Health Statistics: How Do We Know That?

What are the leading causes of death in the U.S.? How many Americans smoke? How many Americans are obese? Are emergency departments more crowded than they used to be?*

The National Center for Health Statistics (NCHS) collects data needed to answer these and many other key questions about health and health care in the United States. NCHS is part of the federal statistical system which includes agencies that are responsible for compiling, analyzing, and disseminating data for statistical purposes.

How Does NCHS Obtain Data?

NCHS uses a variety of data collection mechanisms to fulfill our statutory mandate to obtain accurate statistics on a wide range of health issues. We obtain data from all **birth and death records** filed in states. We also conduct **national surveys** based on samples designed to represent the American population. Survey methods include:

- **Personal interviews** in households and via phone.
- Standardized **physical examinations** and **lab tests** in mobile examination centers.
- **Review of facility information and patient medical records** in hospitals, hospital emergency and out-patient departments, physicians' offices, nursing homes, home and hospice care agencies, and residential care facilities.

What Data Are Produced?

NCHS produces data on a wide range of health indicators including:

- **Births** - teen, nonmarital, multiple, preterm, and low birth-weight.
- **Diseases and health conditions** such as obesity, diabetes, hypertension, cancer, heart disease, stroke, HIV/AIDS, lung diseases, osteoporosis, asthma, allergies, ADHD, arthritis, and pain.
- Other **health status measures** including injuries, disabilities, environmental exposures, oral health, vision, hearing, and mental health.
- **Health-related behaviors** such as smoking, physical activity, and alcohol use.
- **Nutrition** and growth charts.
- **Preventive services** such as immunizations and cancer screening.
- **Reproductive health** including fertility, contraceptive use, and sexual behaviors.
- **Health insurance coverage** and access to care.
- **Health care use and services** delivered by hospitals, hospital emergency and out-patient departments, physicians' offices, nursing homes, home and hospice care agencies, and residential care facilities.
- The **health care system** including the use of health IT and electronic medical records, changing patterns of service delivery, medications prescribed, and complications of care.
- **Deaths** - life expectancy, leading causes of death, fetal deaths, and infant mortality.

*The leading causes of death in 2011 were heart disease and cancer (the same as in 2010). │In the first half of 2013, 17.4 percent of adult Americans were smokers. │In 2011-12, 34.9 percent of adults and 16.9 percent of 2 to 19 year-olds in the U.S. were obese. │The number of visits to emergency departments (EDs) continues to increase as the number of EDs has decreased. There were about 136 million visits in 2011 compared to 115 million in 2005 and 108 million in 2000.

How Does NCHS Assure Data Quality?

- By adopting the highest possible standards for survey design, questionnaire development, and data collection, processing, analysis, and dissemination.
- With a strong commitment to protecting the confidentiality of information collected, thereby gaining the trust of survey respondents and promoting accuracy of the data.
- Through an active program in research and methodology to address significant issues related to survey design - such as how to use advances in technology and how to achieve high response rates - and to assure validity by verifying that survey questions are obtaining the information we are intending to measure.
- By collaborating with other agencies to assure that surveys include appropriate content and data are analyzed and interpreted accurately, enhancing the value of data for all users.

How Are Data Disseminated?

- Through a comprehensive website featuring easy access to published reports and statistics as well as tutorials and interactive web tools to further support use of the data. We produce a wide range of publications - from easily understandable Data Briefs to more in-depth analyses and methodological studies - to meet different data needs.
- By making public use data files available. Allowing users to work with the data for their own inquiries fosters valuable analyses that build on information presented in routine NCHS reports.
- Through Research Data Centers that provide secure access to detailed data while maintaining confidentiality.
- Through a Health Indicators Warehouse that provides a single mechanism for access to data from a variety of sources.

Who Uses These Data?

- **Policymakers** - to track implementation of health policies and programs, set priorities for research and prevention programs, and evaluate outcomes.
- **Epidemiologists and researchers** - to understand trends in health, health care delivery, risk factors, and outcomes.
- **Businesses** - to support health-related activities of manufacturing, marketing, and consulting firms and trade associations.
- **Public health professionals** - to identify and monitor health problems, risk factors, and disease patterns and to assess the impact of interventions.
- **Physicians** - to evaluate health and risk factors of their patients (such as norms for cholesterol, body weight, blood pressure, and children's growth).
- **Media and advocacy groups** - to obtain accurate information for use in raising awareness of health issues.

Data are used to compare health indicators over time and across populations and geographic areas. Most data produced from NCHS surveys are national-level data; if sample sizes are large enough, state data can be produced. National, state, and county data are available on births and deaths.