

March 2007

Aging Trends  
No. 7

The Aging Trends series was developed with support from the National Institute on Aging.



# Trends in Health Status and Health Care Use Among Older Women

by Kristen Robinson, Ph.D., Office of Analysis and Epidemiology

## Introduction

Maintaining good health enables older people to remain independent, stay socially engaged, and enjoy a good quality of life. Older women, however, face distinctly different challenges to maintaining their health compared with older men. Older women live longer, develop different chronic conditions, and experience a higher prevalence of functional limitations than older men. Awareness of these differences may enable the health care needs of older women to be addressed more effectively.

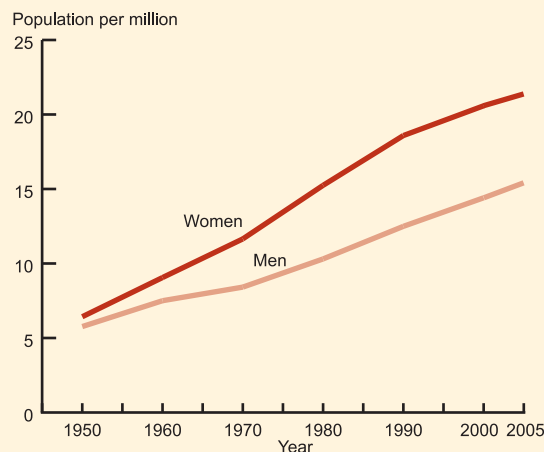
## Demographic characteristics

### Number

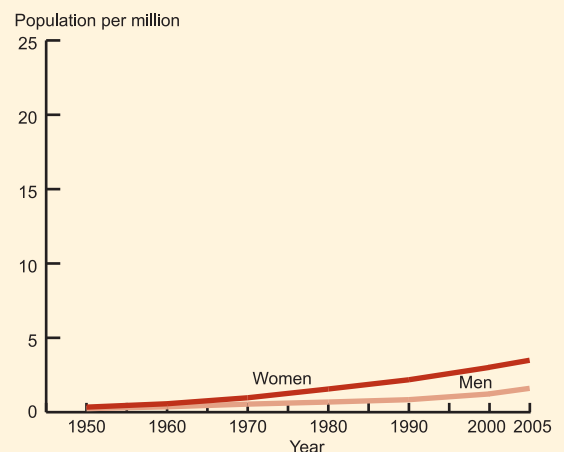
#### Women are the majority in the older population.

In 2005, there were 21 million women aged 65 years and over living in the United States, compared with 15 million men. Older women represented over one-half (58 percent) of the population aged 65 years and over, more than two-thirds (69 percent) of the population aged 85 years and over, and 80 percent of the population aged 100 years and over (1). Between 1950 and 2005 the number of women aged 65 years and over more than tripled, increasing from 6.5 million to 21 million (1,2). Moreover, the U.S. Census Bureau projects that by 2030, the number of women aged 65 years and over will double to 40 million, and by 2050 it will reach 48 million (3). Between 1950 and 2005, the sex ratio for people aged 65 years and over changed from 90 men per 100 women to 72 men per 100 women and for people aged 85 years and over, from 70 men per 100 women to 46 men per 100 women.

**Figure 1.** Number of people aged 65 years and over 1950–2005



**Figure 2.** Number of people aged 85 years and over 1950–2005



SOURCE: U.S. Census Bureau, Population Estimates.

## Race and ethnicity

**The large majority of older women are non-Hispanic white, but the share of other racial and ethnic groups will grow.**

Older women do not yet reflect the racial and ethnic diversity that exists among younger generations of women. In 2005, 81 percent of women aged 65 years and over were non-Hispanic white. This percentage increases to 85 percent for women aged 85 years and over. Whereas black women make up 9 percent of the population aged 65 years and over, older women in other racial groups (Asian, American Indian or Alaska Native, and Native Hawaiian and Other Pacific Islander) make up less than 4 percent of the population. Older women of Hispanic origin (who could be of any race) made up 6 percent of the population. These percentages will increase as younger, more diverse cohorts of women age. For example, in 2005, 58 percent of females under 18 years of age were non-Hispanic white, 16 percent were black, 4 percent were Asian, and 20 percent were Hispanic. Females in other racial groups made up 1 percent of the population (4).

