



## Examples of Uses of Data from NCHS

**Health Insurance Coverage** - NCHS provides the most current data available to track health insurance coverage. To provide a complete picture of the uninsured population, three fundamental measures of insurance coverage are obtained: persons who currently lack coverage; persons uninsured at any time in the previous year; and persons who have experienced lack of coverage for more than a year. In the first nine months of 2007, 16.7 percent of the nonelderly population currently lacked health insurance coverage. For the same time period, 9.2 percent of children under 18 had no health insurance coverage - an improvement over 1997 when 13.9 percent were not covered. Estimates for enrollment in high deductible health plans and consumer-directed health plans that combine a high deductible plan with a health savings account, as well as estimates of participation in flexible spending account arrangements for medical expenses, are now available.

**Birth Data** - NCHS data provide a wealth of information on health and demographic trends related to childbirth including data on trends in out-of-wedlock births and births to teens. In 2006, birth rates among teens increased for the first time in 15 years; this 3 percent increase to 42 births per 1,000 teens aged 15 - 19 followed a 34 percent decline from 1991-2005. Data are also available to monitor preterm, low birthweight, and multiple births - all of which are increasing.

**Teen Pregnancy** - NCHS data monitor trends in teen pregnancy rates. The latest estimates show a decline of 38 percent from the 1990 peak, to 72 pregnancies per 1,000 teens aged 15-19 in 2004 (data are not yet available to extend the pregnancy rates through 2006, to parallel the birth data). The decline through 2004 is consistent with NCHS data showing reductions in sexual activity and increased use of contraceptives among many teens.

**Growth Charts** - NCHS data are used to create the pediatric growth charts used by pediatricians and parents to monitor children's growth. These charts are available in electronic form directly from the CDC website, and are also repackaged by private sector entities and distributed widely to physicians' offices.

**Immunizations** - NCHS data are used to monitor compliance with recommended practices such as recommendations for influenza vaccines, to update immunization policies, and to target groups at risk from vaccine preventable diseases. Testing for immunity to rubella documented increases in recent years in groups targeted by vaccine policy and provided evidence that rubella transmission is not likely to occur in the U.S. population because immunity is now high.

**Nutrition** - NCHS data are used to recommend and evaluate food fortification decisions, to develop and evaluate the Dietary Guidelines for Americans, and to help set the recommended intake levels for vitamins, minerals, and other nutrients. Data from 2003-04 show that since the 1990s intake of milk and dairy foods improved somewhat but intake of vegetables and whole grains declined.

**Obesity and Diabetes** - NCHS data illustrate that the percentage of obese Americans - who are at elevated risk of a variety of health problems - has increased in spite of attempts to address this problem. Between 1980 and 2004 the percent of adults classified as obese more than doubled, and in 2005-06 more than one-third of adults (over 72 million people) were obese. The data also show that 18.8 percent of children aged 6 - 11 and 17.4 percent of adolescents aged 12 - 19 were overweight in 2003-04. Diabetes (diagnosed and undiagnosed) continues to affect many Americans - over 10 percent of adults aged 20 and older - and is one of the most common chronic diseases in our country.

**Cholesterol and Hypertension** - NCHS data called attention to these health problems decades ago. After public health intervention, there were declines in the percent of adults with high serum cholesterol, as well as declines in mortality from heart disease and stroke. After dramatic reductions in hypertension - down to 24 percent of adults in 1988-94 - recent data indicate a reversal in this trend. In 2003-06, 29 percent of the adult population had hypertension. Blood pressure data showing increases for children and teens prompted NIH to revise clinical practice guidelines for these age groups.

**Health Information Technology** - NCHS data track system changes that can decrease opportunities for error. Data on the diffusion of health information technology in ambulatory settings show that hospital EDs and outpatient departments are more likely than physician offices to use electronic medical records. Among physicians, 29 percent used electronic medical records in some way in their office-based practices in 2006, compared with 18 percent in 2001. Solo practitioners were least likely to use this technology.

**Quality and Patient Safety** - NCHS data systems offer a wealth of opportunities to examine issues of patient safety, such as adverse events in hospital settings, healthcare worker vaccinations in long-term care facilities, over- or under-use of procedures, visits to EDs or physician offices for complications of prior medical treatment or adverse drug events, and deaths due to medical error. In 2005, there were approximately 1.8 million ED visits for adverse effects of medical treatment. Data from death certificates show that in 2005 there were about 28,000 deaths involving complications of medical and surgical care.

**Emergency Preparedness** - NCHS data are used to monitor the emergency care system and illustrate the increasing demand for emergency care. ED visits increased from 97 million in 1995 to 115 million in 2005; during the same period there was a 9 percent decrease in the number of EDs. In 2005, more than one-third of patients waited more than an hour to see a physician after their arrival at the ED. Baseline data are also available on preparedness for mass casualties and bioterrorism and can highlight areas in need of improvement.

**Exposure to Environmental Chemicals** - NCHS data have contributed to our understanding of exposure to lead and secondhand smoke - which continue to decline - and blood mercury levels in women of child-bearing age and young children. Using NCHS data, CDC assesses the exposure of the U.S. population to a wide range of environmental chemicals.

**Oral Health** - NCHS data show significant improvements in Americans' oral health since the 1990s. The prevalence of tooth decay in permanent teeth is down for children, teens, and adults, although decay in baby teeth increased for 2 - 5 year-olds. There is more use of protective dental sealants and less gum disease, and more seniors are retaining their natural teeth.

**Smoking** - NCHS data chronicle decreases in adult smoking since 1964 - the year the first Surgeon General's report on smoking was released. The data show steady declines from 1965, when over 40 percent of adults smoked, until 1990 when about 25 percent of adults smoked. Smoking rates remained at 25 percent through much of the 1990s, but modest further reductions occurred between 1998 and 2006. In 2006, about 21 percent of adults (over 45 million) were current smokers.

