Examples of Uses of Data from NCHS

Birth Data - NCHS data provide a wealth of information on health and demographic trends related to childbirth. In particular, these data have highlighted trends in out-of-wedlock births and births to teens - trends that have slowed or reversed in recent years. Data for 2002 show that birth rates among teens fell for the 10th straight year to a new record low (43 births per 1,000 teens aged 15 – 19). Data are also available to monitor preterm, low birthweight, and multiple births – all of which are increasing.

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.

Child Health Data - From birth through childhood and adolescence, NCHS data chronicle the health status and experiences of children. These data address the major health concerns of children as they age – injuries, adoption of healthy and risky behaviors, and delivery of preventive services such as immunizations. Indicators of infant and child health range from prenatal care, birthweight, and infant mortality to physician visits, causes of hospitalization, child and adolescent mortality, causes of death, medical conditions such as asthma and overweight, and information about children with special health care needs.

Infant Mortality - In 2002, the U.S. witnessed the first rise in the infant mortality rate in more than four decades. NCHS data will soon be available to help explain the increase in this important health indicator. Early data from 2003 suggest a return to the downward trend in the infant mortality rate.

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 health 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. NCHS publishes each of these measures quarterly, only six months after the close of each quarter. In the first three quarters of 2003, 17 percent of the nonelderly population lacked health insurance coverage. If considering children separately, however, the results are better. In the first three quarters of 2003, 9.8 percent of children under 18 had no health insurance coverage – an improvement over 1997 when 13.9 percent were not covered.

Organization and Delivery of Health Care - Survey data reveal how our health encounters are changing: Americans are receiving more medications, more cardiac procedures, more ambulatory surgery, more therapies in nursing homes, and more home health care than in years past. Hospital stays, however, are shorter. Since 1970, the average length of stay for discharges of all ages declined from 7.8 days to 4.9 days in 2001. Understanding how the system is changing facilitates planning for the future.

Patient Safety - NCHS data systems offer a wealth of opportunities to examine questions of patient safety. They are used to profile issues such as complications and adverse events in hospital settings, over- or under-use of procedures, appropriate use of medications, visits to emergency departments or physician offices for complications of prior medical treatment or adverse drug events, or deaths due to medical error. Between 1992 and 1999, visits to emergency departments for injuries caused by adverse events of medical treatment increased 67 percent for all ages, 103 percent for persons age 45 - 64, and 110 percent for seniors. Data from death certificates show that in 2001 there were over 33,000 deaths involving complications of medical and surgical care.

Appropriate Use of Antibiotics - NCHS data are used to examine changes in medical practice related to antimicrobial resistance and antibiotic use. Data on the prescribing rates for children and adolescents visiting office-based physician practices indicate that efforts to reduce inappropriate use may be having the desired impact, showing a 40 percent decrease in the rate of antimicrobial prescriptions for children younger than 15 between 1989-90 and 1999-2000.

Overweight and Diabetes - NCHS data illustrate that the percentage of overweight Americans - who are at elevated risk of a variety of health problems - has increased in spite of attempts to address this problem. The 1999-2000 data show increased overweight prevalence not just among adults, 64 percent of whom are overweight or obese (30 percent are obese), but also among children and adolescents (15 percent are overweight). Diabetes (diagnosed and undiagnosed) continues to affect many Americans - over 8 percent of adults aged 20 and older - and is one of the most common chronic diseases in the country.

Cholesterol and Hypertension - NCHS data called attention to these health problems decades ago. After public health intervention, the data show declines in the number of people with high serum cholesterol, as well as declines in mortality from heart disease and stroke. After dramatic declines in hypertension – down from 40 to 24 percent of the population from the late 1970s to 1988-94 – recent data indicate a reversal in this trend. In 1999-2000, 29 percent of the population had hypertension.

Immunizations - NCHS data are used to update immunization policies and monitor compliance with recommended practices. NCHS data contributed to the recommendation that children be vaccinated against hepatitis B and have documented large increases in the number of children vaccinated against this disease since the recommendation. Data on adult immunizations are also available. Roughly two-thirds of non-institutionalized adults aged 65 and older have received the influenza vaccine in recent years – almost twice that of adults aged 50 – 64.

Trends in the Use of Medications - Nationwide prescription drug use and spending are on the rise. During 2001, about two-thirds of visits to office-based physicians and hospital outpatient departments and three-fourths of visits to emergency departments involved the prescription of medications.

