.06	2,014 2,741	1.59 2.05	328 238	0.26 0.18	508 1,312	0.40 0.98
Age															
Under 18	70,349	70,204	99.79	145	0.21	88	0.12	0	0.00	19	* 0.03	36	0.05	27	0.04
Under 5	20,378	20,361	99.92	17	* 0.08	* 10	* 0.05	* 0	0.00	4	* 0.02	* 0	0.00	3 *	0.02 *
5-13	35,091	34,994	99.72	98	0.28	66	0.19	0	0.00	8	* 0.02	* 24	0.07	22	0.06
14-17	14,880	14,850	99.80	30	0.20	12	* 0.08	* 0	0.00	7	* 0.05	* 12	80.0	* 1 *	0.01 *
18-64	159,169	156,859	98.55	2,310	1.45	614	0.39	78	0.05	1,535	0.96	375	0.24	373	0.23
18-24	25,107	25,022	99.66	84	0.34	48	0.19	1 *	0.01	* 20	0.08	32	0.13	8 *	0.03 *
25-34	41,073	40,883	99.54	189	0.46	57	0.14	0	0.00	88	0.21	57	0.14	23	0.06
35-44	41,930	41,436	98.82	494	1.18	127	0.30	14 *	0.03	* 317	0.76	106	0.25	51	0.12
45-54	30,317	29,686	97.92	631	2.08	155	0.51	24	0.08	445	1.47	94	0.31	103	0.34
55-64	20,742	19,831	95.60	912	4.40	227	1.09	39	0.19	667	3.21	86	0.41	189	0.91
65 and over	31,245	26,879	86.03	4,366	13.97	897	2.87	64	0.21	3,200	10.24	155	0.50	1,421	4.55
65-69	9,698	9,034	93.15	664	6.85	156	1.61	21	0.22	491	5.07	56	0.58	160	1.65
70-74	8,658	7,865	90.84	793	9.16	164	1.90	13 *	0.15		6.86	36	0.41	233	2.69
75-84	10,194	8,352	81.93	1,842	18.07	401	3.93		0.25	1,372	13.46	49	0.49	582	5.71
85 and over	2,696	1,629	60.42	1,067	39.58	175	6.50	5 *	0.18	* 743	27.56	14	0.50	* 445	16.53
Age and Gender Males															
Under 18	35,997	35,909	99.75	88	0.25	51	0.14	0	0.00	8	* 0.02	* 25	0.07	19	0.05
Under 5	10,423	10,417	99.95		* 0.05				0.00	0	0.02	0	0.00	3 *	
5-13	17,945	17,878	99.63	67	0.37	41	0.23	0	0.00	5	* 0.03		0.10		0.09
14-17	7,630	7,614	99.79	16	0.21		* 0.10		0.00	2	* 0.03		0.09		0.00
18-64	78,001	76,756	98.40	1,245	1.60	299	0.38		0.04	837	1.07	221	0.28	132	0.17
18-24	12,482	12,436	99.63	46	0.37	25	0.20		0.00	8	* 0.06		0.13		0.03 *
25-34	20,219	20,106	99.44	113	0.56	34	0.17	0	0.00	50	0.25	33	0.16	8 *	
35-44	20,642	20,347	98.57	295	1.43	73	0.35		0.03		0.91	69	0.34	16	0.08
45-54	14,791	14,441	97.63	351	2.37	74	0.50		0.06	* 261	1.76	50	0.34	42	0.28
55-64	9,867	9,426	95.54	440	4.46	93	0.94	14 *	0.14	* 332	3.36	51	0.52	61	0.62
65 and over	13,035	11,536	88.50	1,499	11.50	308	2.36	31	0.24	1,169	8.97	82	0.63	358	2.75
65-69	4,428	4,119	93.03	309	6.97	71	1.59	10 *	0.23	* 248	5.59	31	0.69	62	1.41
70-74	3,742	3,435	91.79	307	8.21	61	1.64	5 *	0.15	* 252	6.73	18	0.48	54	1.44
75-84	4,017	3,407	84.81	610	15.19	138	3.43	13 *	0.32	* 462	11.49	29	0.71	157	3.90
85 and over	848	576	67.87	273	32.13	38	4.53	2 *	0.25	* 208	24.46	5	0.58	* 85	10.04
Females															
Under 18	34,352	34,295	99.83	57	0.17		0.11		0.00			* 11			
Under 5	9,955	9,944	99.88	12 '			* 0.07		0.00	4			0.00	0	0.00
5-13	17,146	17,115	99.82	31	0.18	26	0.15		0.00	2			0.03		
14-17	7,250	7,236	99.81	14 '			* 0.05		0.00	5	0.07		0.07		
18-64	81,168	80,103	98.69	1,065	1.31	316	0.39		0.06	698	0.86		0.19	242	0.30
18-24	12,625	12,586	99.69	39	0.31	23	0.18						0.13		
25-34	20,854	20,778	99.63	76	0.37	23	0.11	0	0.00	38	0.18	23	0.11	15 *	
35-44	21,288	21,089	99.07	199	0.93	54	0.25				0.61	37	0.17	34	0.16 *
45-54	15,525	15,245	98.19	280	1.81	82	0.53				1.19	44	0.28	61	0.40 *
55-64	10,876	10,404	95.67	471	4.33	134	1.24	25	0.23	335	3.08	34	0.31	127	1.17 *

Table 2 continued. Number of persons and proportion of population using mobility devices, by type of device and sociodemographic characteristics: United States civilian noninstitutionalized population, all ages.

	Total	No mol devi	•	Any m	obility	Wheel	lchair	Scoo	oter	Ca	ane	Cruto	ches	Wall	cer
	Number (1000s)	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)		Number (1000s)	%
65 and over	18,210	15,343	84.25	2,867	15.75	589	3.23	33	0.18	2,031	11.16	73	0.40	1,063	5.83 *
65-69	5,270	4,915	93.26	355	6.74	86	1.63	11 *	0.21		4.63	25	0.48	98	1.86 *
70-74	4,916	4,430	90.12	485	9.88	103	2.10	7 *	0.14		6.96	18	0.36	179	3.64 *
75-84 85 and over	6,177 1,847	4,945 1,053	80.06 56.99	1,232 794	19.94 43.01	263 137	4.25 7.41	13 3 *	0.20	910 * 535	14.74 28.98	21 a	0.34 * 0.47	425 * 360	6.89 * 19.51 *
oo and over	1,047	1,000	30.33	754	40.01	107	7.71	J	0.10	303	20.50	3	0.47	000	10.01
Race Native American	2,520	2,435	96.61	85	3.39	20	0.81	0	0.00	52	2.06	10	* 0.41	* 22	0.88
Asian/Pacific Isl.	8,919	8,831	99.02	88	0.98	31	0.35	3 *	0.04		0.66		* 0.15		0.00
Black	32,899	31,892	96.90	1,008	3.06	183	0.56	5 *	0.02		2.28	90	0.17	208	0.63
White	216,066	210,433	97.40	5,633	2.61	1,362	0.63	134	0.06	3,887	1.80	452	0.21	1,565	0.72
Other & unknown	358	351	98.10	7	* 1.95	* 2	* 0.52	* 0	0.00	7	* 1.95	* 0	0.00	3 '	0.88 *
Ethnicity															
Hispanic origin	28,013	27,598	98.52	415	1.48	101	0.36	3 *	0.01	* 278	0.99	38	0.14	100	0.36
Other	232,750	226,343	97.25	6,406	2.75	1,497	0.64	139	0.06	4,477	1.92	528	0.23	1,721	0.74
Education All persons 18 and															
older	190,414	183,738	96.49	6,676	3.51	1,511	0.79	142	0.07	4,736	2.49	530	0.28	1,794	0.94
Years of schooling:															
8 years or less	15,127	13,483	89.14	1,643	10.86	327	2.16	21	0.14	1,170	7.73	71	0.47	529	3.50
9-11 years	20,904	19,761	94.53	1,143	5.47	247	1.18	13 *	0.00	* 819	3.92	78	0.37	330	1.58
12 years	70,225 41,924	68,109 40,988	96.99 97.77	2,116 936	3.01 2.23	499 238	0.71 0.57	53 35	0.08	1,474 675	2.10	217 90	0.31	524 222	0.75 0.53
13-15 years 16 years or more	40,830	40,988	98.20	733	1.80	236 166	0.57	20	0.06	534	1.61 1.31	64	0.21	141	0.35
Unknown	1,405	1,300	92.57	104	7.43	34	2.44	0	0.00	64	4.59		* 0.67		3.42
Familia Income															
Family income Under \$10,000	23,254	21,684	93.25	1,571	6.75	309	1.33	24	0.10	* 1,147	4.93	126	0.54	476	2.05
\$10,000-\$14,999	18,670	17,774	95.20	896	4.80	195	1.05	18	0.10	652	3.49	61	0.34	244	1.30
\$15,000-\$24,999	39,983	38,635	96.63	1,348	3.37	363	0.91	23	0.06	930	2.33	112	0.28	347	0.87
\$25,000-\$34,999	36,154	35,495	98.18	659	1.82	152	0.42	24	0.07	432	1.20	74	0.21	162	0.45
\$35,000 or more	106,642	105,507	98.94	1,135	1.06	306	0.29	34	0.03	730	0.68	134	0.13	267	0.25
Unknown	36,060	34,847	96.64	1,213	3.36	273	0.76	19	0.05	864	2.39	59	0.16	325	0.90
Poverty status															
Above poverty line	210,419	205,737	97.77	4,682	2.23	1,152	0.55	109	0.05	3,216	1.53	407	0.19	1,227	0.58
Below poverty line	31,954	30,689	96.04	1,265	3.96	272	0.85	24	0.08	901	2.82	120	0.38	349	1.09
Unknown	18,390	17,516	95.25	874	4.75	175	0.95	9 *	0.05	* 637	3.47	39	0.21	245	1.33
Region															
Northeast	52,551	51,201	97.43	1,350	2.57	315	0.60	27	0.05	976	1.86	104	0.20	335	0.64
Midwest	63,428	61,779	97.40	1,648	2.60	370	0.58	47	0.07	1,175	1.85	134	0.21	457	0.72
South	88,310	85,847	97.21	2,463	2.79	569	0.64	46	0.05	1,692	1.92	208	0.23	637	0.72
West	56,474	55,114	97.59	1,360	2.41	345	0.61	23	0.04	911	1.61	121	0.21	392	0.69
Setting of residence															
Metropolitan	205,507	200,465	97.55	5,042	2.45	1,241	0.60	106	0.05	3,518	1.71	412	0.20	1,352	0.66
Central city	78,318	76,146	97.23	2,173	2.77	526	0.67	31	0.04	1,536	1.96	177	0.23	580	0.74
Suburb	127,188	124,319	97.74	2,869	2.26	715	0.56	75	0.06	1,982	1.56	235	0.18	772	0.61
Non-metropolitan	55,256	53,477	96.78	1,780	3.22	358	0.65	36	0.07	1,237	2.24	155	0.28	469	0.85
Non-farm	53,778	52,032	96.75	1,746	3.25	349	0.65	36	0.07	1,211	2.25	152	0.28	465	0.86
Farm	1,479	1,445	97.74	33	2.26	9	* 0.58	* 0	0.00	26	1.76	3	* 0.20	* 4	0.29 *

Table 3. Number of persons and proportion of population using mobility devices, by type of device and sociodemographic characteristics: United States civilian noninstitutionalized population, ages 18–64.