## Marital status and living arrangements

**A large percentage of older women are living alone.**

Because women generally marry men older than themselves (5), and men have lower average life expectancies, women aged 65 years and over are more likely to be widowed (43 percent) than older men (13 percent) (6). Consequently, there are more older women living alone (38 percent) than older men (19 percent), and the percentage of older women living alone increases with age. In 2006, for example, 29 percent of women aged 65–74 years lived alone compared with 48 percent of women aged 75 years and over. Living arrangements differ by race and ethnicity. In 2006, non-Hispanic white women (40 percent) and black women (41 percent) aged 65 years and over were more likely to live alone than older Asian women (20 percent) and Hispanic women (25 percent). Older Asian women (32 percent), Hispanic women (34 percent), and black women (34 percent) were more likely to live with relatives other than a spouse compared with non-Hispanic white women (14 percent). Older non-Hispanic white women (44 percent), Asian women (46 percent), and Hispanic women (40 percent) were more likely to live with a spouse compared with older black women (23 percent) (6).

## Health status

### Life expectancy

**Overall life expectancy continues to improve, and the gap between men and women is narrowing.**

In 2004, the average life expectancy at birth for women was 80.4 years compared with 75.2 years for men. The difference in life expectancy between women and men was 2.9 years at age 65 (20.0 years and 17.1 years, respectively), and a little more than 1 year at age 85 (7.2 years and 6.1 years, respectively). The gap in life expectancy at birth between women and men has decreased from 7.8 years to 5.2 years since 1979 (7).

▶ Although life expectancy for both women and men has increased dramatically over the past century, the United States lags behind many other developed countries. For example, in 2002, Japan, Hong Kong, and Spain (ranked 1, 2, and 3) reported life expectancy at birth for women to be 85.2, 84.5, and 83.5 years, respectively, and for men to be 78.3, 78.6, and 75.8 years (ranked 2, 1, and 15), respectively. In 2002, for women the United States ranked 26th in life expectancy at birth and 18th in life expectancy at age 65 years; for men the United States ranked 26th in life expectancy at birth and 13th in life expectancy at age 65 years among 37 selected countries ranked in *Health, United States, 2006* (8).

## Causes of death

### Leading causes of death among older women differ by race and ethnicity.

In 2004, the five leading causes of death for women aged 65 years and over were Diseases of heart (heart disease), Malignant neoplasms (cancer), Cerebrovascular diseases (stroke), Chronic lower respiratory diseases (CLRD), and Alzheimer's disease. The leading causes of death for older men were heart disease, cancer, CLRD, stroke, and Diabetes mellitus (diabetes). Older minority women (category includes black, Asian or Pacific Islander (API), American Indian or Alaska Native (AIAN), and Hispanic women), however, have slightly different patterns. Although heart disease, cancer, and stroke were the top three causes of death among all racial and ethnic groups, diabetes was a more prominent cause of death among older minority women. The fourth and fifth leading causes of death for older black women, for example, were diabetes; and Nephritis, nephrotic syndrome and nephrosis (kidney disease). For older AIAN women, the fourth and fifth leading causes of death were diabetes, and CLRD. For older API women, the fourth and fifth leading causes of death were diabetes and Influenza and pneumonia. Finally, for older Hispanic women (people of Hispanic origin may be of any race), the fourth and fifth leading causes of death were diabetes and Alzheimer's disease (9).

▶ Diabetes is an incurable condition in which the body has trouble breaking down sugars in the blood. Diabetes is not only a leading cause of death, it is also a debilitating chronic condition that in 2002 affected more than 19 million people (includes both diagnosed and undiagnosed diabetes) aged 20 years and over (10). If left untreated, diabetes can lead to cardiovascular disease, kidney disease, nerve and blood vessel damage, blindness, and death. In 2001–2004, data from the National Health and Nutrition Examination Survey (NHANES) showed the prevalence of diabetes (both diagnosed and undiagnosed) to be 23 percent for people aged 60 years and over (8). Poor nutrition, obesity, and sedentary lifestyles have all contributed to the increase in the prevalence of diabetes in the 65 years and over population.

