

Data Sources

Behavioral Risk Factor Surveillance System (BRFSS): BRFSS is a national telephone survey of adults 18 and over who live in households with telephones. BRFSS monitors modifiable risk factors for chronic diseases and other leading causes of death, including nutrition, exercise, tobacco use, injury control, and use of preventive services as well as knowledge and attitudes, demographics, general health status, and access to health care. Topics vary by year as well as whether they are core CDC topics or state-added modules. Households are randomly selected to be called and then, once reached, one adult from the household is randomly selected to be interviewed. Data are not available at the county level. The Washington State BRFSS website is http://www.doh.wa.gov/EHSPHL/CHS/CHS-Data/BRFSS/BRFSS_homepage.htm
The CDC BRFSS website is <http://www.cdc.gov/brfss/>

Birth Certificates: Birth certificates are completed for all births that occur in Washington State. Births that occur to Washington residents in other states are added to the data files. Data presented in this report reflect information on Washington residents whether they delivered in Washington or elsewhere. Information collected includes maternal and paternal demographics, delivery information, medical risks of the mother and selected morbidity of the newborn. For more information about data collected on the Washington State Birth Certificate, see the website http://www.doh.wa.gov/ehsphl/chs/chs-data/birth/bir_main.htm

Information on all births in the United States is collected and reported by the National Center for Health Statistics. Documentation, statistics and reports are available at www.cdc.gov/nchs/births.htm

Comprehensive Hospital Abstract Reporting System (CHARS): The Comprehensive Hospital Abstract Reporting System is a database maintained by the Center for Health Statistics with inpatient hospital discharge information for all patients treated in state-licensed acute care hospitals in Washington from 1987-2008, regardless of patient residence. A hospital is defined as any health care institution that is required to qualify for a license under RCW 70.41.020. CHARS does not cover private alcoholism hospitals, no-fee hospitals, US military hospitals, US Veterans Administration (VA) hospitals, or Washington State psychiatric hospitals. Data on Washington residents hospitalized in Oregon are obtained through the Oregon Hospital Discharge Data (OHDD). However, hospitalization data are not available for Washington residents hospitalized in other states, and OHDD cannot always be combined with CHARS. This situation affects border counties, especially those adjacent to larger population centers in other states. Asotin and Garfield counties are particularly affected by hospitalizations in Idaho. Up to 9 hospital discharge diagnoses are recorded using the ninth revision of the International Classification of Disease diagnosis codes (ICD-9). Additional information is available at <http://www.doh.wa.gov/EHSPHL/hospdata/>

Current Population Survey (CPS): CPS is a monthly household survey of the non-institutional civilian population in the United States. Most of the information collected is on unemployment and the labor force (including employment benefits, such as health insurance coverage). Supplemental questions related to health have also been asked including tobacco use, fertility, and food security. The CPS Website is <http://www.census.gov/cps/>

Death Certificates: Death certificates are completed for all deaths that occur in Washington State. In addition, deaths to Washington residents that occur out of state are added to the data files. Data presented in this report reflect Washington residents whether they died in Washington or not. Death certificate information includes demographics, characteristics of the death and causes of death. The causes of deaths reported here are classified based on the International Classification of Diseases, Tenth Revision (ICD-10) published by the World Health Organization. Information on this classification as well as continuity with the previous revision is available in the Vital Statistics Technical Note at www.doh.wa.gov/ehsphl/chs/chs-data/TechNote/Tech_not.pdf. Additional information about data collected on the Washington State Death Certificate is available at: <http://www.doh.wa.gov/EHSPHL/CHS/CHS-Data/death/deatmain.htm>

Information on all deaths in the United States is collected and reported by the National Center for Health Statistics. Documentation, statistics and reports are available at <http://www.cdc.gov/nchs/deaths.htm>

Information on infant deaths in this report comes from a data file that links deaths to infants less than 365 days old to birth certificates. This linkage provides maternal demographics, maternal pregnancy information and birth characteristics for the infant.