		No mo	bility	Any mo	bility										
	Total	devi	ce	devi	ce	Wheel	chair	Scoo	oter	Can	ie	Cruto	hes	Wall	ker
	Number	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
	(1000s)	(1000s)		(1000s)		(1000s)		(1000s)		(1000s)		(1000s)		(1000s)	
All persons Gender	159,169	156,859	98.55	2,310	1.45	614	0.39	78	0.05	1,535	0.96	375	0.24	373	0.23
Males	78,001	76,756	98.40	1,245	1.60	299	0.38	29	0.04	837	1.07	221	0.28	132	0.17
Females <b>Race</b>	81,168	80,103	98.69	1,065	1.31	316	0.39	49	0.06	698	0.86	154	0.19	242	0.30
Native American	1,505	1,448	96.22	57	3.78	14 '	0.96	* 0	0.00	39	2.61	9 *	0.61	* 8 *	0.53 *
Asian/Pacific Isl.	5,908	5,879	99.51	29	0.49	13 '	0.22	* 1 *	0.02	* 16	0.27	6 *	0.10	* 6 *	0.10 *
Black	19,107	18,644	97.60	463	2.42	85	0.44	5 *	0.02	* 330	1.73	65	0.34	72	0.38
White	132,364	130,607	98.70	1,757	1.33	502	0.38	72	0.05	1,145	0.87	295	0.22	287	0.22
Other & unknown Ethnicity	286	281	98.60	4	* 1.44	* 0	0.00	0	0.00	4	* 1.44	* 0	0.00	1 *	0.45 *
Hispanic origin	16,232	16,054	98.90	178	1.10	41	0.26	2 *	0.01	* 120	0.74	33	0.20	20	0.12
Other	142,937	140,805	98.51	2,132	1.49	573	0.40	76	0.05	1,415	0.99	343	0.24	353	0.25
Education															
8 years or less	8,319	8,017	96.37	302	3.63	63	0.75	5 *	0.06	* 217	2.61	35	0.42	56	0.67
9-11 years	16,105	15,710	97.55	395	2.45	100	0.62	6 *	0.04	* 261	1.62	57	0.35	69	0.43
12 years	59,374	58,544	98.60	829	1.40	227	0.38	33	0.06	527	0.89	158	0.27	133	0.22
13-15 years	37,653	37,198	98.79	455	1.21	139	0.37	20	0.05	* 306	0.81	73	0.19	72	0.19
16 years or more	36,661	36,343	99.13	318	0.87	84	0.23	14 *	0.04	* 216	0.59	50	0.14	41	0.11
Unknown	1,057	1,046	98.92	11	* 1.08	* 2 *	0.22	* 0	0.00	8	* 0.77	* 2 *	0.23	* 2 *	0.21 *
<b>Employment status</b>															
In labor force	125,465	124,834	99.50	632	0.50	125	0.10	16 *	0.01	* 391	0.31	167	0.13	64	0.05
Employed	120,019	119,457	99.53	562	0.47	107	0.09	14 *	0.01	* 352	0.29	144	0.12	54	0.05
Unemployed	5,446	5,376	98.72	70	1.28	18	0.33	1 *	0.03	* 39	0.71	23	0.42	9 *	0.17 *
Not in labor force	33,703	32,025	95.02	1,678	4.98	489	1.45	62	0.19	1,145	3.40	208	0.62	310	0.92
Family income															
Under \$10,000	12,197	11,682	95.78	515	4.22	119	0.98	13 *	0.10	* 343	2.81	86	0.70	104	0.85
\$10,000-\$14,999	9,607	9,317	96.98	290	3.02	82	0.85	9 *	0.09	* 202	2.10	32	0.34	66	0.68
\$15,000-\$24,999	22,651	22,218	98.09	433	1.91	140	0.62	13 *	0.06	* 281	1.24	69	0.31	61	0.27
\$25,000-\$34,999	22,400	22,154	98.90	245	1.10	58	0.26	15 *	0.07	* 152	0.68	53	0.24	34	0.15
\$35,000 or more	71,202	70,657	99.23	545	0.77	146	0.20	21	0.03	362	0.51	101	0.14	71	0.10
Unknown	21,112	20,830	98.67	282	1.33	69	0.33	7 *	0.03	* 196	0.93	34	0.16	37	0.18
Poverty status															
Above poverty line	132,936	131,399	98.84	1,537	1.16	450	0.34	60	0.05	996	0.75	264	0.20	235	0.18
Below poverty line	16,469	15,886	96.46	583	3.54	133	0.81	16 *	0.10	* 396	2.41	88	0.54	114	0.69
Unknown <b>Region</b>	9,764	9,574	98.05	191	1.95	32	0.32	2 *	0.02	* 143	1.46	22	0.23	24	0.25
Northeast	32,129	31,693	98.64	436	1.36	138	0.43	12 *	0.04	283	0.88	66	0.21	77	0.24
Midwest	38,525	37,983	98.59	542	1.41	141	0.37	28	0.07	374	0.97	92	0.24	84	0.22
South	54,233	53,355	98.38	878	1.62	200	0.37	26	0.05	584	1.08	146	0.27	134	0.25
West	34,281	33,828	98.68	453	1.32	135	0.39	11	0.03	* 295	0.86	71	0.21	78	0.23
Setting of residence															
Metropolitan	126,428	124,683	98.62	1,744	1.38	472	0.37	58	0.05	1,179	0.93	269	0.21	289	0.23
Central city	48,270	47,468	98.34	802	1.66	191	0.39	19	0.04	556	1.15	113	0.23	148	0.31
Suburb	78,157	77,215	98.79	942	1.21	281	0.36	40	0.05	623	0.80	156	0.20	141	0.18
Non-metropolitan	32,741	32,175	98.27	566	1.73	142	0.43		0.06		1.09	106	0.33	84	0.26
Non-farm	31,822	31,267	98.26	555	1.74		0.43		0.06		1.10	106	0.33	82	0.26
Farm	919	908	98.81	11	* 1.19	* 4	0.47	* 0	0.00	8	* 0.85	* 1 *	0.10	* 2 *	0.23 *

Table 4. Number of persons and proportion of population using mobility devices, by type of device and sociodemographic characteristics: United States civilian noninstitutionalized population, ages 65 and above.

	Total	No mo	•	Any modev	•	Wheel	chair	Sco	oter	Car	ne	Cruto	hes	Walk	er
	Number (1000s)	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)		Number (1000s)	%	Number (1000s)	%	Number (1000s)	%
All persons	31,245	26,879	86.03	4,366	13.97	897	2.87	64	0.21	3,200	10.24	155	0.50	1,421	4.55
Gender															
Males	13,035	11,536	88.50	1,499	11.50	308	2.36	31	0.24	1,169	8.97	82	0.63	358	2.75
Females	18,210	15,343	84.25	2,867	15.75	589	3.23	33	0.18	2,031	11.16	73	0.40	1,063	5.83
Race															
Native American	155	130	83.66	25	16.34	3 *	1.69	* 0	0.00	13	* 8.09	* 1 *	0.79	* 14 *	9.23
Asian/Pacific Isl.	578	526	91.01	52	8.99	17	2.88		* 0.35		7.39	2 *			2.25 *
Black	2,533	2,012	79.40	521	20.57	87	3.44	1	* 0.02	* 415	16.40	20	0.81	131	5.19
White	27,964	24,199	86.50	3,765	13.46	788	2.82	62	0.22	2,727	9.75	131	0.47	1,260	4.51
Other & unknown	15	* 12	* 80.90	3	* 19.14	* 2 *	12.44	* 0	0.00	3	* 19.14	* 0	0.00	2 *	12.44 *
Ethnicity															
Hispanic origin	1,578	1,358	86.10	219	13.90	48	3.03	1	* 0.09	* 155	9.84	3 *	0.21	* 78	4.97
Other	29,668	25,521	86.02	4,147	13.98	849	2.86	63	0.21	3,045	10.26	151	0.51	1,342	4.52
	,	,		•						,				,	
Education															
8 years or less	6,808	5,466	80.29	1,342	19.71	265	3.89	16	0.24	953	13.99	36	0.53	473	6.95
9-11 years	4,799	4,050	84.40	748	15.60	147	3.06	7	• • • •		11.63	21	0.44	261	5.44
12 years	10,852	9,565	88.14	1,287	11.86	272	2.51	20	0.19	947	8.72	59	0.54	391	3.60
13-15 years	4,271	3,789	88.73	481 415	11.27 9.96	99 83	2.31 1.98	15 6	0.35	369	8.64 7.62	17 14 *	0.40	150	3.51 2.40
16 years or more Unknown	4,169 348	3,753 255	90.04 73.25	93	26.75	32	9.17	0	0.14	* 318 56	16.18		2.04		13.19
•	0.0		. 0.20				0		0.00			-			
Family income															
Under \$10,000	4,244	3,208	75.61	1,035	24.39	180	4.24		* 0.27		18.83	35	0.81	370	8.71
\$10,000-\$14,999	3,948	3,353	84.93	595	15.07	106	2.68		* 0.23		11.41	24	0.60	175	4.43
\$15,000-\$24,999	6,946	6,056	87.19	889	12.81	204 85	2.93		* 0.15		9.34	39	0.56	281	4.05
\$25,000-\$34,999 \$35,000 or more	3,964 5,601	3,567 5,061	89.97 90.36	397 540	10.03 9.64	132	2.16 2.36		* 0.21 * 0.23		7.01 6.43	15 20	0.38	126 188	3.17 3.35
Unknown	6,543	5,634	86.10	909	13.90	190	2.91		* 0.19		10.15	22	0.34	282	4.30
Onknown	0,040	0,004	00.10	000	10.00	100	2.01		0.10	004	10.10		0.04	202	4.00
Poverty status															
Above poverty line	24,470	21,426	87.56	3,044	12.44	642	2.62	49	0.20	2,207	9.02	117	0.48	975	3.99
Below poverty line	2,617	1,966	75.10	652	24.90	120	4.59		* 0.33		19.07	21	0.82	230	8.79
Unknown	4,158	3,488	83.87	671	16.13	135	3.24	1	* 0.16	* 494	11.89	10	0.38	* 215	5.17
Region															
Northeast	6,978	6,092	87.30	886	12.70	159	2.28	15	* 0.21		9.88	30	0.42	254	3.65
Midwest	7,815	6,742	86.27	1,073	13.73	209	2.68	19	0.24	798	10.22	33	0.43	360	4.61
South	10,412	8,883	85.32	1,529	14.68	338	3.24	19	0.19	1,097	10.54	48	0.46	497	4.77
West	6,040	5,162	85.45	879	14.55	191	3.17	12	* 0.19	* 615	10.18	44	0.72	309	5.11
Setting of residence															
Metropolitan	23,526	20,333	86.43	3,192	13.57	705	3.00	48	0.20	2,326	9.89	114	0.49	1,040	4.42
Central city	9,140	7,805	85.40	1,334	14.60	313	3.43		* 0.14		10.64	54	0.59	429	4.69
Suburb	14,386	12,528	87.09	1,858	12.91	392	2.72	35	0.24	1,353	9.40	61	0.42	611	4.25
Non-metropolitan	7,720	6,546	84.79	1,174	15.21	192	2.49	16	0.21	875	11.33	41	0.53	381	4.94
Non-farm	7,514	6,362	84.67	1,152	15.33	188	2.50	16	0.21	856	11.40	39	0.51	379	5.04
Farm	206	183	89.07	23	10.93	4 *	2.07	* 0	0.00	18	* 8.87	2 *	0.99	* 2 *	1.02 *

<sup>\*</sup>Estimate has low statistical reliability (standard error exceeds 30 percent of estimate).

Table 5. Health- and disability-related characteristics of mobility device users and non-users, by type of device: United States civilian noninstitutionalized population, all ages.