## Chronic conditions

### Some chronic conditions are more prevalent among older women than men.

Chronic conditions are often defined as diseases or illnesses that afflict people for at least 3 months and are rarely cured. These conditions often affect a person's quality of life and have to be managed by a variety of prescription drugs or medical monitoring and surgery. In this report, having a diagnosed chronic condition refers to a noninstitutionalized respondent ever being told by a physician or other health care professional that he or she has a certain chronic condition. In 2004–2005, age-adjusted estimates show the diagnosed chronic conditions that were more prevalent among older women compared with men included hypertension (51 percent for women, 45 percent for men);

arthritis (51 percent for women, 40 percent for men); asthma (11 percent for women, 9 percent for men); and chronic bronchitis (6 percent for women, 5 percent for men) (respondents were asked “During the past 12 months have you been told by a doctor or other health professional that you had chronic bronchitis?” Prevalence estimates shown for other conditions are based on ever being diagnosed with the condition). The ever-diagnosed conditions that were more prevalent among older men than older women included heart disease (33 percent for men, 26 percent for women); cancer (23 percent for men, 18 percent for women); diabetes (17 percent for men, 15 percent for women); and emphysema (6 percent for men, 4 percent for women) (11).

Prevalence estimates of diagnosed conditions do not represent the true burden of the condition. To do so, it is necessary to include undiagnosed conditions. For example, the age-adjusted prevalence of hypertension (both diagnosed and undiagnosed) in 1999–2002 was 78 percent for older women and 64 percent for older men based on data from NHANES (11). The age-adjusted prevalence of diabetes (both diagnosed and undiagnosed) in 1999–2002 was 19 percent for older women and 23 percent for older men (11).

## **Osteoporosis**

### **Osteoporosis is a silent threat to women.**

Osteoporosis is an often undiagnosed disease of the skeletal system that is characterized by low bone mass and structural deterioration of bone tissue. This “silent” disease leads to bone fragility and an increased susceptibility to fractures of the hip, spine, and wrist. Using data from the third NHANES, it is estimated that 5 million noninstitutionalized women (based on the average of undercount-adjusted population estimates from the March 1990 and March 1993 Current Population Surveys) aged 50 years and over in the United States had osteoporosis in 1988–1994. An additional 14 million women aged 50 years and over were at risk for the disease due to their low bone mass (a condition called osteopenia) (12). Numbers would be higher today, given the aging of the population, even if age specific rates have not increased. Risk factors for osteoporosis include low bone mass, previous fractures after age 50 years, family history of the disease, being female, deficient calcium and vitamin D intake over the lifetime, early menopause, and being non-Hispanic white or Asian. In 1988–1994, the age-adjusted prevalence of osteoporosis among non-Hispanic white women aged 50 years and over was 15 percent. Non-Hispanic black women and Mexican-American women aged 50 years and over had a prevalence of 8 percent and 16 percent, respectively (12).

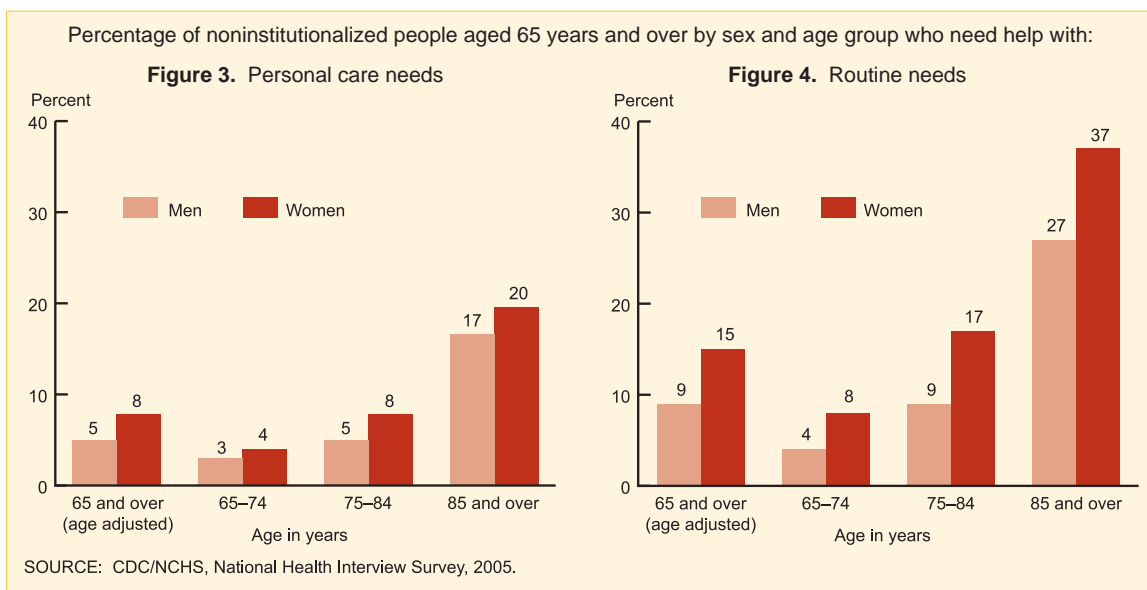
## **Assistance with personal care and routine care needs**