Fetal Death Certificates: Fetal Death certificates are completed for all fetal deaths of 20 weeks gestation or more that occur in Washington State. Fetal deaths that occur to Washington residents in other states are added to the data files. Information collected on the fetal death certificate includes maternal and paternal demographics, causes of fetal death, delivery information, pregnancy risks and selected morbidity of the mother, and congenital anomalies of the fetus. For more information about data collected on the Washington State Fetal Death Certificate, see the website http://www.doh.wa.gov/ehsphl/chs/chs-data/fetdeath/fd_main.htm

Information on all fetal deaths in the United States is collected and reported by the National Center for Health Statistics. Documentation, statistics and reports are available at <http://www.cdc.gov/nchs/about/major/fetaldeath/abfetal.htm>

First Steps Database: The First Steps Database (FSDB), housed in Research and Data Analysis, Department of Social and Health Services, was created to assist in the evaluation of the First Steps Program. The First Steps Program helps low-income pregnant women get the health and social services they need. The FSDB performs an annual individual-level linkage of Medicaid claims and eligibility data with birth and death certificates. Medicaid women are defined by FSDB as women who received Medicaid-paid prenatal care and/or delivery services or who were enrolled in a Medicaid managed care plan for at least 3 of the last 6 months before delivery. (See Medicaid Status under [Technical Notes and Definitions](#) below for additional information on the classification of women on Medicaid used in this report). Documentation, statistics and reports are available at <http://hrsa.dshs.wa.gov/firststeps/index.htm>.

Genetics Minimum Data Set: The Genetics Minimum Data Set is maintained by the Genetics Program at the Office of Maternal and Child Health. The dataset includes genetic service utilization data for all regional genetic clinics in Washington with information on the demographics of the population served.

Healthy People 2010 Objectives: Healthy People 2010 provides national health objectives for a number of health outcomes to be achieved by 2010. Documentation, baseline data and objectives can be found at <http://www.healthypeople.gov/document/>

Healthy Youth Survey: The Healthy Youth Survey (HYS) is a collaborative effort of the Office of the Superintendent of Public Instruction, the Department of Health, the Department of Social and Health Service's Division of Behavioral Health and Recovery, the Department of Commerce and the Liquor Control Board. Data on youth substance use and other health behaviors are needed to support planning and evaluation of science-based prevention and health promotion programs. Historically, numerous surveys were administered by different groups (See description of Survey of Adolescent Health Behaviors and the Youth Risk Behavior Survey). The Healthy Youth Survey was developed to better coordinate survey efforts and minimize the burden on schools. HYS was first administered in October 2002, and will now be administered every two years in the fall. It provides information about adolescents in grades 6, 8, 10 and 12 in public schools in Washington. Schools are randomly sampled and all students in the surveyed grades are asked to respond to the questionnaire. Topics include safety and violence, physical activity and diet, alcohol, tobacco and other drug use, and related risk and protective factors. Documentation and state and county level data are available at: <http://www.doh.wa.gov/healthyyouth/default.htm>.

National Immunization Survey: The National Immunization Survey is an ongoing telephone survey of a random sample of households screened to determine whether an infant 19-35 months lives there. The adult most knowledgeable about the infant's health is surveyed to provide demographic information and to identify the provider(s) of immunizations. A mailed survey is sent to the providers for immunization history. The survey is conducted by the National Immunization Program and National Center for Health Statistics at the Centers for Disease Control and Prevention. The survey uses the State and Local Area Integrated Telephone Survey (SLAITS) methodology. State level immunization rates are available. Documentation and reports are available at <http://www.cdc.gov/nis>

National Survey of Children's Health: The National Survey of Children's Health was a telephone survey of a random sample of households with children less than 18 conducted from April 2007-July 2008. One child from the household was randomly selected to be the subject of the survey. The adult most knowledgeable about the child's health was asked to respond to the survey. The survey asked about the physical, social and emotional health of children. The survey was conducted by the National Center for Health Statistics at the Centers for Disease Control and Prevention. The survey used the state and local area integrated telephone survey (SLAITS) methodology. State level data are available. Documentation and reports are available at <http://www.cdc.gov/nchs/slait/nsch.htm>

National Survey of Children with Special Health Care Needs: The National Survey of Children with Special Health Care Needs was a telephone survey conducted from April 2005 – February 2007. A random sample of households was selected and screened to identify children with special needs. The adult most knowledgeable about the selected child's health was asked to respond to the survey which collected information on health insurance, access to services, satisfaction with care and care coordination. The survey was conducted by the National Center for Health Statistics at the Centers for Disease Control and Prevention. The survey used the



