The National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC), is implementing multiple changes in 2016 to improve and update its data collection systems. Changes include questionnaire revisions, operational innovations to increase survey response, and use of electronic health records (EHRs) to expand data sources. NCHS is also implementing new approaches for data analysis and dissemination. A new NCHS report presents the most comprehensive data available on smoking during pregnancy.

DATA SYSTEMS DEVELOPMENTS

The National Health Interview Survey (NHIS) is redesigning its questionnaire to better monitor the health of the nation, to more accurately reflect the current and future priorities in health, to incorporate state-of-the-art survey technology, and to take advantage of new knowledge on disease processes, health outcomes, and relationships. The NHIS is a large-scale household interview survey that collects nationally representative data on the health status, health behaviors, health-care utilization, and health characteristics of a sample of the nation’s civilian, noninstitutionalized population.

The last content redesign was in 1997; the current redesign aims to update sections of the questionnaire and have it ready to field in 2018. Another goal of the redesign is to reduce the interview time by one-third to keep response rates up and costs down. To do so, NHIS has convened an internal committee to draft a shorter questionnaire that will still produce the wide array of quality data that NHIS has generated for almost 60 years. The committee has gathered feedback from survey sponsors and is conferring with health data users to develop the survey content. Plans may call for collecting some items on a rotating basis, concentrating on key items, retiring some topics, and adding in-demand items. The committee is exploring innovative ways to structure the questionnaire and conduct the interview.

Another major NCHS health survey, the National Health and Nutrition Examination Survey (NHANES), will implement a new electronic system in 2016 that operates in real time to adapt the survey design. NHANES collects data through personal interviews, standardized physical examinations, and laboratory testing and has a national sample of about 5,000 survey respondents annually. NHANES has created a database of all contacts with the survey’s sample and will use that paradata to adopt the most effective approaches, including how many calls works best, the time of day that yields the most results, which interviewers are more successful in certain households, and when to release more sample cases. Although this type of data has been available before, it has never been available to direct day-to-day operations. It is anticipated that this ability to adjust field operations on a flexible and frequent basis will result in higher survey response rates.

Population-based surveys have the challenge of maintaining or improving survey response rates, whereas record-based surveys must deal with changing forms of source documents. For health-care surveys, that means the creative use of EHRs. NCHS’s Division of Health Care Statistics is working with the health-care industry, including large health-care systems and solo physician practices, to obtain data from their EHR systems. In this effort, providers will get credit from the Centers for Medicare & Medicaid Services (CMS) through the Electronic Health Record Incentive Program and NCHS, and health-care researchers and policy makers will get valuable clinical data that would not be available with that level of detail by abstracting data from a sample of records. EHR problems, such as access, uniformity in format and transmission, and cost, will be addressed and will lead to improvements in data quality and efficiencies in data collection.

NCHS conducts the National Survey of Family Growth (NSFG) to produce national data on family life, marriage and divorce, pregnancy, infertility, use of contraception, and men’s and women’s health. NCHS recently expanded the NSFG age range from 15–44 years to 15–49 years to include a larger number of eligible respondents in its sample. In addition to gaining information on childbearing, family formation, divorce, and other key data on this older age group, expanding the pool of eligible respondents should increase survey response rates. An upcoming evaluation will provide preliminary results to guide the topics, scope, and focus of the NSFG. An ongoing effort is also being made to evaluate how vital statistics birth data collected by NCHS can be combined with NSFG data, and how the data will be disseminated.

Annually, the nation’s more than 2 million death certificates are filed in state vital statistics offices and reported to NCHS through the National Vital Statistics System. Death certificates contain demographic information about a decedent, including age, sex, race/ethnicity, residence, and information on the cause(s)
DATA DISSEMINATION DEVELOPMENTS

NCHS is also concentrating in 2016 on methods to improve the analytical power of its data, including by linking NCHS data files with those from other agencies such as CMS, the Social Security Administration, and the U.S. Environmental Protection Agency. Most recently, the focus has been on linking data from NHIS and NHANES with administrative data from the U.S. Department of Housing and Urban Development (HUD). HUD is matching its data on housing rental assistance programs with health outcomes to assess the effect of rental housing assistance on health outcomes. In 2016, HUD researchers will be able to use the linked data to assess this relationship and learn more about rental housing assistance residents. The NCHS/HUD linked files just became available through the Research Data Center of NCHS. Many other linked files can be obtained through the Research Data Center, which also provides controlled access to restricted files.

The new Vital Statistics Rapid Release program provides access to timely vital statistics data for public health surveillance through (1) pilot releases of quarterly provisional estimates and (2) special reports based on a current flow of vital statistics data from state vital records offices. Using the provisional data, NCHS is able to produce more timely estimates of important health indicators for public health practitioners, researchers, and health policy makers than would be possible by using final annual data. NCHS is expanding this rapid release program by adding reproductive health statistics to the existing program on mortality data.

Provisional estimates, based on vital statistics data received and processed by NCHS as of a specified cutoff date, will be updated quarterly as new data become available. To adjust for incompleteness of the provisional data, individual records are weighted when necessary to independent counts of vital records received from the states’ vital registration systems through the Vital Statistics Cooperative Program. Some records are imputed if the data available for a state and month are less than 50% complete at the time of data closure. Although the adjusted estimates based on provisional data were found to be close to the final estimates in an NCHS evaluation, they are subject to small changes as new data and updates are available. NCHS’s Vital Statistics Rapid Release program will continue evaluating the accuracy of the provisional estimates.

In 2016, the Office of Information Services and the Office of Information Technology will unite to form one organization to advance the dissemination and communication services of NCHS to better reach and serve data users. Staff members in both programs will be working to improve Internet tools, use data visualization throughout NCHS, and conduct research to define and design the most innovative communication programs.

SMOKING DURING PREGNANCY

A new report from NCHS presents data on smoking during pregnancy for 95% of the births in 2014 in the United States. The data cover 46 states and the District of Columbia, are based on the standard certificate of birth adopted in 2003, and are used in the National Vital Statistics System. Data in the report show that one in 10 women smoked for three months before or during their pregnancy in 2014. The smoking rate at any time during pregnancy was 8.4%, with 20.6% of women who smoked in the first or second trimesters quitting by the third trimester. Smoking during pregnancy was more prevalent among women aged 20–24 years (13.0%) than among women of other ages. By race and Hispanic origin, non-Hispanic American Indian/Alaska native women (18.0%) had the highest percentage of women smoking during pregnancy. By state, smoking during pregnancy ranged from 1.8% in California to 27.1% in West Virginia. On average, women who continued to smoke during pregnancy indicated smoking fewer cigarettes as their pregnancy progressed, from 13 per day before pregnancy to nine per day by the third trimester of pregnancy. The report also presents information on smoking cessation.
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REFERENCES