National Nutrition Policy - NCHS data are used to recommend and evaluate food fortification decisions, including iron fortification. The data are also used to help set the Dietary Reference Intakes for vitamins, minerals, and other nutrients which form the basis of many nutrition programs, such as the nutrition labels we see on virtually all processed foods, the Meals on Wheels program, and National School Lunch Program. The data also provide information on caloric intake, showing an increase in caloric intake for both men and women - primarily due to higher carbohydrate intake - between the early 1970s and 2000.

Folate - NCHS data have guided the national policy regarding folic acid fortification to prevent neural tube defects. Data helped to define a problem and set policy to address it, and now are being used to monitor the impact of that policy. Data for 1999-2000 reveal substantial increases in folate blood concentrations among women of childbearing age.

Smoking - NCHS data on smoking chronicle decreases in the number of adult American smokers since 1964 - the year of the release of the first Surgeon General's report on smoking. The data show steady declines from 1965, when slightly over 40 percent of adults smoked, until 1990 when about a quarter of adults smoked. In the first three quarters of 2003, the adult smoking rate was 21.6 percent.

Exposure to Environmental Chemicals - NCHS data have contributed to our understanding of exposure to lead and secondhand smoke - which continue to decline. Using NCHS data from 1999 and subsequent years, CDC has expanded exposure monitoring activities to assess the exposure of the U.S. population to 116 environmental chemicals.

Disparities in Health - Since its inception, NCHS has collected health data on priority populations including various racial and ethnic groups, the uninsured and those on Medicaid, those living in underserved areas, children, women, those with special health care needs, and the elderly. These data have led to the identification of health disparities as a major public health problem and the development of national goals to reduce racial, ethnic, and other disparities in access to and quality of health care, as well as health outcomes.

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 on different population groups. Among persons with asthma, blacks visit emergency departments more than twice as often as whites and are three times as likely to be hospitalized for asthma. Non-Hispanic blacks are most likely to die from asthma.

Women's Health Data - NCHS data are used to monitor the health of American women in all stages of their lives, from childhood and adolescence, through mid-life and the mature years, and with a particular focus on the health of women (and infants) in their childbearing years. Data for 2002 reveal, for example, that the rate of cesarean delivery rose to the highest level ever reported in the U.S. Data on preventive services such as mammograms are also available, showing that in 2000 almost 74 percent of women aged 50 and older reported having had a mammogram in the last 2 years, as opposed to 50 percent in 1990.

Increases in Emergency Department Use - NCHS data are used to monitor the emergency care system. The data reveal a 23 percent increase in ED visits over the last decade - due to overall population growth as well as an increase in older adults who tend to visit EDs more often than younger people. Data also show that ED visits are becoming more complex and diverse. These factors combined with a trend in ED closings has brought about concerns that overcrowding will create delays in access to care, compromise the quality of critical care services, and jeopardize preparedness for national emergencies.

Trends in Physician Office Care - Physician office visits are becoming more complex with patient age increasing, more diagnoses rendered per visit, and more medications to manage. NCHS data from 2001 show that patients 45 years and over accounted for 53 percent of office visits, up from 42 percent in 1992 and outpacing the growth in the over-45 population.

Monitoring the Health of Older Americans - Over 80 percent of Americans now live past 65. NCHS data illustrate the health and well-being of the elderly and underscore the health service delivery needs of this population. Data reveal, for example, that the likelihood of adults age 65 and older needing help with personal care from other persons increases dramatically as they age. Data also document increased use of health care services, particularly increases in physician office visits and ED visits.

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 mortality in the past century. In 2002, Americans experienced the longest life expectancy in U.S. history – 77.4 years. Among adults aged 25 – 44, death rates since 1950 have decreased substantially for unintentional injuries, heart disease, cancer, and tuberculosis. Among persons aged 45 – 64, fewer are dying from heart disease, stroke, and unintentional injuries, and cancer is the leading cause of death. Deaths from heart disease and stroke are also down for older Americans, although heart disease remains the leading cause of death.

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 diseases, the relationship of observed risk factors to diseases, and the use of health services.

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).

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

Actuaries - including those gauging the health of the Social Security and Medicare trust funds, and setting premiums for health and life insurance.

Businesses - such as pharmaceutical and food manufacturers, market research firms, consulting firms, and trade associations.

Advocacy groups - to raise awareness of health issues such as heart disease, cancer, diabetes, child nutrition, Alzheimer's disease, and health disparities.

For further information on NCHS and its programs, visit the NCHS website at http://www.cdc.gov/nchs or call the Office of Planning, Budget and Legislation at 301-458-4100.

Last revised 04/04