**Asthma** - Tracking different aspects of asthma - prevalence, health care utilization, and mortality - reveals how well the Nation is addressing this disease and can lead to better targeting of interventions. NCHS data illustrate the disparate impact of asthma, with blacks experiencing more ED visits, hospitalizations, and deaths due to asthma than whites.

**High Risk Behavior** - NCHS provides information on testing and behavioral risk for HIV and other sexually transmitted infections. In 2002, persons at increased risk of HIV were more likely than lower-risk people to have been tested in the last year, but one third of this higher risk group (almost 5 million people aged 15 - 44) had never been tested.

**Injuries** - Injuries inflict a heavy toll on Americans. NCHS data document that unintentional injuries were the leading cause of death in 2005 for those 1 - 44 years of age and the 5<sup>th</sup> leading cause of death for all ages. In 2005, 68 percent of injury deaths were unintentional. Motor vehicles caused the most injury deaths, followed by poisoning, firearms, and falls.

**Disability** - NCHS data identify Americans with limitations in physical and mental functioning due to impairments and chronic illnesses and help us understand what proportion of the population actually experiences restrictions in activities. In 2006, 6.5 percent of children under age 12 and 42 percent of seniors aged 75 and older had activity limitations.

**Children's Emotional Health** - NCHS data are used to monitor children's emotional and behavioral health. Among children 4 - 17 years of age, about 8 percent had ADHD and about 5 percent had definite or severe difficulties in emotions, concentration, behavior, or being able to get along with others in 2006. Special education programs are major providers of services to children and parents report that 8 percent of children 6 - 17 years of age receive these services; 31 percent of these children receive special education services because of an emotional or behavioral problem.

**Use of Medications** - Prescription drug use is on the rise. NCHS data demonstrate the extent to which prescription drugs have become a vital component in our health care delivery system. In 2001-04, almost 47 percent of Americans used a prescription drug in the last month, while 20 percent used three or more; and use among seniors was much higher. Medication was prescribed, provided, or continued at 71 percent of ambulatory visits in 2005.

**Complementary and Alternative Medicine** - NCHS data represent the most comprehensive and reliable data on complementary and alternative medicine use by adults in the U.S., revealing that 36 percent of adults used some form of alternative medicine in 2002 (62 percent if prayer for health reasons is included).

**Disparities in Health** - NCHS data have long documented disparities in life expectancy, infant mortality, use of health care services, a variety of risk factors, health insurance coverage, and access to care - leading HHS to identify health disparities as a major public health problem and to develop national goals to reduce racial, ethnic, and other disparities in access to and quality of health care, as well as health outcomes.

**Women's Health** - NCHS data are used to monitor the health of American women in all stages of their lives, with a particular focus on the health of women in their childbearing years. Data are obtained to monitor access to contraceptive drugs and procedures, and their possible side effects - an important component of reproductive health. Data on cesareans are also monitored, revealing the highest rate ever reported in the U.S. in 2006 - 31 percent of all births. Data on preventive services such as mammograms show that in 2005 about 68 percent of women aged 50 and older reported having had a mammogram in the last two years. NCHS data also document the prevalence of HPV infection - one in four women are infected with HPV.

**Older Americans** - Over 80 percent of Americans now live past age 65. NCHS data illustrate the health and well-being of the elderly and underscore the health service delivery needs of this population. Data reveal that the likelihood of adults age 65 and older needing help with personal care from others increases dramatically as they age. Data also document increased use of health care services among this population, including increases in physician office and ED visits as well as increases in hospital use, and increased use of surgical procedures such as knee and hip replacements.

**Infant Mortality** - After increasing in 2002, the infant mortality rate dropped in 2003 and remained steady in 2004 and 2005 at a level of fewer than 7 deaths per 1,000 live births. In addition to monitoring trends, NCHS data are used to describe differentials in rates. For example, infants born to black mothers are at much higher risk of infant mortality.

**Life Expectancy and Causes of Death** - Drawing on data from state vital records, NCHS monitors trends in life expectancy, death rates, and causes of death, documenting the dramatic improvements in life expectancy in the past century. In 2005, Americans experienced the longest life expectancy in U.S. history - 77.8 years (75.2 years for men and 80.4 years for women). Heart disease, cancer, and stroke remained the leading causes of death in 2005.

## Who Uses NCHS Data?

**Congress and other policymakers** - to track major initiatives, set priorities for prevention and research programs, and evaluate outcomes.

**Epidemiologists, biomedical and health services researchers** - to understand trends in multiple aspects of health and health care, the relationship of observed risk factors to health outcomes, and the use of health services.

**Businesses** - to support health-related activities of pharmaceutical and food manufacturers, market research firms, consulting firms, and trade associations.

**Public health professionals** - to track preventable illnesses and functional limitations and evaluate the impact of intervention programs.

**Individual physicians** - to evaluate health and risk factors of their patients (for example, reference standards and norms for conditions such as cholesterol, body weight, and blood pressure, and reference growth charts for children).

**Media and advocacy groups** - to obtain background information and raise awareness of issues such as heart disease, cancer, diabetes, child nutrition, Alzheimer's disease, and health disparities.

**Actuaries** - to gauge the health of the Social Security and Medicare trust funds and set premiums for health and life insurance.

## Access to NCHS Data

- Published reports - in print and on website.
- Website-only data releases of timely information on important health issues.
- Public use data files for analysis by researchers.
- Pre-tabulated tables with state-level data on issues of special interest, such as births and deaths.
- Interactive data warehouses including "VitalStats" and "Health Data for All Ages," containing national and state data on a wide variety of health topics.
- Research Data Center - secure access to detailed data.