State and Local Area Integrated Telephone Survey (SLAITS) methodology. State level data are available. Documentation and reports for the 2005-2006 survey are available at <http://www.cdc.gov/nchs/slait/cshcn.htm>

National Vital Statistics Reports: The National Center for Health Statistics publishes periodic reports based on national birth and death data including annual reports summarizing trends in US births and deaths. Documentation and reports are available at <http://www.cdc.gov/nchs/products/nvsr.htm>

Pregnancy Risk Assessment Monitoring System (PRAMS): The Pregnancy Risk Assessment Monitoring System survey is an ongoing, population-based surveillance system sponsored by the Centers for Disease Control and Prevention (CDC) and the Washington State Office of Maternal and Child Health. PRAMS is designed to generate state-specific data for assessing health status and health care before, during, and after pregnancy. Some of the topics include prenatal care, pregnancy intention, multivitamin use, tobacco and alcohol use, physical abuse, breastfeeding, infant health care and infant sleep position. The information can be used for health and social services planning and policy development. Documentation and the questionnaire are described at <http://www.doh.wa.gov/cfh/PRAMS/default.htm> Additional detail is available at the CDC PRAMS webpage <http://www.cdc.gov/prams/>

Smile Survey: The Washington State Smile Survey is conducted by the Department of Health every five years. During the most recent survey, thirty nine Head start or Early Childhood Education and Assistance Program (ECEAP) sites and sixty-seven public elementary schools with a 2nd or 3rd grade were randomly selected across the state during the 2004-2005 school year. All preschool children enrolled and present on the day of the screening were included in the sample unless the parent returned a consent form specifically opting out of the sample. Elementary schools could choose to use either an active or passive consent process. Each child participating in the survey received an oral screening exam to determine the child's caries experience, treatment need and urgency, and dental sealants needs. Many counties chose to supplement this survey with an over sample or census of schools and/or Head Start/ECEAP sites in their county. The next round of the Smile Survey was begun in the 2009-2010 school year. Data is expected to be released in late 2010. More information on the Smile Survey is available at <http://www.doh.wa.gov/Data/oral.htm>

State and Local Area Integrated Telephone Survey (SLAITS): This is a survey methodology for collecting state level health care data for program development and policy-making activities. The National Center for Health Statistics has employed this methodology for several national surveys, including the National Survey of Child Health, National Immunization Survey, and the National Survey of Children with Special Needs. Information about this methodology is available at <http://www.cdc.gov/nchs/slait.htm#Description>

United States Census: Current Washington State census data are available from the Washington State Office of Financial Management at <http://www.ofm.wa.gov/pop/censusacs.asp>. Current United States census data are available from the US Census Bureau at <http://www.census.gov>

Washington State Population Survey: The Washington State Population Survey is a telephone survey of a random sample of Washington households which has been conducted every two years since 1998. The survey is coordinated by the Washington State Office of Financial Management. The survey focuses on employment, family poverty, in-migration, health and



health insurance coverage. Additional information is available at <http://www.ofm.wa.gov/sps/default.asp>

Survey of Adolescent Health Behaviors: The Survey of Adolescent Health Behaviors in 2000 was a precursor to the current Healthy Youth Survey. The survey was conducted jointly by the Department of Social and Health Services, the Office of the Superintendent of Public Instruction, the Department of Commerce. The survey was administered during class time to public school students in grades 6, 8, 10 and 12. The sample was stratified by geographic region and school size, and within these cells, where possible, a school was selected from each of three community types: urban, suburban, and rural. All students in selected schools were invited to participate. The survey asked a variety of questions about alcohol, tobacco, and drug use and risk and protective factors.