			No mo	bility	Any m	obility										
	То	tal	devi	•	dev	•	Whee	lchair	Sco	ooter	Car	ne	Cru	tches	Wall	ker
	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%
All persons	260,763	100.0	253,942	100.0	6,821	100.0	1,599	100.0	142	100.0	4,755	100.0	566	100.0	1,820	100.0
Health status																
Excellent	97,569	37.4	97,190	38.3	379	5.6	76	4.7	8	* 5.4	* 236	5.0	68	12.1	82	4.5
Very good	75,130	28.8	74,433	29.3	697	10.2	116	7.2	8	* 5.8	* 485	10.2	80	14.2	151	8.3
Good	60,045	23.0	58,323	23.0	1,722	25.2	346	21.6	32	22.5	1,200	25.2	161	28.4	374	20.6
Fair	18,603	7.1	16,654	6.6	1,949	28.6	407	25.5	38	26.7	1,438	30.3	119	21.0	520	28.5
Poor	7,214	2.8	5,199	2.0	2,015	29.5	638	39.9	52	36.4	1,355	28.5	136	24.1	667	36.6
Unknown	2,202	8.0	2,144	0.8	58	0.9	16	1.0	5	* 3.3	* 41	0.9	2	* 0.3	* 27	1.5
Hospitalization history Discharged in prior 6 months Hospitalization in prior year	11,252 19,439	4.3 7.5	9,776 17,210	3.8 6.8	1,476 2,229	21.6 32.7	478 687	29.9 43.0	35 48	24.7 33.8	898 1,420	18.9 29.9	154 199	27.2 35.1	556 810	30.6 44.5
	.0,.00		,	0.0	_,0	02				00.0	.,0	_0.0			0.0	
Perceived disability Self-perceived disability	17,557	6.7	13,312	5.2	4,246	62.2	1,285	80.4	122	85.7	2,796	58.8	357	63.1	1,239	68.1
Other-perceived disability	14,455	5.5	10,530	4.1	3,925	57.5	1,255	78.5	120	84.3	2,790	52.8	342	60.4	1,239	65.8
No perceived disability	241,444	92.6	239.171	94.2	2,273	33.3	240	15.0	14	10.2	1,754	36.9	183	32.4	492	27.0
,	,	02.0	200,171	01.2	2,270	00.0	210	10.0	• • •		1,701	00.0	100	02.1	102	27.0
Activity limitation Unable to do major activity	11 004	16	0.050	2 5	2.046	42.0	1.057	66.1	0.5	59.5	1 000	20 0	251	44.4	057	E0 6
Only limited in major activity	11,904 14,725	4.6 5.6	8,958 12,970	3.5 5.1	2,946 1,755	43.2 25.7	1,057 349	66.1 21.8	85 39	27.1	1,808 1,248	38.0 26.2	146	25.7	957 471	52.6 25.9
Limited only in other activity	12,320	4.7	11,280	4.4	1,039	15.2	81	5.1	14	9.7	883	18.6	44	7.8	191	10.5
Not limited in activity	221,814	85.1	220,733	86.9	1,081	15.8	112	7.0	5	* 3.6	* 817	17.2	125	22.1	202	11.1
Tion miniou in usurity	,	00	,	00.0	.,00.				·	0.0	• • • • • • • • • • • • • • • • • • • •		0			
All persons aged 18 & over	190,414	100.0	183,738	100.0	6,676	100.0	1,511	100.0	142	100.0	4,736	100.0	530	100.0	1,794	100.0
Functional limitation																
Limited in 1 or more	25,103	13.2	19,183	10.4	5,920	88.7	1,453	96.2	140	98.4	4,136	87.3	433	81.8	1,711	95.4
Unable to perform 1 or more	7,595	4.0	3,970	2.2	3,625	54.3	1,294	85.7	109	76.8	2,182	46.1	240	45.4	1,336	74.5
No functional limitation	165,311	86.8	164,555	89.6	756	11.3	58	3.8	2	* 1.6	* 599	12.7	96	18.2	83	4.6
Specific functional limitations																
Lifting 10 lbs.	10,046	5.3	6,610	3.6	3,435	51.5	1,077	71.3	78	55.2	2,226	47.0	217	40.9	1,195	66.6
Unable	3,314	1.7	1,600	0.9	1,714	25.7	730	48.3	42	29.6	933	19.7	78	14.8	725	40.4
Difficulty only	6,732	3.5	5,010	2.7	1,721 4,365	25.8 65.4	347 1,336	23.0 88.4	36	25.6	1,293 2,826	27.3 59.7	139 315	26.2 59.5	470 1,464	26.2
Climbing stairs Unable	11,020 2,519	5.8 1.3	6,654 738	3.6 0.4	1,781	26.7	962	63.7	116 63	81.8 44.3	760	16.1	107	20.2	794	81.6 44.3
Difficulty only	8,501	4.5	5,916	3.2	2,585	38.7	374	24.7	53	37.5	2,066	43.6	208	39.3	670	37.3
Walking 1/4 mile	14,558	7.6	9,412	5.1	5,147	77.1	1,424	94.2	138	96.9	3,469	73.3	379	71.5	1,603	89.4
Unable	4,936	2.6	2,061	1.1	2,875	43.1	1,186	78.5	102	72.0	1,596	33.7	183	34.5	1,132	63.1
Difficulty only	9,622	5.1	7,351	4.0	2,271	34.0	238	15.7	35	24.9	1,873	39.6	196	36.9	471	26.3
Standing 20 mins.	11,261	5.9	6,936	3.8	4,325	64.8	1,311	86.8	125	87.6	2,821	59.6	327	61.7	1,409	78.6
Unable	2,738	1.4	902	0.5	1,836	27.5	922	61.0	67	47.1	896	18.9	130	24.6	708	39.5
Difficulty only	8,524	4.5	6,035	3.3	2,489	37.3	389	25.8	58	40.5	1,924	40.6	197	37.2	701	39.1
Bending down	12,074	6.3	8,018	4.4	4,057	60.8	1,226	81.2	110	77.4	2,662	56.2	297	56.1	1,327	74.0
Unable	2,359	1.2	842	0.5	1,517	22.7	837	55.4	55	38.4	679	14.3	103	19.4	587	32.7
Difficulty only	9,715	5.1	7,176	3.9	2,539	38.0	389	25.8	55	39.0	1,983	41.9	195	36.8	740	41.3
Reaching up or out	5,272	2.8	3,520	1.9	1,752	26.2	563	37.3	59	41.6	1,158	24.5	112	21.2	572	31.9
Unable Difficulty, only	916	0.5	455	0.2	460	6.9	227	15.0	11	* 8.0		5.1	15 07	2.9	168 405	9.3
Difficulty only	4,357 4,695	2.3 2.5	3,065 3,255	1.7 1.8	1,292 1,440	19.3 21.6	336 510	22.2 33.7	48 47	33.6 33.4	916 941	19.3 19.9	97 79	18.3 14.9	405 452	22.6 25.2
Grasping Unable	309	0.2	129	0.1	180	2.7	137	9.1	6	* 4.6		1.4	4	* 0.8		23.2
Difficulty only	4,387	2.3	3,127	1.7	1,260	18.9	373	24.7	41	28.8	875	18.5	74	14.0	413	23.0
Holding pen	3,141	1.6	1,975	1.1	1,166	17.5	478	31.6	37	25.8	720	15.2	43	8.2	434	24.2
Unable	330	0.2	138	0.1	192	2.9	137	9.0	4	* 2.7		1.4	0	0.0	61	3.4
Difficulty only	2,811	1.5	1,838	1.0	974	14.6	341	22.6	33	23.2	654	13.8	43	8.2	374	20.8
- •	•		•													

Table 5 continued. Health- and disability-related characteristics of mobility device users and non-users, by type of device: United States civilian noninstitutionalized population, all ages.

	То	tal	No mo devi	•	•	obility vice	Whee	lchair	Sco	ooter	Car	ne	Crut	ches	Wali	ker
	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%
All persons aged 5 and over	240,385	100.0	233,581	100.0	6,804	100.0	1,589	100.0	142	100.0	4,750	100.0	566	100.0	1,817	100.0
Self-care activities (ADL)																
Any ADL limitation	5,710	2.4	2,500	1.1	3,210	47.2	1,274	80.2	101	71.3	1,794	37.8	270	47.7	1,309	72.1
Needs assistance	3,821	1.6	1,721	0.7	2,101	30.9	996	62.7	53	37.3	1,043	22.0	132	23.4	908	50.0
No ADL limitation	234,675	97.6	231,081	98.9	3,594	52.8	315	19.8	41	28.7	2,957	62.2	296	52.3	508	27.9
Specific ADL limitations																
Bathing	4,288	1.8	1,707	0.7	2,582	37.9	1,145	72.0	75	52.7	1,370	28.8	191	33.7	1,075	59.2
Needs assistance	3,105	1.3	1,290	0.6	1,816	26.7	928	58.4	40	28.3	828	17.4	100	17.6	813	44.8
Dressing	2,846	1.2	1,174	0.5	1,672	24.6	868	54.6	45	31.8	779	16.4	130	22.9	691	38.0
Needs assistance	2,381	1.0	972	0.4	1,409	20.7	795	50.0	37	26.2	598	12.6	91	16.1	596	32.8
Eating	967	0.4	443	0.2	524	7.7	371	23.3	22	15.3	176	3.7	29	5.2	195	10.7
Needs assistance	775	0.3	350	0.1	424	6.2	319	20.1	11 '	* 8.1		2.6	19	3.4	153	8.4
Transferring	2,663	1.1	910	0.4	1,753	25.8	881	55.4	67	47.0	850	17.9	154	27.2	734	40.4
Needs assistance	1,684	0.7	528	0.2	1,156	17.0	694	43.7	39	27.4	482	10.1	65	11.5	470	25.9
Toileting	2,090	0.9	583	0.2	1,507	22.1	835	52.6	52	36.4	646	13.6	120	21.3	693	38.1
Needs assistance	1,253	0.5	399	0.2	854	12.6	596	37.5	23	15.9	273	5.8	43	7.5	362	19.9
Getting around inside	2,464	1.0	602	0.3	1,862	27.4	947	59.6	70	49.0	834	17.6	172	30.4	876	48.2
Needs assistance	1,282	0.5	363	0.2	919	13.5	597	37.6	25	17.8	342	7.2	47	8.3	390	21.5
All persons aged 18 and over	190,414	100.0	183,738	100.0	6,676	100.0	1,511	100.0	142	100.0	4,736	100.0	530	100.0	1,794	100.0
Home-management activities	(IADL)															
Any IADL limitation	14,689	7.7	10,141	5.5	4,548	68.1	1,305	86.4	124	87.1	3,006	63.5	330	62.2	1,481	82.6
Needs assistance	12,548	6.6	8,410	4.6	4,138	62.0	1,218	80.6	115	80.6	2,707	57.2	295	55.7	1,382	77.0
No IADL limitation	175,725	92.3	173,597	94.5	2,128	31.9	206	13.6	18	12.9	1,730	36.5	200	37.8	312	17.4
Specific IADL limitations																
Preparing meals	3,295	1.7	1,545	0.8	1,750	26.2	851	56.3	46	32.0	839	17.7	93	17.6	789	44.0
Needs assistance	2,782	1.5	1,283	0.7	1,499	22.4	744	49.3	40	28.2	708	15.0	66	12.5	684	38.1
Shopping	5,204	2.7	2,540	1.4	2,664	39.9	1,049	69.4	67	47.4	1,497	31.6	169	31.8	1,142	63.7
Needs assistance	4,638	2.4	2,216	1.2	2,422	36.3	961	63.6	64	44.7	1,353	28.6	151	28.5	1,051	58.6
Managing money	2,909	1.5	1,762	1.0	1,147	17.2	535	35.4	21	15.1	580	12.2	35	6.7	510	28.4
Needs assistance	2,618	1.4	1,578	0.9	1,041	15.6	482	31.9	20	14.1	528	11.2	31	5.8	470	26.2
Using the telephone	1,376	0.7	778	0.4	599	9.0	321	21.3	11 '	7.6	* 266	5.6	14 *	2.6	* 252	14.1
Needs assistance	1,092	0.6	595	0.3	497	7.4	276	18.3	8 '	5.8	* 216	4.6	5 *	1.0	* 205	11.4
Heavy housework	13,625	7.2	9,221	5.0	4,404	66.0	1,287	85.1	120	84.6	2,894	61.1	322	60.8	1,444	80.5
Needs assistance	11,432	6.0	7,530	4.1	3,902	58.4	1,149	76.0	107	75.2	2,549	53.8	281	53.1	1,303	72.6
Light housework	4,256	2.2	1,978	1.1	2,278	34.1	988	65.4	66	46.2	1,201	25.4	155	29.3	981	54.7
Needs assistance	3,612	1.9	1,629	0.9	1,983	29.7	882	58.4	54	38.3	1,021	21.6	134	25.3	867	48.3
ADL/IADL																
Any ADL or IADL limitation	15,471	8.1	10,588	5.8	4,883	73.1	1,392	92.1	128	89.7	3,237	68.4	361	68.2	1,596	89.0
Needs assistance	13,122	6.9	8,726	4.7	4,397	65.9	1,311	86.7	117	82.4	2,862	60.4	311	58.7	1,489	83.0
No ADL/IADL limitation	174,943	91.9	173,150	94.2	1,793	26.9	119	7.9	15 '	10.3	1,498	31.6	168	31.8	197	11.0

<sup>\*</sup>Estimate has low statistical reliability (standard error exceeds 30 percent of estimate).