### **A higher percentage of older women needed help with personal care and routine care needs than older men.**

In the National Health Interview Survey, people are defined as needing assistance with personal care needs if, because of a physical, mental, or emotional problem, they require the help of others with such personal care needs as eating, bathing, dressing, or getting around inside their home. People are defined as needing assistance with routine needs if because of a physical, mental, or emotional problem, they require the help of others in handling routine needs such as everyday household chores, doing necessary business, shopping, or getting around for other purposes. Overall, among the noninstitutionalized population, a higher percentage of older women needed assistance with personal care and routine care needs than older men. In 2005, 8 percent of women aged 65 years

and over (age adjusted) reported they needed help with personal care needs, compared with 5 percent of men. The percentage of people who needed help with personal care needs was higher for older age groups. In 2005, 4 percent of women aged 65–74 years reported that they needed assistance with personal care needs compared with 20 percent of those aged 85 years and over. Similarly, 3 percent of men aged 65–74 years reported they needed assistance, compared with 17 percent of those aged 85 years and over (11).

A higher percentage of older women were also more likely to have reported that they needed help with routine care needs, such as everyday household chores and shopping, than older men. In 2005, 15 percent of women aged 65 years and over (age adjusted) reported that they needed help with routine care needs, compared with 9 percent of men. The percentage of people who needed help with routine care needs was higher for older age groups. In 2005, 8 percent of women aged 65–74 years reported that they needed assistance with routine care needs compared with 37 percent of those aged 85 years and over. Similarly, 4 percent of men aged 65–74 years reported they needed assistance compared with 27 percent of those aged 85 years and over (11).



▶ Older women are more likely than older men to have a health problem that requires special equipment such as a cane, a wheelchair, a special bed, or a special telephone. In 2004–2005, 19 percent of women aged 65 years and over (age adjusted) had a health problem that required special equipment compared with 15 percent of men (11).

Although the evidence from several studies suggests that rates of the need for help with personal care and routine care are declining for both older women and men, the cause and magnitude of this decline are debated (13–16). Most of the decline appears to be driven by fewer people reporting that they need help with routine needs. This could reflect a combination of improved overall health coupled with environmental adaptations including increased availability of senior housing options that offer services such as cleaning, meal preparation, or help with medications; special equipment and assistive devices that help people with functional limitations remain independent; and new technology that allows people to do more from their home such as electronic banking (13,17,18).

## **Health risk factors and behaviors**

### **Smoking**

#### **Less than 10 percent of older women are current smokers.**

Smoking cigarettes is associated with a higher risk of cancer, heart disease, and chronic obstructive lung diseases (19). Between 1965 and 2004–2005, the percentage of noninstitutionalized women aged 65 years and over (age adjusted) who were current cigarette smokers rose from 8 percent in 1965 to 13 percent in the mid-1980s, and then decreased back to 8 percent in 2004–2005. The percentage of older men who smoked decreased from 25 percent in 1965 to 9 percent in 2004–2005 (11). Concurrently, a larger percentage of both older men and women are former smokers. In 2004–2005, 28 percent of women and 49 percent of men aged 65 years and over (age adjusted) had previously smoked cigarettes (11).