Youth Risk Behavior Survey: The 1999 Washington State Youth Risk Behavior Survey (YRBS) was a precursor to the current Healthy Youth Survey based on the Centers for Disease Control and Prevention Youth Risk Behavior Survey instrument. The YRBS is intended to monitor adolescent health-risk behaviors that contribute to morbidity, mortality, and social problems among youth and adults in the United States. The Washington YRBS used a two-stage sampling design: schools were chosen using a probability-proportionate-to-size sampling of all public schools serving children grades 9-12 (which ensured that smaller schools had some chance of selection). Once schools were chosen, a random sample of classrooms was selected within participating schools. A sample of 4,022 adolescents in Washington State public schools participated in the YRBS 1999 survey. Alternative schools serving high-risk youth in the public school system were included. Based on four comparison items that were also administered to a census of eleventh graders in the state during achievement testing, results seemed to be representative of adolescents in public schools despite the low school participation rate (45%). Additional information on Washington's Youth Risk Behavior Survey is available at www.doh.wa.gov/EHSPHL/Epidemiology/NICE/publications/yrbs99.pdf The CDC YRBS webpage is <http://www.cdc.gov/HealthyYouth/yrbs/index.htm>

Technical Notes and Definitions

Confidence Interval: A confidence interval is a range of values that is used to describe the uncertainty around a point estimate of a quantity, for example, a mortality rate or the frequency of a particular behavior. Confidence intervals measure the variability in the data due to random factors or chance. Generally speaking, confidence intervals describe how much different the point estimate could have been if the underlying conditions stayed the same, but chance had led to a different set of data. Confidence intervals are calculated with a stated probability (say 95%). Most confidence intervals are calculated as 95% confidence intervals because it's conventional and that is the level we use in this report. It is good to remember that the true population value is a constant, but its value is unknown. Thus, we calculate a confidence interval based on the sample of data we have available. If we had generated 100 confidence intervals, from taking 100 samples of data, each time the data would be slightly different and the confidence interval would be different. However, approximately 95 of the 100 confidence intervals would contain the true value. Confidence intervals do not account for bias resulting from missing or incomplete data, non-response to a survey, or poor data collection. This report provides confidence intervals for all survey data, including data from the Pregnancy Risk Assessment Monitoring System (PRAMS), the Healthy Youth Survey, the Behavior Risk Factor Surveillance System, the National Survey of Children's Health, the National Survey of Children with Special Needs, the National Immunization Survey, the Washington State Smile Survey and the Washington State Population Survey.

Much of this information was taken from the *Washington State Department of Health - Assessment Guidelines* (or <http://www.doh.wa.gov/data/guidelines/ConfIntguide.htm>) website.

International Classification of Disease (ICD) Codes: ICD codes are used to code hospitalization data in the Comprehensive Hospital Abstract Reporting System (CHARS) dataset and to code cause of death in the death certificate data. Hospitalization data use the ninth revision of the codes (ICD-9). Starting in 1999, mortality data switched from using ICD-9 to using the tenth revision of the codes (ICD-10). In order to view trends in Death Certificate data, comparability ratios (available from the National Center for Health Statistics) are used.

Medicaid Status: The source for the Medicaid designations used in this report is the First Steps Database (FSDB). FSDB uses three major Medicaid subgroups, determined by eligibility at the time of delivery: S Women Citizens, TANF, and Non-Citizens. In addition to these major groups, a small number of Medicaid women are eligible through other Medicaid programs, or receive services with eligibility type unknown.

- **S Women Citizens** – S Women citizens are Medicaid-eligible solely because of pregnancy (program S, excluding non-citizens). They have incomes at or below 185% of the Federal Poverty Level.
- **TANF** - Women on Temporary Assistance for Needy Families (TANF) receive cash grants in addition to medical coverage (program C or E). They generally have family incomes lower than 50% of the Federal Poverty Level.
- **Non-Citizens** – Non-Citizen women have incomes at or below 185% of the Federal Poverty Level, are Medicaid-eligible solely because of pregnancy, and are not legally

admitted for permanent residence in the United States. Non-Citizens are not eligible for TANF although their incomes are often lower than women on TANF.