Table 6. Health- and disability-related characteristics of mobility device users and non-users, by type of device: United States civilian noninstitutionalized population, ages 18–64.

	Tota	al	No mo devi	•	Any m dev	•	Whee	lchair	Sco	oter	Cai	ne	Cruto	hes	Wal	ker
	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%
All persons	159,169	100.0	156,859	100.0	2,310	100.0	614	100.0	78	100.0	1,535	100.0	375	100.0	373	100.0
Health status																
Excellent	56,635	35.6	56,498	36.0	137	5.9	44	7.1	3 *	4.3	* 57	3.7	47	12.4	19 *	5.2
Very good	48,574	30.5	48,379	30.8	195	8.5	53	8.6	6 *	7.7	* 100	6.5	59	15.7	22	5.9
Good	37,606	23.6	37,089	23.6	518	22.4	148	24.1	13 *	16.3	* 307	20.0	114	30.3	50	13.4
Fair	11,154	7.0	10,535	6.7	620	26.8	145	23.7	20	25.9	453	29.5	67	17.9	97	26.0
Poor	4,215	2.6	3,391	2.2	824	35.7	220	35.8	31	39.8	607	39.5	89	23.7	177	47.3
Unknown	984	0.6	968	0.6	16	0.7	4 *	0.7	* 5 *	6.0	* 11 *	0.7	* 0	0.0	8 *	2.2
Hospitalization history																
Discharged in prior 6 months	6,719	4.2	6,219	4.0	500	21.6	167	27.1	15	18.8	305	19.9	109	29.1	131	35.0
Hospitalization in prior year	11,956	7.5	11,215	7.1	741	32.1	252	41.1	19	24.8	450	29.3	140	37.3	170	45.5
Perceived disability																
Self-perceived disability	10,240	6.4	8,534	5.4	1,707	73.9	498	81.1	69	88.9	1,144	74.5	230	61.4	300	80.3
Other-perceived disability	8,424	5.3	6,841	4.4	1,583	68.5	493	80.2	68	86.6	1,039	67.7	218	58.2	286	76.7
No perceived disability	147,896	92.9	147,375	94.0	521	22.5	91	14.8	7 *	8.7	* 334	21.8	129	34.5	70	18.
Activity limitation																
Jnable to do major activity	8,192	5.1	6,716	4.3	1,476	63.9	441	71.8	56	71.6	1.006	65.5	187	49.9	290	77.6
Only limited in major activity	8,311	5.2	7,842	5.0	469	20.3	115	18.7	21	26.7	308	20.1	82	22.0	42	11.4
Limited only in other activity	6,137	3.9	6,012	3.8	125	5.4	18	2.9	0	0.0	95	6.2	22	5.8	11 *	2.8
Not limited in activity	136,529	85.8	136,289	86.9	240	10.4	41	6.6	1 *	1.7	* 126	8.2	84	22.4	31	8.2
Functional limitation																
Limited in 1 or more	13,907	8.7	11,860	7.6	2,047	88.6	574	93.5	77	98.6	1.383	90.1	293	78.1	348	93.3
Unable to perform 1 or more	3,322	2.1	2,094	1.3	1,228	53.2	507	82.5	58	74.0	724	47.2	146	38.9	280	75.1
No functional limitation	145,262	91.3	144,999	92.4	263	11.4	40	6.5	1 *	1.4	* 153	9.9	82	21.9	25	6.7
Specific functional limitations																
Lifting 10 lbs.	5,331	3.3	4,137	2.6	1,194	51.7	398	64.8	46	58.7	771	50.2	152	40.5	251	67.2
Unable	1,370	0.9	844	0.5	526	22.8	228	37.1	23	29.5	300	19.5	51	13.7	142	37.9
Difficulty only	3,961	2.5	3,293	2.1	668	28.9	170	27.7	23	29.2	472	30.7	101	26.9	109	29.2
Climbing stairs	5,202	3.3	3,647	2.3	1,555	67.3	526	85.7	64	82.3	991	64.6	208	55.5	314	84.2
Unable	901	0.6	347	0.2	553	24.0	365	59.4	31	39.2	195	12.7	61	16.3	151	40.5
Difficulty only	4,301	2.7	3,299	2.1	1,002	43.4	161	26.3	34	43.2	796	51.9	147	39.2	163	43.7
Walking 1/4 mile	6,818	4.3	5,044	3.2	1,774	76.8	561	91.3	76	97.4	1,165	75.9	246	65.5	326	87.5
Unable	1,808	1.1	912	0.6	897	38.8	450	73.2	52	67.0	475	30.9	106	28.4	215	57.6
Difficulty only	5,009	3.1	4,132	2.6	877	38.0	111	18.0	24	30.3	691	45.0	139	37.1	111	29.8
Standing 20 mins.	5,782	3.6	4,207	2.7	1,575	68.2	517	84.2	67	86.3	1,020	66.4	221	59.0	292	78.2
Unable	1,083	0.7	433	0.3	650	28.2	369	60.1	37	47.3	300	19.5	78	20.7	142	38.1
Difficulty only	4,699	3.0	3,775	2.4	924	40.0	148	24.1	30	38.9	720	46.9	144	38.3	150	40.1
Bending down	6,742	4.2	5,227	3.3	1,515	65.6	488	79.4	60	77.2	996	64.9	191	51.0	283	75.7
Unable	1,083	0.7	520	0.3	563	24.4	330	53.7	29	37.0	238	15.5	53	14.1	131	35.1
Difficulty only	5,659	3.6	4,707	3.0	952	41.2	158	25.7	31	40.3	758	49.4	138	36.9	152	40.6
Reaching up or out	2,916	1.8	2,287	1.5	629	27.2	206	33.5	37	47.7	414	27.0	71	18.8	116	31.0
Unable	424	0.3	262	0.2	163	7.0	76	12.3	9 *	11.0	* 92	6.0	10 *	2.6	* 27	7.2
Difficulty only	2,491	1.6	2,025	1.3	467	20.2	130	21.1	29	36.7	322	21.0	61	16.2	89	23.7
Grasping	2,800	1.8	2,198	1.4	602	26.1	228	37.2	33	41.7	387	25.2	56	15.0	127	33.9
Unable	151	0.1	66	0.0	85	3.7	67	11.0	5 *	6.7	* 27	1.8	3 *	0.7	* 10 *	
Difficulty only	2,649	1.7	2,132	1.4	517	22.4	161	26.2	27	35.0	360	23.4	54	14.3	116	31.1
Holding pen	1,754	1.1	1,318	0.8	436	18.9	188	30.6	29	36.6	261	17.0	30	8.1	104	27.8
Unable	142	0.1	73	0.0	68	3.0	54	8.8	3 *	3.6		1.3	0	0.0	12 *	
Difficulty only	1,612	1.0	1,245	0.8	367	15.9	134	21.8	26	33.0	242	15.7	30	8.1	92	24.7

Table 6 continued. Health- and disability-related characteristics of mobility device users and non-users, by type of device: United States civilian noninstitutionalized population, ages 18–64.

	Tota	ıl	No mob devic	•	Any mo	•	Whee	chair	Sco	oter	Car	ne	Crutc	hes	Wall	cer
	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%
Self-care activities (ADL)																
Any ADL limitation	2,349	1.5	1,286	0.8	1,063	46.0	458	74.6	60	76.5	599	39.0	169	45.1	266	71.4
Needs assistance	1,537	1.0	855	0.5	682	29.5	336	54.7	32	41.6	364	23.7	75	20.0	181	48.6
No ADL limitation	156,819	98.5	155,572	99.2	1,247	54.0	156	25.4	18	23.5	936	61.0	206	54.9	107	28.6
Specific ADL limitations																
Bathing	1,550	1.0	736	0.5	814	35.3	405	66.0	47	59.9	427	27.8	110	29.4	221	59.1
Needs assistance	1,072	0.7	538	0.3	534	23.1	298	48.6	26	33.7	250	16.3	54	14.3	150	40.1
Dressing	1,164	0.7	575	0.4	589	25.5	303	49.3	29	37.3	299	19.5	74	19.7	156	41.8
Needs assistance	919	0.6	439	0.3	480	20.8	273	44.5	25	32.2	228	14.8	47	12.5	130	34.9
Eating	407	0.3	214	0.1	192	8.3	128	20.8	19 *	24.4	76	4.9	15 *	4.0	41	11.0
Needs assistance	298	0.2	149	0.1	150	6.5	108	17.5	10 *	12.9	* 55	3.6	9 *	2.5	* 30	8.0
Transferring	1,263	0.8	594	0.4	669	29.0	311	50.7	42	54.3	350	22.8	94	25.1	173	46.4
Needs assistance	802	0.5	342	0.2	459	19.9	250	40.8	26	33.0	227	14.8	43	11.4	121	32.5
Toileting	752	0.5	251	0.2	501	21.7	283	46.1	33	42.7	224	14.6	70	18.6	143	38.4
Needs assistance	456	0.3	152	0.1	304	13.2	210	34.2	15 *	19.6	* 112	7.3	27	7.1	84	22.5
Getting around inside	1,001	0.6	357	0.2	645	27.9	326	53.0	44	55.8	303	19.8	107	28.6	192	51.5
Needs assistance	533	0.3	202	0.1	330	14.3	196	31.9	18 *	23.3	149	9.7	32	8.4	89	23.7
Home-management activities	(IADL)															
Any IADL limitation	7,589	4.8	6,051	3.9	1,538	66.6	507	82.5	73	93.0	977	63.6	222	59.2	305	81.8
Needs assistance	6,265	3.9	4,893	3.1	1,372	59.4	468	76.2	69	88.6	859	56.0	194	51.8	288	77.3
No IADL limitation	151,580	95.2	150,808	96.1	772	33.4	107	17.5	5 *	7.0	* 558	36.4	153	40.8	68	18.2
Specific IADL limitations																
Preparing meals	1,452	0.9	894	0.6	558	24.1	317	51.6	33	41.9	259	16.9	60	15.9	153	41.0
Needs assistance	1,185	0.7	716	0.5	469	20.3	272	44.2	29	37.7	213	13.9	41	11.0	142	38.1
Shopping	2,131	1.3	1,351	0.9	780	33.8	368	59.9	41	52.9	410	26.7	105	28.1	216	57.8
Needs assistance	1,832	1.2	1,147	0.7	685	29.7	327	53.3	38	49.0	356	23.2	91	24.2	201	53.9
Managing money	1,411	0.9	1.104	0.7	307	13.3	179	29.1	17 *	21.9	152	9.9	26	6.9	88	23.6
Needs assistance	1,233	0.8	964	0.6	269	11.6	154	25.1	16 *	20.1		8.7	23	6.2	85	22.9
Using the telephone	591	0.4	425	0.3	166	7.2	101	16.5	8 *	10.5	* 70	4.5	11 *	2.9	* 44	11.7
Needs assistance	444	0.3	312	0.2	132	5.7	87	14.1	7 *	8.7		3.5	2 *	0.6	* 34	9.2
Heavy housework	6,891	4.3	5,387	3.4	1,504	65.1	501	81.5	71	91.4	953	62.1	216	57.7	297	79.7
Needs assistance	5,595	3.5	4,287	2.7	1,308	56.6	442	71.9	65	83.5	822	53.5	184	48.9	272	72.9
Light housework	1,988	1.2	1,193	0.8	795	34.4	375	61.0	47	59.9	420	27.4	94	25.1	217	58.3
Needs assistance	1,639	1.0	958	0.6	680	29.5	331	53.9	38	48.3	349	22.8	80	21.4	195	52.4
ADL/IADL																
Any ADL or IADL limitation	7,948	5.0	6,291	4.0	1,656	71.7	543	88.5	73	93.0	1,051	68.5	245	65.3	330	88.3
Needs assistance	6,538	4.1	5.087	3.2	1,452	62.8	497	81.0	70	89.4	911	59.3	201	53.7	302	81.0
No ADL/IADL limitation	151,221	95.0	150,567	96.0	654	28.3	71	11.5	5 *	7.0	* 484	31.5	130	34.7	44	11.7
NO ADL/IADL IIMITATION	151,221	95.0	150,567	96.0	054	28.3	/1	11.5	5 ^	7.0	484	ა1.5	130	<b>ა</b> 4./	44	11./