### **Alcohol consumption**

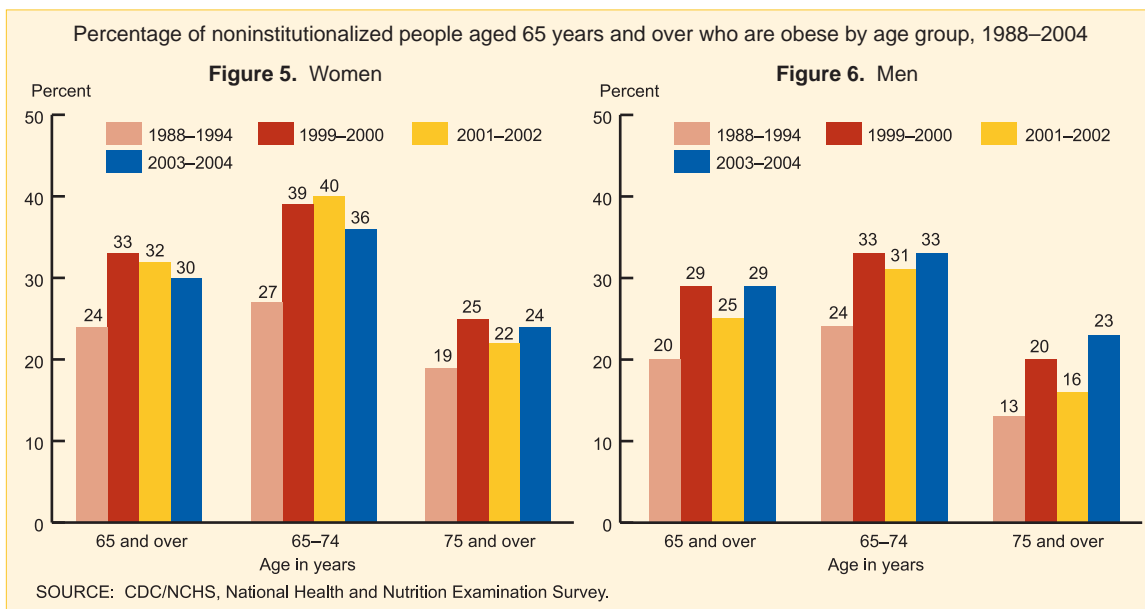
#### **Older women are less likely than older men to be heavy drinkers.**

Chronic health problems associated with heavy drinking include liver cirrhosis, pancreatitis, cancer, hypertension, and psychological disorders (20). Older men are considerably more likely than older women to have had five or more drinks in 1 day at least once in the past year. In 2005, 7 percent of noninstitutionalized men aged 65 years and over reported having had five or more drinks in 1 day at least once in the past year compared with 1 percent of women (21).

### **Obesity**

#### **Like the rest of the population, older men and women are heavier now than they were a decade ago.**

Obesity is a risk factor for several chronic conditions including coronary heart disease, Type 2 diabetes, and different types of cancer (22). As with other age groups, the percentage of people aged 65 years and over who are obese has increased since 1988–1994. In 2003–2004, 36 percent of noninstitutionalized women aged 65–74 years and 24 percent of women aged 75 years and over were obese. This is an increase from 1988–1994, when 27 percent of women aged 65–74 years and 19 percent of women aged 75 years and over were obese. Older men follow similar trends; 24 percent of men aged 65–74 years and 13 percent of men aged 75 years and over were obese in 1988–1994, compared with 33 percent of men aged 65–74 years and 23 percent of men aged 75 years and over in 2003–2004 (23). Over the past 5 years, the trend has leveled off, with no statistically significant change in obesity for older men or women between 1999–2000 and 2003–2004.



## Physical activity

### Older women and men have low levels of physical activity.

Participation in regular physical activity can reduce the risk of certain chronic diseases such as hypertension, diabetes, and heart disease (24). In 2004–2005, 22 percent of noninstitutionalized people aged 65 years and over (age adjusted) engaged in regular leisure-time physical activity (regular leisure-time physical activity is defined as engaging in light to moderate leisure-time physical activity for greater than or equal to 30 minutes at a frequency greater than or equal to five times per week or engaging in vigorous leisure-time physical activity for greater than or equal to 20 minutes at a frequency greater than or equal to three times per week). Men were more likely to exercise than women, although regular physical activity levels were low for both men and women. For example, 20 percent of women aged 65 years and over (age adjusted) participated in physical activity, compared with 25 percent of men (11).

## Influenza and pneumococcal vaccinations

### Vaccination rates for both older men and women are below the Healthy People 2010 targets of the U.S. Department of Health and Human Services.

The U.S. Department of Health and Human Services recommends that people aged 65 years and over receive an influenza vaccination each year and a pneumococcal vaccination at least once after they reach age 65. The Healthy People 2010 target for people aged 65 years and over receiving both of these vaccinations is 90 percent, which neither men nor women have achieved (25). Older women and men are equally likely to receive an influenza vaccination. In 2004–2005, 62 percent of noninstitutionalized women and men aged 65 years and over (age adjusted) reported receiving an influenza vaccination during the past 12 months. Women, however, are slightly more likely to receive a pneumococcal vaccination than men. In 2004–2005, 58 percent of women and 55 percent of men aged 65 years and over (age adjusted) reported ever receiving a pneumococcal vaccination (11).