In this report, Medicaid status is used as a proxy for socioeconomic status. From highest to lowest socioeconomic status the groups are: Non-Medicaid women, S Women, TANF and Non-Citizens. For additional information on the Medicaid groups, see First Steps Database description above or the First Steps website <http://hrsa.dshs.wa.gov/firststeps/index.htm>

Race and Ethnicity: Rates in this report are presented by race together with ethnicity because we observe disparities across these groups in Washington. Race/ethnic disparities are believed to reflect a mix of social, cultural and economic factors. One of the Healthy People 2010 goals is to reduce race/ethnic disparities. To monitor progress toward this goal, we must collect and present data by race/ethnicity. Current federal guidelines separate Hispanic ethnicity from race, and report on race and ethnicity separately. Federal guidelines also currently specify using five racial groups: White, Black or African American, Asian, Native Hawaiian or Pacific Islander, and American Indian or Alaska Native. We have combined race with ethnicity and attempted to use a standard coding system. This system includes the five race/ethnic groups: Hispanic, Non-Hispanic (NH) White, NH Black, NH Asian or Pacific Islander, and NH American Indian/Alaska Native. Data from the birth certificate, PRAMS and Washington State population files use this grouping. Other groupings are listed below:

The Healthy Youth Survey asks students to check all that apply for race/ethnicity. Data from the Healthy Youth Survey have 7 groups: White, Black, Asian, Pacific Islander, Native American, Hispanic and Other and because youth can answer more than one, we also have a More than one race category. Based on the way the question is asked we are able to identify Non-Hispanic race groups and Hispanics. These data include: asthma, child weight and physical activity, food insecurity and hunger, and mental health.

The 2005 SMILE Survey reports data on Non-Hispanic Whites, Non-Hispanic African Americans, Non-Hispanic Asians, Non-Hispanic Native Americans, and Hispanics.

Lastly, the National Survey of Children's Health and the National Survey of Children with Special Health Care Needs report data on Whites, Blacks, Multiple Race and Other.

Rates: A crude rate is the number of health events in a specified place and time period divided by the number of people at risk for the health event in the same place and time. For example, the Washington child mortality rate in 2003 is the number of Washington children ages 1-19 who died in 2003 divided by the total number of Washington children ages 1-19 in 2003. Rates are usually multiplied by a constant such as 1,000 or 100,000 for ease of understanding, and are then reported as rate per 1,000 or rate per 100,000. Thus, child mortality is usually reported as deaths per 100,000 children 1-19 years. For additional information on calculating and interpreting rates, please see the Washington State Department of Health data guidelines at <http://www.doh.wa.gov/Data/guidelines/Rateguide.htm>

Small numbers: To protect confidentiality in this report, rates are not presented if the number of health events was five or less. To prevent the need to suppress a lot of rates, we have combined three years of data for the sub-group analyses: county, age, and race/ethnicity. The interpretation of data based on small numbers is another concern. Small numbers primarily affect the county-specific rates, and can lead to instability of rates even when three years of data are

used. This instability or lack of precision is seen as wide confidence intervals. We have provided county population data in the first section of the report and encourage readers to look at the population sizes and estimate the number of events prior to using the data for policy and program planning.

Unintended Pregnancy: The percent of pregnancies which are unintended. Unintended pregnancy attempts to count the proportion of all pregnancies that were not intended at the time of conception. The only Washington State data available to assess intention are data from the Washington State Pregnancy Risk Assessment Monitoring System (PRAMS). To determine pregnancy intention, women are asked 2-6 months after delivering a live birth how they felt about becoming pregnant when they first learned of their pregnancy. Women can respond they wanted to be pregnant sooner, later, at that time or they didn't want to be pregnant then or at any time. Responses that the woman wanted to be pregnant later or not at all are classified as unintended. In addition, all abortions are considered unintended pregnancies. The unintended pregnancy rate is calculated as follows. The numerator is [(the estimated percentage of unintended pregnancies from PRAMS) *(resident live births)] + reported resident abortions. The denominator is the number of resident live births + reported resident abortions. Birth and Abortion data are obtained from the Washington State Center for Health Statistics Birth and Abortion files for 2006-2008.

There are several concerns with the unintended pregnancy measure. First, information on intention is only collected from some pregnancies (live births) and not from fetal deaths, abortions or other pregnancy outcomes. Second, the reported pregnancy intention may vary depending on when in relation to the pregnancy it is asked. Third, the concept of intending or planning pregnancies may be influenced by cultural perceptions around pregnancy and the life course.

Additional detail on selected data sources used in this document is included in Appendix B of The Health of Washington State. This appendix is available at <http://www.doh.wa.gov/HWS/doc/AppendixB2007.pdf>.

For persons with disabilities, this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TDD/TTY 1-800-833-6388).