<sup>\*</sup>Estimate has low statistical reliability (standard error exceeds 30 percent of estimate).

Table 7. Health- and disability-related characteristics of mobility device users and non-users, by type of device: United States civilian noninstitutionalized population, ages 65 and above.

	То	tal	No mo	•	Any m dev	•	Wheel	lchair	Sco	oter	Ca	ine	Cruto	hes	Wall	(er
	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%
All persons	31,245	100.0	26,879	100.0	4,366	100.0	897	100.0	64	100.0	3,200	100.0	155	100.0	1,421	100.0
Health status																
Excellent	4,832	15.5	4,608	17.1	223	5.1	28	3.1	4 *	6.7	* 172	5.4	14	8.9	59	4.1
Very good	7,222	23.1	6,747	25.1	475	10.9	48	5.4	2 *	3.6	* 382	11.9	14 *	9.2	124	8.7
Good	10,398	33.3	9,249	34.4	1,148	26.3	160	17.8	19	30.0	887	27.7	37	23.6	310	21.8
Fair	5,822	18.6	4,519	16.8	1,303	29.8	244	27.2	18	27.5	983	30.7	44	28.3	421	29.6
Poor	2,745	8.8	1,568	5.8	1,177	27.0	406	45.3	21	32.2	748	23.4	46	30.0	489	34.4
Unknown	226	0.7	187	0.7	39	0.9	11 *	1.2	* 0	0.0	29	0.9	0	0.0	19	1.3
Hospitalization history	0.040	40.0	2 225	0.4	0.40	04.7	205			0.4.0	500	40.4		05.4	404	00.0
Discharged in prior 6 months	3,213	10.3	2,265	8.4	948	21.7	295	32.9	20	31.9	588	18.4	39	25.4	421	29.6
Hospitalization in prior year	5,257	16.8	3,810	14.2	1,447	33.1	409	45.6	29	44.8	964	30.1	49	31.9	635	44.7
Perceived disability																
Self-perceived disability	5,624	18.0	3,189	11.9	2,435	55.8	710	79.2	52	81.8	1,646	51.4	103	66.8	922	64.9
Other-perceived disability	4,557	14.6	2,321	8.6	2,236	51.2	686	76.5	52	81.5	1,464	45.8	102	65.7	890	62.7
No perceived disability	25,135	80.4	23,419	87.1	1,716	39.3	139	15.5	8 *	12.0	* 1,407	44.0	41	26.6	417	29.3
Activity limitation																
Unable to do major activity	3,228	10.3	1,785	6.6	1,443	33.0	594	66.2	29	44.8	801	25.0	61	39.6	664	46.7
Only limited in major activity	3,603	11.5	2,387	8.9	1,215	27.8	185	20.6	18	27.6	931	29.1	47	30.4	414	29.1
Limited only in other activity	4,951	15.8	4,050	15.1	901	20.6	57	6.3	14 4 *	21.6	785	24.5	21	13.4	176	12.4
Not limited in activity	19,464	62.3	18,657	69.4	807	18.5	62	6.9	4 "	6.0	* 683	21.3	26	16.6	167	11.7
Functional limitation																
Limited in 1 or more	11,197	35.8	7,323	27.2	3,873	88.7	879	98.0	63	98.2	2,753	86.0	140	90.8	1,363	95.9
Unable to perform 1 or more	4,274	13.7	1,877	7.0	2,397	54.9	788	87.8	51	80.2	1,458	45.6	94	61.1	1,056	74.3
No functional limitation	20,049	64.2	19,556	72.8	493	11.3	18	2.0	1 *	1.8	* 447	14.0	14	9.2	58	4.1
Specific functional limitations																
Lifting 10 lbs.	4,715	15.1	2,473	9.2	2,241	51.3	679	75.7	33	50.8	1,455	45.5	65	41.9	944	66.5
Unable	1,944	6.2	756	2.8	1,188	27.2	502	56.0	19	29.7	633	19.8	27	17.4	583	41.0
Difficulty only	2,771	8.9	1,717	6.4	1,054	24.1	177	19.7	14	21.2	821	25.7	38	24.5	361	25.4
Climbing stairs	5,818	18.6	3,008	11.2	2,810	64.4	810	90.3	52	81.3	1,835	57.3	107	69.3	1,149	80.9
Unable	1,618	5.2	391	1.5	1,227	28.1	597	66.6	32	50.7	565	17.7	46	29.7	643	45.3
Difficulty only	4,200	13.4	2,617	9.7	1,583	36.3	213	23.7	20	30.6	1,270	39.7	61	39.6	506	35.6
Walking 1/4 mile	7,741	24.8	4,368	16.3	3,373	77.2	863	96.2	62	96.3	2,304	72.0	133	86.1	1,277	89.9
Unable	3,128	10.0	1,149	4.3	1,979	45.3	736	82.1	50	78.1	1,121	35.0	77	49.5	917	64.6
Difficulty only	4,613	14.8	3,219	12.0	1,394	31.9	127	14.2	12 *	18.2	* 1,183	37.0	57	36.6	360	25.3
Standing 20 mins.	5,479	17.5	2,729	10.2	2,750	63.0	794	88.6	57	89.3	1,801	56.3	106	68.4	1,117	78.7
Unable	1,654	5.3	469	1.7	1,186	27.2	553	61.7	30	46.9	596	18.6	53	34.0	566	39.8
Difficulty only	3,825	12.2	2,260	8.4	1,565	35.8	241	26.9	27	42.4	1,205	37.6	53	34.4	552	38.8
Bending down	5,332	17.1	2,790	10.4	2,542	58.2	738	82.3	50	77.6	1,666	52.1	106	68.5	1,045	73.5
Unable Difficulty only	1,276	4.1	322	1.2	955	21.9	507	56.5	26	40.1	441	13.8	50	32.2	456	32.1
Difficulty only Reaching up or out	4,056 2,357	13.0 7.5	2,469 1,234	9.2 4.6	1,587 1,123	36.4 25.7	231 358	25.8 39.9	24 22	37.5 34.1	1,225 743	38.3 23.2	56 41	36.3 26.8	588 457	41.4 32.2
Unable	2,337 491	1.6	1,234	0.7	298	6.8	152	16.9	3 *	4.2		23.2 4.7	5 *			9.9
Difficulty only	1,866	6.0	1,041	3.9	825	18.9	206	23.0	19	29.8	594	18.6	36	23.3	316	22.3
Grasping	1,895	6.1	1,058	3.9	838	19.2	282	31.4	15 *		554	17.3	23	14.7	326	22.9
Unable	158	0.5	63	0.2	95	2.2	69	7.7	1 *	2.0		1.2	2 *			2.1
Difficulty only	1,737	5.6	994	3.7	743	17.0	212	23.7	14 *	21.3	516	16.1	21	13.5	296	20.9
Holding pen	1,388	4.4	657	2.4	730	16.7	290	32.3	8 *	12.7	* 459	14.3	13 *	8.4	* 330	23.3
Unable	188	0.6	64	0.2	124	2.8	83	9.2	1 *			1.4	0	0.0	49	3.5
Difficulty only	1,199	3.8	593	2.2	606	13.9	207	23.1	7 *	11.2	* 413	12.9	13 *	8.4	* 281	19.8

Table 7 continued. Health- and disability-related characteristics of mobility device users and non-users, by type of device: United States civilian noninstitutionalized population, ages 65 and above.