## **Health care**

### **Utilization of medical care**

#### **Older women have hospital stays less often than older men.**

In 2005, 97 percent of noninstitutionalized women aged 65 years and over said they had a usual place to go for medical care, whereas less than 3 percent said they failed to obtain needed medical care during the past 12 months due to financial barriers. Older men reported similar rates (21). Older women also visited office-based physicians at about the same rate as older men. In 2003–2004, women aged 65 years and over had 674 office-based physician visits per 1,000 (age adjusted), compared with 679 visits per 1,000 for men (11). But in 2004, men aged 65 years and over had higher hospital discharge rates (4,820 per 10,000) (age adjusted) than women (4,036 per 10,000) (11).

### **Source of payment**

#### **Older men and women rely on different sources of payment for their health care.**

Although most older people are covered by Medicare, that program pays for only slightly over one-half (53 percent) (23) of the health care costs incurred by older Americans. The remaining costs are paid for by other sources. Medicare primarily covers acute care services such as physician and hospital care and, starting in 2006, prescription drugs. Important services not covered by Medicare are nursing homes (except for post-acute care in a skilled nursing facility) and many other long-term services, dental care, and, until 2006, most prescription drugs.

Older women use more health services than men (\$12,176 compared with \$11,329 (age adjusted) per person in 2003) and because women use more long-term care, which Medicare does not cover, a greater amount of their care is paid out of pocket or by Medicaid. In 2003, out of pocket payments (out of pocket payments include direct payments to providers by sample person or proxy. These payments are for coinsurance amounts, co-payments, deductibles, balance billings and charges for non-Medicare covered services not paid for by public or private insurance plans) for personal health care were \$2,445 and Medicaid payments were \$1,272 for women aged 65 years and over (age adjusted), compared with \$1,953 and \$722 for men (11).

It is important to note that Medicare-covered services are subject to cost-sharing through deductibles and coinsurance. About 90 percent of Medicare enrollees also have supplemental insurance coverage (26), Medicaid, or are in a Medicare HMO, so these plans often cover Medicare cost-sharing.

### **Home health care and long-term care**

#### **Older women utilize more home health care and long-term care than older men.**

Older women have higher average expenditures for home health care services and long-term care than men because they make up a higher proportion of the older and frailer population, need more help with both personal care needs and routine needs, and are less likely to have a spouse available to help them. In 2000, the rate of home health care discharges for any service was 1,521 per 10,000 for women aged 65 years and over (age adjusted) compared with 1,230 per 10,000 for men (11).



Likewise, in 2004, there were almost 1 million women aged 65 years and over living in nursing homes compared with fewer than 400,000 men. The rate of nursing home utilization increases with age. For example, the rate of nursing home residence in 2004 was 10 per 1,000 population for women aged 65–74; 42 per 1,000 population for women aged 75–84; and 165 per 1,000 population for women aged 85 years and over. The overall rate of nursing home utilization for women aged 65 years and over has decreased over time, from 68 per 1,000 population in 1973–1974 to 40 per 1,000 population in 2004 (age adjusted) (8,27).

## Conclusion

There have been many favorable trends in the health status of older women. Longevity has continued to increase, though at a slower rate for women than men; obesity rates that were going up for both older women and men have leveled off over the past 5 years; and although a higher percentage of older women reported needing help with personal care and routine care activities than older men, evidence from several studies suggest that rates of the need for help with functional limitations have declined for both women and men (13–16).

Because women live longer and experience more functional limitations than men, the financing and provision of their health care, and specifically long-term care, is a particularly important issue for older women. With fewer older women than men having a spouse they can rely on as a primary caregiver, older women are more dependent upon other informal (unpaid) caregivers (i.e., adult children, other family members, and friends); have a stronger need for community-based services (i.e., senior centers and convenient transportation); and a greater reliance on formal (paid) care services (i.e., home health care and nursing home care).

## About the data

### Current Population Survey (CPS)

**Description:** Provides monthly estimates of total employment, unemployment, and other demographic characteristics of the civilian noninstitutionalized population.

**Measures included in report:** Living arrangements and marital status.

**Source and contact information:** U.S. Census Bureau, [www.bls.census.gov/cps/cpsmain.htm](http://www.bls.census.gov/cps/cpsmain.htm).

### Medicare Current Beneficiary Survey (MCBS)

**Description:** Produces nationally representative estimates of health status, health care use and expenditures, health insurance coverage, and socioeconomic and demographic characteristics of Medicare beneficiaries (both institutionalized and noninstitutionalized).

**Measures included in report:** Sources of payment for health care services.

**Source and contact information:** Centers for Medicare and Medicaid Services, [www.cms.hhs.gov/MCBS](http://www.cms.hhs.gov/MCBS).

### National Ambulatory Medical Care Survey (NAMCS)

**Description:** Collects data on the utilization and provision of medical care services at visits to office-based physicians. Data are collected on type of providers seen; reason for visit; diagnoses; drugs ordered, provided, or continued; diagnostic and screening services, and therapeutic services ordered or provided during the visit, as well as other visit characteristics.

**Measures included in report:** Visits to office-based physicians.

**Source and contact information:** Centers for Disease Control and Prevention, National Center for Health Statistics, [www.cdc.gov/nchs/namcs.htm](http://www.cdc.gov/nchs/namcs.htm).

#### **National Health Interview Survey (NHIS)**

**Description:** Monitors the health of the civilian noninstitutionalized U.S. population through the collection and analysis of data on a broad range of data and is used to monitor trends in illness and disability and to track progress toward achieving national health objectives.

**Measures included in report:** Alcohol consumption, chronic conditions, failed to obtain medical care, help with personal care needs, help with routine needs, influenza and pneumococcal vaccinations, physical activity, smoking, special equipment, and usual place to go for medical care.

**Source and contact information:** Centers for Disease Control and Prevention, National Center for Health Statistics, [www.cdc.gov/nchs/nhis.htm](http://www.cdc.gov/nchs/nhis.htm).

#### **National Health and Nutrition Examination Survey (NHANES)**

**Description:** Designed to assess the health and nutritional status of the U.S. noninstitutionalized civilian population through direct physical examinations, laboratory tests, and interviews.

**Measures included in report:** Diabetes, obesity, and osteoporosis.

**Source and contact information:** Centers for Disease Control and Prevention, National Center for Health Statistics, [www.cdc.gov/nchs/nhanes.htm](http://www.cdc.gov/nchs/nhanes.htm).

#### **National Home and Hospice Care Survey (NHHCS)**

**Description:** Collects data on the characteristics and care provided by home health care agencies and hospices as well as characteristics of patients receiving these services.

**Measures included in report:** Home health care discharges.

**Source and contact information:** Centers for Disease Control and Prevention, National Center for Health Statistics, [www.cdc.gov/nchs/nhhcs.htm](http://www.cdc.gov/nchs/nhhcs.htm).

#### **National Hospital Discharge Survey (NHDS)**

**Description:** Collects and produces national estimates on characteristics of inpatient stays in nonfederal short-stay hospitals in the United States.

**Measures included in report:** Hospital discharge rates.

**Source and contact information:** Centers for Disease Control and Prevention, National Center for Health Statistics, [www.cdc.gov/nchs/about/major/hdasd/nhds.htm](http://www.cdc.gov/nchs/about/major/hdasd/nhds.htm).

#### **National Nursing Home Survey (NNHS)**

**Description:** Provides information on characteristics of nursing homes and their residents and staff.

**Measures included in report:** Nursing home utilization rates.

**Source and contact information:** Centers for Disease Control and Prevention, National Center for Health Statistics, [www.cdc.gov/nchs/nnhs.htm](http://www.cdc.gov/nchs/nnhs.htm).

#### **National Vital Statistics System (NVSS)**

**Description:** Includes data on births, deaths, and prior to 1996, marriages and divorces occurring in the United States based on U.S. Standard Certificates.

**Measures included in report:** Cause of death and life expectancy.

**Source and contact information:** Centers for Disease Control and Prevention, National Center for Health Statistics, [www.cdc.gov/nchs/about/major/dvs/mortdata.htm](http://www.cdc.gov/nchs/about/major/dvs/mortdata.htm).

### Population Estimates and Projections

**Description:** Estimates derived by updating the resident population enumerated in the decennial census using a component of population change approach.

**Measures included in report:** Number of older Americans and race and ethnicity.

**Source and contact information:** U.S. Census Bureau, [www.census.gov/popest/estimates.php](http://www.census.gov/popest/estimates.php).