	Tot	al	No mo devi	•	Any mo	•	Wheel	chair	Sco	oter	Ca	ne	Crutc	hes	Wall	ær
	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%
Self-care activities (ADL)																
Any ADL limitation	2,965	9.5	914	3.4	2,051	47.0	746	83.2	42	65.0	1,190	37.2	80	51.9	1,022	71.9
Needs assistance	1,914	6.1	586	2.2	1,328	30.4	594	66.2	21	32.1	676	21.1	39	25.3	707	49.8
No ADL limitation	28,280	90.5	25,965	96.6	2,315	53.0	151	16.8	22	35.0	2,010	62.8	74	48.1	398	28.1
Specific ADL limitations																
Bathing	2,392	7.7	719	2.7	1,673	38.3	670	74.8	28	43.9	938	29.3	60	38.8	834	58.7
Needs assistance	1,701	5.4	510	1.9	1,191	27.3	564	62.8	14 *	21.7	575	18.0	28	18.0	645	45.4
Dressing	1,383	4.4	385	1.4	998	22.9	499	55.6	16	25.1	477	14.9	43	27.8	519	36.6
Needs assistance	1,179	3.8	334	1.2	845	19.4	455	50.8	12 *	19.0	367	11.5	31	20.0	450	31.7
Eating	432	1.4	156	0.6	276	6.3	192	21.4	3 *	4.2	* 99	3.1	10 *	6.6	* 146	10.2
Needs assistance	351	1.1	131	0.5	220	5.0	160	17.8	1 *	2.3	* 69	2.2	6 *	3.7	* 114	8.1
Transferring	1,291	4.1	272	1.0	1,019	23.3	510	56.9	24	38.0	501	15.7	54	34.6	547	38.5
Needs assistance	789	2.5	154	0.6	635	14.5	386	43.0	13 *	20.5	255	8.0	18	11.6	337	23.7
Toileting	1,149	3.7	220	8.0	930	21.3	489	54.5	18	28.7	420	13.1	41	26.5	533	37.5
Needs assistance	625	2.0	146	0.5	480	11.0	327	36.4	7 *	11.5	* 160	5.0	9 *	5.6	* 263	18.5
Getting around inside	1,361	4.4	213	0.8	1,148	26.3	557	62.1	26	40.8	530	16.6	56	36.1	674	47.4
Needs assistance	668	2.1	137	0.5	532	12.2	346	38.6	7 *	11.0	* 194	6.0	11 *	7.2	* 292	20.6
Home-management activities	s (IADL)															
Any IADL limitation	7,100	22.7	4,090	15.2	3,011	69.0	799	89.1	51	79.9	2,028	63.4	108	69.7	1,176	82.8
Needs assistance	6,283	20.1	3,517	13.1	2,766	63.3	750	83.6	45	70.9	1,848	57.8	101	65.2	1,094	77.0
No IADL limitation	24,145	77.3	22,789	84.8	1,356	31.0	98	10.9	13 *	20.1	1,172	36.6	47	30.3	244	17.2
Specific IADL limitations																
Preparing meals	1,842	5.9	650	2.4	1,192	27.3	534	59.5	13 *	20.0	580	18.1	33	21.7	636	44.8
Needs assistance	1,596	5.1	567	2.1	1,029	23.6	473	52.7	11 *	16.7	* 495	15.5	25	16.3	542	38.1
Shopping	3,074	9.8	1,190	4.4	1,884	43.1	681	75.9	26	40.6	1,087	34.0	63	41.0	926	65.2
Needs assistance	2,806	9.0	1,069	4.0	1,737	39.8	634	70.6	25	39.6	997	31.2	60	38.9	850	59.9
Managing money	1,498	4.8	658	2.4	840	19.2	356	39.7	4 *	6.8		13.4	9 *	6.1		29.7
Needs assistance	1,385	4.4	613	2.3	772	17.7	328	36.6	4 *	6.8	* 394	12.3	8 *	4.9	* 385	27.1
Using the telephone	785	2.5	353	1.3	433	9.9	220	24.5	3 *	4.0	* 196	6.1	3 *	2.0	* 209	14.7
Needs assistance	648	2.1	283	1.1	365	8.4	190	21.1	1 *	2.3	* 162	5.1	3 *	2.0	* 170	12.0
Heavy housework	6,735	21.6	3,834	14.3	2,900	66.4	786	87.6	49	76.3	1,941	60.7	106	68.4	1,147	80.7
Needs assistance	5,837	18.7	3,244	12.1	2,594	59.4	707	78.8	42	65.1	1,727	54.0	98	63.2	1,031	72.6
Light housework	2,269	7.3	786	2.9	1,483	34.0	614	68.4	19	29.4	781	24.4	61	39.3	764	53.8
Needs assistance	1,973	6.3	671	2.5	1,302	29.8	551	61.5	17	26.1	671	21.0	54	34.8	671	47.3
ADL/IADL																
Any ADL or IADL limitation	7,523	24.1	4,297	16.0	3,227	73.9	849	94.6	55	85.6	2,186	68.3	117	75.3	1,267	89.2
Needs assistance	6,584	21.1	3,639	13.5	2,945	67.5	813	90.7	47	73.8	1,951	61.0	110	70.9	1,187	83.6
No ADL/IADL limitation	23,722	75.9	22,583	84.0	1,140	26.1	48	5.4	9 *	14.4	* 1,014	31.7	38	24.7	154	10.8

<sup>\*</sup>Estimate has low statistical reliability (standard error exceeds 30 percent of estimate).

Table 8. Health conditions and impairments reported as the main cause of disability among mobility device users, by type of device: United States civilian noninstitutionalized population, all ages.

	Any mobility device	Wheelchair /Scooter	Cane	Crutches	Walker
		(Number of p		ousands)	
All conditions	6,321	1,629	4,384	492	1,752
Absence or loss of lower extremity Absence or loss of rib, bone, joint, or muscle of trunk	121	60	43	47	30
	126	19	100	11 *	36
Quadraplegia (paralysis of entire body or four limbs) Hemiplegia (paralysis of one side of body, including limbs)	32	32	0	0	0
	52	32	37	1 *	14 *
Paraplegia (paralysis of both legs) Cerebral palsy Hemiparesis (partial paralysis of one side of body, including limbs)	67	59	5 *	7 *	3 *
	85	51	12 *	20	17
	24	12 *	12 *	2 *	4 *
Other paralysis  Curvature of spine or back	65	37	31	11 *	13 *
	29	8 *	20	2 *	4 *
Spina bifida  Deformity of lower extremity	24	17 *	2 *	6 *	1 *
	36	1 *	24	9 *	6 *
Orthopedic impairment of back or neck Orthopedic impairment of shoulder and/or upper extremity Orthopedic impairment of hip and/or pelvis	273	27	226	25	54
	58	8 *	46	4 *	14 *
	185	27	132	19	75
Orthopedic impairment of lower extremity Orthopedic impairment of other and ill-defined sites	367	59	270	55	91
	49	11 *	35	1 *	13
Cancer	84	29	53	5 *	26
Diabetes	129	39	91	8 *	43
Mental disorders (excluding mental retardation)	59	22	29	5 *	17
Alzheimer's and other cerebral degenerations	35	16 *	17 *	0	17 *
Senility without mention of psychosis	236	24	172	0	81
Parkinson's disease	77	36	44	4 *	43
Amyotrophic lateral sclerosis  Multiple sclerosis  Other disorders of the central nervous system  Mononeuritis, carpal tunnel, and other disorders of the peripheral	60	32	33	8 *	12 *
	130	82	68	3 *	38
	73	37	38	7 *	28
nervous system	92	34	59	5 *	14 *
Hypertensive disease	42	12 *	34	0	15
Ischemic heart disease	106	16	90	2 *	28
Other forms of heart disease	210	54	152	7 *	73
Cerebrovascular disease	442	180	294	6 *	136
Other circulatory system disorders	100	33	63	4 *	29
Emphysema	103	37	62	0	23
Asthma	21	7 *	17	2 *	6 *
Other diseases of the respiratory system	40	14	24	6 *	12 *
Rheumatoid arthritis and other inflammatory polyarthropathies	201	49	142	21	62
Osteoarthrosis and allied disorders	1,189	170	976	59	335
Spondylosis and allied disorders	93	16 *	77	2 *	22
Intervertebral disc disorders	237	23	218	17	38
Osteoporosis	92	18 *	64	4 *	35
Other and unspecified disorders of bone and cartilage	51	7 *	36	9 *	6 *
Chronic injuries or late effects of injuries	131	25	60	40	50
Other conditions  Source: National Health Interview Survey on Disability 1994 95	702	162	479	51	192

<sup>\*</sup>Estimate has low statistical reliability (standard error exceeds 30 percent of estimate).

Table 9. Health conditions and impairments reported as the main cause of disability among mobility device users, by type of device: United States civilian noninstitutionalized population, ages 18–64.

	Any mobility device	Wheelchair /Scooter (Number of p	<b>Cane</b> ersons in th	<b>Crutches</b> ousands)	Walker
All conditions	2,169	635	1,465	325	356
Absence or loss of lower extremity	71	29	25	38	10 *
Absence or loss of rib, bone, joint, or muscle of trunk	24	4 *	19	2 *	4 *
Quadraplegia (paralysis of entire body or four limbs)	32	32	0	0	0
Hemiplegia (paralysis of one side of body, including limbs)	18	7 *	15 *	1 *	4 *
Paraplegia (paralysis of both legs)	50	45	3 * 11 *	3 * 13 *	1 * 3 *
Cerebral palsy Hemiparesis (partial paralysis of one side of body, including limbs)	48 11 *	29 4 *	7 *	2 *	0
Other paralysis	32	15 *	17	7 *	4 *
Curvature of spine or back	11 *	1 *	9 *	0	2 *
Spina bifida	14 *	10 *	2 *	4 *	0
Deformity of lower extremity	18	0	14 *	4 *	1 *
Orthopedic impairment of back or neck	162	20	131	21	21
Orthopedic impairment of shoulder and/or upper extremity	16	4 *	11 *	4 *	3 *
Orthopedic impairment of hip and/or pelvis	29	4 *	20	7 *	4 *
Orthopedic impairment of lower extremity Orthopedic impairment of other and ill-defined sites	140 23 *	20 * 6 *	105 16 *	38 0	18 3 *
Cancer	30	14 *	19	4 *	8 *
Diabetes	54	21 *	37	5 *	17 *
Mental disorders (excluding mental retardation)	26	9 *	18	4 *	2 *
Alzheimer's and other cerebral degenerations	2 *	2 *	0	0	1 *
Senility without mention of psychosis	2 *	1 *	2 *	0	0
Parkinson's disease	8 *	6 *	6 *	0	7 *
Amyotrophic lateral sclerosis	32	14	18	7 *	2 *
Multiple sclerosis	98	58	52	2 *	31
Other disorders of the central nervous system	39	20	22	3 *	16 *
Mononeuritis, carpal tunnel, and other disorders of the peripheral nervous system	45	20 *	32	2 *	7 *
Hypertensive disease	17	6 *	14	0	5 *
Ischemic heart disease	25	7 *	19	0	7 *
Other forms of heart disease	47	10 *	36	3 *	7 *
Cerebrovascular disease	100	44	74	3 *	18
Other circulatory system disorders	30	10 *	20	4 *	2 *
Emphysema	25	14 *	10 *	0	3 *
Asthma	6 *	1 *	5 *	2 *	3 *
Other diseases of the respiratory system	15	7 *	9 *	2 *	4 *
Rheumatoid arthritis and other inflammatory polyarthropathies	92	21	63	16 *	15 *
Osteoarthrosis and allied disorders	228	31	204	24	34
Spondylosis and allied disorders	33	5 *	26	2 *	9 *
Intervertebral disc disorders	176	20	160 9 *	17	27
Osteoporosis Other and unspecified disorders of bone and cartilage	9 * 23	0 2 *	18 *	0 5 *	0 0
Chronic injuries or late effects of injuries	69	13 *	27	37	10 *
Other conditions	239	53	161	39	47

Table 10. Health conditions and impairments reported as the main cause of disability among mobility device users, by type of device: United States civilian noninstitutionalized population, ages 65 and above.

	Any mobility device	Wheelchair /Scooter	Cane	Crutches	Walker
		(Number of p		nousands)	
All conditions	4,040	916	2,908	147	1,374
Absence or loss of lower extremity  Absence or loss of rib, bone, joint, or muscle of trunk	48 102	29 15	17 81	7 * 9 *	20 32
Quadraplegia (paralysis of entire body or four limbs) Hemiplegia (paralysis of one side of body, including limbs) Paraplegia (paralysis of both legs) Cerebral palsy Hemiparesis (partial paralysis of one side of body, including limbs) Other paralysis	0 34 15 * 0 13 *	0 25 13 * 0 8 * 20	0 22 2 * 0 5 * 14 *	0 0 4 * 0 0 4 *	0 10 * 2 * 0 4 * 9 *
Curvature of spine or back Spina bifida Deformity of lower extremity	14 * 0 18 *	2 * 0 1 *	11 * 0 10 *	2 * 0 5 *	2 * 0 4 *
Orthopedic impairment of back or neck Orthopedic impairment of shoulder and/or upper extremity Orthopedic impairment of hip and/or pelvis Orthopedic impairment of lower extremity Orthopedic impairment of other and ill-defined sites	112 42 155 226 23	7 * 4 * 22 39 5 *	95 35 112 166 18	4 * 0 12 * 17 0	33 11 * 72 73 11 *
Cancer	53	14	34	1 *	18
Diabetes	76	18	54	3 *	26
Mental disorders (excluding mental retardation)	30	11 *	11 *	0	13 *
Alzheimer's and other cerebral degenerations Senility without mention of psychosis Parkinson's disease Amyotrophic lateral sclerosis Multiple sclerosis Other disorders of the central nervous system Mononeuritis, carpal tunnel, and other disorders of the peripheral nervous system	33 233 68 28 31 27	14 * 23 30 18 23 12 *	17 * 170 39 15 16 14	0 0 4 * 1 * 1 * 2 *	16 * 81 36 10 * 7 * 10 *
Hypertensive disease Ischemic heart disease Other forms of heart disease Cerebrovascular disease Other circulatory system disorders	25 81 163 342 70	6 * 9 * 43 136 23	20 71 116 220 42	0 2 * 4 * 3 * 0	10 * 21 65 118 26
Emphysema Asthma Other diseases of the respiratory system	78 15 * 25	23 6 * 7 *	53 12 * 15	0 0 4 *	20 3 * 8 *
Rheumatoid arthritis and other inflammatory polyarthropathies Osteoarthrosis and allied disorders Spondylosis and allied disorders Intervertebral disc disorders Osteoporosis Other and unspecified disorders of bone and cartilage	107 957 60 62 83 28	26 139 11 * 4 * 18 * 5 *	78 768 51 58 55	5 * 35 0 0 4 * 4 *	47 301 13 * 10 * 35 6 *
Chronic injuries or late effects of injuries	61	12 *	33	2 *	39
Other conditions	434	88	315	6 *	141

Table 11. Prevalence of home accessibility features and environmental accessibility difficulties among mobility device users and non-users, by type of device: United States civilian noninstitutionalized population, ages 18 and above.

	No mobility		Any m	obility										
	dev	ice	dev	ice	Wheel	chair	Sco	oter	Ca	ne	Crutches		Wal	ker
	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%
All persons <sup>†</sup>	35,605	100.0	6,177	100.0	1,694	100.0	174	100.0	4,164	100.0	500	100.0	1,876	100.0
Home layout Entire home on 1 floor Bedroom, bathroom, kitchen on 1 floor	15,669 30,457	44.0 85.5	2,425 5,302	39.3 85.8	596 1,328	35.2 78.4	70 154	40.0 88.5	1,722 3,697	41.4 88.8	216 429	43.2 85.7	686 1,587	36.6 84.6
Accessibility features present in home														
Widened doorways or hallways Ramps or street-level entrances Railings	2,009 2,693 5,380	5.6 7.6 15.1	849 1,296 1,914	13.7 21.0 31.0	349 602 529	20.6 35.5 31.2	36 70 75	20.6 40.2 43.0	481 668 1,335	11.6 16.0 32.1	46 70 133	9.2 14.0 26.5	269 421 630	14.3 22.4 33.6
Automatic or easy-to-open doors Accessible parking or drop-off site Bathroom modifications	1,648 5,634 2,427	4.6 15.8 6.8	599 1,634 1,831	9.7 26.4 29.6	216 542 618	12.8 32.0 36.5	24 64 81	13.5 37.0 46.6	380 1,080 1,182	9.1 25.9 28.4	38 112 121	7.5 22.4 24.2	212 486 669	11.3 25.9 35.7
Kitchen modifications Elevator, chair lift, or stair glide  Accessiblity features needed	371 1,023	1.0 2.9	249 590	4.0 9.6	126 216	7.4 12.7	23 32	13.5 18.2	137 358	3.3 8.6	30 34	5.9 6.7	77 214	4.1 11.4
but not present in home Widened doorways or hallways	0.0	0.3	222	3.6	151	8.9	0.5	14.5	100	2.5	0.4	4.0	97	5.2
Ramps or street-level entrances Railings	88 273 469	0.8 1.3	421 458	6.8 7.4	166 160	9.8 9.5	25 23 25	13.3 14.2	106 272 299	6.5 7.2	24 45 34	4.8 9.0 6.7	212 193	11.3 10.3
Automatic or easy-to-open doors Accessible parking or drop-off site Bathroom modifications	182 114 561	0.5 0.3 1.6	271 197 551	4.4 3.2 8.9	135 87 196	8.0 5.1 11.6	22 10 * 33	12.4 5.5 18.9	344	3.6 2.7 8.3	29 25 50	5.8 4.9 9.9	107 84 211	5.7 4.5 11.2
Kitchen modifications Elevator, chair lift, or stair glide	226 161	0.6 0.5	313 266	5.1 4.3	127 105	7.5 6.2	21 16 *	12.0	175 * 182	4.2 4.4	22 31	4.5 6.2	125 127	6.6 6.8
Home accessibility problems  Must use steps to enter home  Difficulty entering or leaving the home	24,217 2,426	68.0 6.8	3,835 2,484	62.1 40.2	833 882	49.2 52.1	95 95	54.4 54.9	2,789 1,501	67.0 36.0	369 211	73.8 42.2	1,119 987	59.6 52.6
Difficulty opening or closing doors Difficulty reaching or opening cabinets Difficulty using the bathroom	907 2,115 764	2.5 5.9 2.1	1,008 1,968 1,189	16.3 31.9 19.2	560 796 601	33.1 47.0 35.5	45 91 49	26.0 52.5 28.0	458 1,098 547	11.0 26.4 13.1	65 134 87	13.0 26.8 17.4	417 730 513	22.2 38.9 27.3
Problems outside the home <sup>‡</sup>														
Wheelchair access problems Problems with other assistive device Difficulty walking	86 108 2,851	0.2 0.3 8.0	650 197 3,033	10.5 3.2 49.1	562 105 976	33.2 6.2 57.6	59 7 * 105	34.1 4.2 60.4	177 * 85 1,902	4.2 2.0 45.7	48 14 <sup>*</sup> 238	9.5 2.7 47.6	253 * 101 1,110	13.5 5.4 59.2
Persons living in areas with public transportation systems	23,292	100.0	4,019	100.0	1,150	100.0	129	100.0	2,722	100.0	312	100.0	1,263	100.0
Public transportation problems  Difficult to use or get to	5,642	24.2	2,744	68.3	943	82.0	93	72.0	1,764	64.8	196	62.6	1,002	79.3
Very difficult to use or get to Wheelchair access problems	2,036 98	8.7 0.4	1,816 572	45.2 14.2	770 445	66.9 38.7	76 53	59.2 40.8	1,072 195	39.4 7.2	89 30	28.4 9.6	787 267	62.3 21.1
Problems with other assistive device Difficulty walking on/to transit	61 941	0.3 4.0	175 1,602	4.3	83 668	7.2 58.1	11 ' 61			2.9 34.3	14 <i>'</i> 107			6.7 57.0

Source: Disability Followback Survey, 1994-97

<sup>†</sup>Estimates in Tables 11–13 are based on answers to questions about mobility device use from the Disability Followback Survey, Phase II of the National Health Interview Survey on Disability. Because of the time lag between interviews, statistics presented in the previous tables, which are based on questions from Phase I, should be considered slightly more reliable as overall estimates of mobility device use.

<sup>&</sup>lt;sup>‡</sup>Excludes public transportation.

<sup>\*</sup>Includes only persons who would qualify to be interviewed in the Disability Followback Survey. Not representative of the overall population of non-device-users.

<sup>\*</sup>Estimate has low statistical reliability (standard error exceeds 30 percent of estimate).

Table 12. Prevalence of home accessibility features and environmental accessibility difficulties among mobility device users and non-users, by type of device: United States civilian noninstitutionalized population, ages 18–64.

	No mobility Any mo			obility										
	devi	ce <sup>‡</sup>	dev	ice	Whee	lchair	Sco	oter	Cai	ne	Cruto	hes	Wal	ker
	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%
All persons <sup>†</sup>	25,032	100.0	2,139	100.0	622	100.0	82	100.0	1,440	100.0	320	100.0	372	100.0
Home layout Entire home on 1 floor Bedroom, bathroom, kitchen on 1 floor	11,306 21,142	45.2 84.5	877 1,854	41.0 86.7	260 524	41.8 84.2	38 68	46.2 83.8	624 1,252	43.3 86.9	132 274	41.4 85.6	158 321	42.5 86.2
Accessibility features present in home Widened doorways or hallways	1,182	4.7	323	15.1	185	29.8	14 *	17.5	* 157	10.9	32	9.9	60	16.0
Ramps or street-level entrances Railings	1,484 3,104	5.9 12.4	450 630	21.0 29.5	262 210	42.2 33.8	29 39	36.1 48.0	190 442	13.2 30.7	44 73	13.6 22.8	82 126	22.1 33.7
Automatic or easy-to-open doors Accessible parking or drop-off site	928 3,522	3.7 14.1	186 574	8.7 26.8	93 223	15.0 35.9	8 * 25	31.1	354	7.3 24.6	21 68	6.7 21.4	49 * 98	13.1 26.3
Bathroom modifications Kitchen modifications Elevator, chair lift, or stair glide	911 194 441	3.6 0.8 1.8	513 122 162	24.0 5.7 7.6	227 78 78	36.5 12.5 12.5	38 10 * 10 *			20.7 4.0 5.6	54 17 * 20 *	16.9 5.2 6.2	105 * 26 * 29	28.2 7.0 7.7
Accessiblity features needed	771	1.0	102	7.0	70	12.0	10	12.2	01	0.0	20	0.2	20	
but not present in home Widened doorways or hallways	42	0.2 0.7	117 173	5.5 8.1	72 71	11.6 11.4	17 * 15 *		55	3.9 8.1	13 * 24	4.0 7.5	* 39 56	10.4
Ramps or street-level entrances Railings Automatic or easy-to-open doors	163 278 94	1.1 0.4	207 130	9.7 6.1	71 77 65	12.3 10.5	16 * 16 *		135	9.4 4.8	23 * 20 *	7.5 7.1 6.2	64 39	14.9 17.3 10.6
Accessible parking or drop-off site  Bathroom modifications	66 314	0.4 0.3 1.3	92 272	4.3 12.7	41 98	6.5 15.8	8 * 19 *	10.1		3.6 12.1	11 * 37	3.5 11.6		8.5 19.7
Kitchen modifications Elevator, chair lift, or stair glide	133 90	0.5 0.4	165 125	7.7 5.8	60 53	9.7 8.5	13 * 13 *	16.3	* 93	6.4 5.9	18 14 *	5.8 4.3	44 * 43	11.8 11.5
Home accessibility problems	17.001	00.0	1 400	05.0	000	50.0	<b>54</b>	00.0	1 007	74.0	005	70.0	040	00.0
Must use steps to enter home Difficulty entering or leaving the home Difficulty opening or closing doors	17,331 1,363 582	69.2 5.4 2.3	1,409 897 414	65.9 41.9 19.4	328 303 201	52.6 48.6 32.3	51 45 21	63.0 55.6 25.8	1,027 569 225	71.3 39.5 15.6	235 144 40	73.6 45.0 12.5	249 218 106	66.9 58.4 28.6
Difficulty reaching or opening cabinets Difficulty using the bathroom	1,297 456	5.2 1.8	765 467	35.8 21.8	289 201	46.4 32.3	45 22	55.0 27.6	459 259	31.8 18.0	78 51	24.5 16.1	171 135	46.0 36.1
Problems outside the home <sup>‡</sup>														
Wheelchair access problems Problems with other assistive device	34 47	0.1	249 55	11.6 2.6	222 32	35.7 5.1	28	2.0	* 31	4.6 2.1	24 6 *	7.4 2.0	62 * 25	16.8 6.7
Difficulty walking	1,636	6.5	1,071	50.1	323	51.9	44	53.7	717	49.8	159	49.6	235	63.2
Persons living in areas with public transportation systems	16,820	100.0	1,452	100.0	445	100.0	54	100.0	985	100.0	204	100.0	269	100.0
Public transportation problems  Difficult to use or get to	3,506	20.8	970	66.8	352	79.2	38	70.9	633	64.3	131	64.3	217	80.5
Very difficult to use or get to Wheelchair access problems	1,075 40	6.4 0.2	521 213	35.9 14.7	243 182	54.5 40.8	26 21	48.4 39.2	319 67	32.3 6.8	48 19 *			59.5 23.7
Problems with other assistive device Difficulty walking on/to transit	27 445	0.2 2.6	45 500	3.1 34.5	27 219	6.1 49.2	4 * 23	7.7 42.5	* 22 299	2.3 30.3	5 * 59	2.6 28.9	* 19 157	7.1 58.5

Source: Disability Followback Survey, 1994-97

<sup>&</sup>lt;sup>†</sup>Estimates in Tables 11–13 are based on answers to questions about mobility device use from the Disability Followback Survey, Phase II of the National Health Interview Survey on Disability. Because of the time lag between interviews, statistics presented in the previous tables, which are based on questions from Phase I, should be considered slightly more reliable as overall estimates of mobility device use.