### References

1. U.S. Census Bureau Population Division. Table 1: Annual estimates of the population by sex and five-year age groups for the United States: April 1, 2000 to July 1, 2005 (NC-EST2005-01). Release date: May 10, 2006.
2. U.S. Census Bureau. Resident population plus Armed Forces overseas: Estimates by age, sex, and race: July 1, 1950.
3. U.S. Census Bureau Projections. Available from: <http://www.census.gov/population/www/projections/popproj.html>.
4. U.S. Census Bureau Population Division. Annual estimates of the population by age, sex, and race for the United States: April 1, 2000 to July 1, 2005.
5. He W, Sengupta M, Velkoff V, DeBarros KA. U.S. Census Bureau. Current population reports, P23-209, 65+ in the United States: 2005. U.S. Government Printing Office, Washington, DC. 2005.
6. Federal Interagency Forum on Aging-Related Statistics. Unpublished worktables: Older Americans: Key indicators of well-being. Washington, DC: U.S. Government Printing Office. 2006. Available from: <http://www.agingstats.gov>.
7. Arias E. United States life tables, 2004. National vital statistics reports; National Center for Health Statistics. Hyattsville, MD. Forthcoming.
8. National Center for Health Statistics. Health, United States, 2006, with chartbook on trends in the health of Americans. Hyattsville, MD: 2006. Available from: <http://www.cdc.gov/nchs/hus.htm>.
9. National Center for Health Statistics. Unpublished worktables: Leading causes of death. 2004. Available from: <http://www.cdc.gov/nchs/datawh/statab/unpubd/mortabs.htm#lead>.
10. Cowie CC, Rust KF, Byrd-Holt DD, et al. Prevalence of diabetes and impaired fasting glucose in adults in the U.S. Population. *Diabetes Care* 29(6). 2006.
11. Trends in Health and Aging Data Website. Available from: <http://www.cdc.gov/nchs/agingact.htm>.
12. Looker AC, Orwoll ES, Johnston CC, Lindsay RL, Wahner HW, Dunn WL, et al. Prevalence of low femoral bone density in older U.S. adults from NHANES III. *J Bone Miner Res* 12(11):1761-8. 1997.
13. Spillman BC. Changes in elderly disability rates and the implications for health care utilization and cost. *Milbank Memorial Quarterly* 82(1):157-94. 2004.

14. Freedman VA, Martin LG. Contribution of chronic conditions to aggregate changes in old-age functioning. *Am J Public Health* 90(11):1755–60. 2000.
15. Freedman VA, Martin LG, Schoeni RF. Recent trends in disability and functioning among older Americans: A critical review of the evidence. *JAMA* 288(24). 2002.
16. Manton KG, Gu X, Lamb VL. Change in chronic disability from 1982 to 2004/2005 as measured by long-term changes in function and health in the U.S. elderly population. *Proceedings of the National Academy of Sciences* 103(48):18374–9. 2006.
17. Federal Interagency Forum on Aging-Related Statistics. *Older Americans 2004: Key indicators of well-being*. Washington, DC: U.S. Government Printing Office. November 2004.
18. Freedman VA, Crimmins E, Schoeni RF, Spillman BC, Aykan H, Kramarow E, et al. Resolving inconsistencies in trends in old-age disability. *Demography* 41(3):417–41. 2004.
19. Office of the Surgeon General, U.S. Public Health Service. *The health consequences of smoking: Chronic obstructive lung disease*. Rockville, MD: U.S. Department of Health and Human Services. 2004.
20. Carrao G, Bagnardi V, Zambon A, LaVecchia C. A meta-analysis of alcohol consumption and the rise of 15 diseases. *Prev Med* 38:613–9. 2004.
21. Early release of selected estimates based on data from the 2005 National Health Interview Survey (Released 6/21/2006).
22. National Institutes of Health. *Clinical guidelines on the identification, evaluation, and treatment of overweight and obesity in adults*. Bethesda, MD: DHHS, NIH, NHLBI. 1998.
23. Federal Interagency Forum on Aging-Related Statistics. *Older Americans update 2006: Key indicators of well-being*. Washington, DC: U.S. Government Printing Office. July 2006.
24. U.S. Department of Health and Human Services. *Physical activity and health: A report of the Surgeon General*. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. 1986.
25. Healthy People 2010 Database. Available from: <http://wonder.cdc.gov/data2010/>.
26. Poisal JA, Murray L. Growing differences between Medicare beneficiaries with and without drug coverage. *Health Aff* 20(2):74–85. 2001.
27. National Center for Health Statistics. *National Nursing Home Survey, unpublished analysis*. 2006.

### **Suggested citation**

Robinson K. Trends in health status and health care use among older women. *Aging Trends*, no 7. Hyattsville, MD: National Center for Health Statistics. 2007.