<sup>&</sup>lt;sup>‡</sup>Excludes public transportation.

<sup>&</sup>lt;sup>¥</sup>Includes only persons who would qualify to be interviewed in the Disability Followback Survey. Not representative of the overall population of non-device-users.

<sup>\*</sup>Estimate has low statistical reliability (standard error exceeds 30 percent of estimate).

Table 13. Prevalence of home accessibility features and environmental accessibility difficulties among mobility device users and non-users, by type of device: United States civilian noninstitutionalized population, ages 65 and above.

	No mobility Any mobility																
	dev	i <b>c</b> e <sup>‡</sup>	dev	ice	Wheel	chair	Sco	oter	Ca	ne	Cruto	hes	Wal	ker			
	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%			
All persons <sup>†</sup>	10,572	100.0	4,038	100.0	1,072	100.0	92	100.0	2,724	100.0	181	100.0	1,504	100.0			
Home layout Entire home on 1 floor	4,363	41.3	1,548	38.3	336	31.3	32	34.4	1,098	40.3	84	46.3	528	35.1			
Bedroom, bathroom, kitchen on 1 floor	9,315	88.1	3,448	85.4	804	75.0	86	92.7	2,445	89.8	155	85.9	1,266	84.2			
Accessibility features present in home																	
Widened doorways or hallways	827	7.8	526	13.0	164	15.3	22	23.4	324	11.9	14 *	7.9	209	13.9			
Ramps or street-level entrances	1,209	11.4	846	20.9	340	31.7	40	43.8	478	17.6	27	14.7	339	22.5			
Railings	2,276	21.5	1,284	31.8	319	29.8	36	38.5	893	32.8	60	33.0	505	33.6			
Automatic or easy-to-open doors	720	6.8	413	10.2	123	11.5	16 *	17.2	274	10.1	16 *	9.1	164	10.9			
Accessible parking or drop-off site	2,111	20.0	1,060	26.2	319	29.8	39	42.2	726	26.7	44	24.2	388	25.8			
Bathroom modifications	1,516	14.3	1,318	32.6	391	36.5	43	46.6	884	32.4	67	37.1	564	37.5			
Kitchen modifications	177 582	1.7 5.5	127 428	3.1 10.6	48 138	4.4	14 * 22 *	15.0 23.4	* 80 277	2.9 10.2	13 * 14 *	7.2 °		3.4 12.3			
Elevator, chair lift, or stair glide	362	5.5	428	10.0	136	12.9	22	23.4	211	10.2	14	1.1	165	12.3			
Accessibility features needed but not pr																	
Widened doorways or hallways	46	0.4	104	2.6	79	7.4	8 *	8.8		1.9	11 *	6.0		3.9			
Ramps or street-level entrances	111	1.1	248	6.1	95	8.8	8 *	0.5		5.7	21	11.7	156	10.4			
Railings	191	1.8	251	6.2	84	7.8	9 * 6 *			6.0	11 *	6.0		8.5			
Acceptable parking or drop off site	88 47	0.8 0.5	141 105	3.5 2.6	69 46	6.5 4.3	6 * 1 *	0.0	* 79 * 60	2.9 2.2	9 * 13 *			4.5 3.5			
Accessible parking or drop-off site Bathroom modifications	247	2.3	279	6.9	98	9.1	14 *	1	00	6.3	12 *			9.1			
Kitchen modifications	93	0.9	148	3.7	67	6.3	8 *	8.2		3.0	4 *	2.3		5.4			
Elevator, chair lift, or stair glide	71	0.7	141	3.5	52	4.9	3 *		* 97	3.6	17 *	9.5		5.6			
•		•		0.0			ŭ	0.0	•	0.0	•••	0.0	٠.	0.0			
Home accessibility problems  Must use steps to enter home	6.886	65.1	2,427	60.1	506	47.2	43	46.8	1,762	64.7	134	74.1	869	57.8			
Difficulty entering or leaving the home	1,063	10.1	1,587	39.3	579	54.1	50	54.2	931	34.2	67	37.1	769	51.2			
Difficulty opening or closing doors	325	3.1	594	14.7	359	33.5	24	26.1	233	8.6	25	14.1	310	20.6			
Difficulty reaching or opening cabinets	818	7.7	1,203	29.8	507	47.3	46	50.2	640	23.5	55	30.7	558	37.1			
Difficulty using the bathroom	309	2.9	722	17.9	400	37.3	26	28.4	288	10.6	36	19.9	378	25.2			
Problems outside the home ‡																	
Wheelchair access problems	51	0.5	401	9.9	340	31.7	32	34.4	110	4.1	24	13.3	190	12.6			
Problems with other assistive device	61	0.6	142	3.5	73	6.8	5 *	5.3	* 54	2.0	7 *	3.9	* 76	5.0			
Difficulty walking	1,215	11.5	1,962	48.6	653	61.0	61	66.2	1,185	43.5	80	44.2	874	58.2			
Persons living in areas with public transportation systems	6,472	100.0	2,567	100.0	705	100.0	75	100.0	1,736	100.0	108	100.0	994	100.0			
Public transportation problems																	
Difficult to use or get to	2,136	33.0	1,774	69.1	590	83.8	55	72.7	1,130	65.1	64	59.5	785	79.0			
Very difficult to use or get to	961	14.9	1,295	50.4	527	74.8	50	66.9	754	43.4	41	37.6	627	63.1			
Wheelchair access problems	58	0.9	359	14.0	263	37.4	32	42.0	128	7.3	10 *	9.7		20.4			
Problems with other assistive device	34	0.5	130	5.1	55	7.9	7 *	8.7		3.3	9 *	8.0		6.6			
Difficulty walking on/to transit	496	7.7	1,102	42.9	449	63.7	38	50.5	636	36.6	48	44.8	562	56.5			

Source: Disability Followback Survey, 1994-97

<sup>&</sup>lt;sup>†</sup> Estimates in Tables 11–13 are based on answers to questions about mobility device use from the Disability Followback Survey, Phase II of the National Health Interview Survey on Disability. Because of the time lag between interviews, statistics presented in the previous tables, which are based on questions from Phase I, should be considered slightly more reliable as overall estimates of mobility device use.

<sup>&</sup>lt;sup>‡</sup>Excludes public transportation.

Fincludes only persons who would qualify to be interviewed in the Disability Followback Survey. Not representative of the overall population of non-

<sup>\*</sup>Estimate has low statistical reliability (standard error exceeds 30 percent of estimate).

Table 14: Number and proportion of mobility device users and non-users with and without health insurance, by age and type of device: United States civilian noninstitutionalized population.

	Total		No mo devi	•	Any m	obility vice	Wheel	chair	Sco	oter	Ca	ine	Crute	ches	Wall	Walker	
	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	Number (1000s)	%	
All persons <sup>†</sup>	255,671	100.0	248,963	100.0	6,708	100.0	1,570	100.0	141	100.0	4,678	100.0	559	100.0	1,789	100.0	
Insured	214,629	83.9	208,253	83.7	6,376	95.1	1,493	95.1	131	92.8	4,467	95.5	507	90.6	1,734	96.9	
Medicare	32,429	12.7	27,571	11.1	4,858	72.4	1,091	69.5	100	71.1	3,532	75.5	236	42.3	1,464	81.8	
Medicaid	24,054	9.4	22,768	9.2	1,286	19.2	395	25.2	15 *	10.4	* 798	17.1	119	21.3	394	22.0	
Private insurance	180,143	70.5	176,211	70.8	3,932	58.6	843	53.7	88	62.6	2,817	60.2	287	51.3	1,078	60.2	
Other	10,147	4.0	9,605	3.9	542	8.1	129	8.2	12 *	8.5	* 407	8.7	69	12.2	103	5.8	
Uninsured	41,042	16.1	40,710	16.4	332	4.9	77	4.9	10 *	7.2	* 211	4.5	52	9.4	55	3.1	
All persons aged <18 <sup>†</sup>	68,727	100.0	68,584	100.0	143	100.0	86	100.0	0	0.0	19	* 100.0	36	100.0	27	100.0	
Insured	58,170	84.6	58,041	84.6	129	90.4	77	89.4	0	0.0	19	* 100.0	32	88.0	22	83.6	
Medicaid	13,018	18.9	12,952	18.9	66	46.2	51	58.9	0	0.0	4	* 21.9	* 9	* 24.3	* 14	* 52.9	
Private insurance	43,999	64.0	43,930	64.1	69	48.1	32	36.9	0	0.0	13	* 69.7	24	64.9	9	* 32.7 *	
Other	2,806	4.1	2,799	4.1	7	* 5.1	* 5	* 5.9	* 0	0.0	2	* 8.5	* 0	0.0	1	* 2.4 *	
Uninsured	10,557	15.4	10,543	15.4	14	* 9.6	* 9	* 10.6	* 0	0.0	0	0.0	4	* 12.0	* 4	* 16.4 *	
All persons aged 18-64 <sup>†</sup>	156,087	100.0	153,822	100.0	2,265	100.0	598	100.0	77	100.0	1,509	100.0	369	100.0	364	100.0	
Insured	125,902	80.7	123,920	80.6	1,982	87.5	542	90.5	68	88.7	1,322	87.6	322	87.3	322	88.6	
Medicare	3,236	2.1	2,476	1.6	760	33.6	250	41.9	43	55.7	517	34.3	93	25.2	140	38.4	
Medicaid	8,847	5.7	8,269	5.4	578	25.5	190	31.8	8 *	10.8	* 346	22.9	85	23.0	123	33.7	
Private insurance	113,009	72.4	111,971	72.8	1,038	45.8	270	45.1	41	53.5	693	46.0	177	47.9	146	40.0	
Other	5,741	3.7	5,482	3.6	259	11.4	54	9.0	7 *	9.0	* 191	12.7	51	14.0	35	9.6	
Uninsured	30,185	19.3	29,902	19.4	283	12.5	57	9.5	9 *	11.3	* 187	12.4	47	12.8	41	11.4	
All persons aged 65+ <sup>†</sup>	30,856	100.0	26,557	100.0	4,299	100.0	886	100.0	64	100.0	3,150	100.0	155	100.0	1,398	100.0	
Insured	30,556	99.0	26,292	99.0	4,264	99.2	875	98.8	63	97.8	3,127	99.3	154	99.3	1,389	99.4	
Medicare	29,112	94.3	25,017	94.2	4,095	95.3	838	94.7	57	89.5	3,015	95.7	142	91.5	1,323	94.6	
Medicaid	2,190	7.1	1,548	5.8	642	14.9	154	17.4	6 *	9.9	* 448	14.2	26	16.7	257	18.4	
Private insurance	23,133	75.0	20,309	76.5	2,824	65.7	542	61.2	47	73.5	2,110	67.0	87	56.1	923	66.0	
Other	1,599	5.2	1,323	5.0	276	6.4	70	7.9	5 *	7.9	* 214	6.8	17	11.0	68	4.8	
Uninsured	301	1.0	266	1.0	35	0.8	11	* 1.2	* 1 *	2.2	* 23	0.7	1 '	* 0.7	* 9	* 0.6 *	

Source: National Health Interview Survey, Disability and Family Resources Supplements, 1994-95

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<sup>&</sup>lt;sup>†</sup>Population estimates in this table exclude a small fraction of persons whose health insurance status is unknown.

<sup>\*</sup>Estimate has low statistical reliability (standard error exceeds 30 percent of estimate).