FINDING PUBLIC HEALTH
STATISTICS AND DATA SOURCES

Catherine R. Selden†

Chapter Summary

Finding data sources and effectively using statistics are of vital importance as national,
state, and local public health departments are called upon to respond quickly to ever more
pressing emergencies. The importance of health data and a brief discussion of how to find
statistics and data sources are discussed in this chapter. Also, a case study is used to
illustrate how Web sites offering data sets and statistics can be useful in public health
practice.

Note that the text of this chapter is in the public domain and may be copied, adapted and
used freely for the training of members of the public health workforce.

Learning Objectives

Public health workers learning the material in this chapter will:

• Have a general understanding of the types of statistics and data sets that are
  available on the Internet
• Be able to identify selected Web sites with data sources and statistics for use at
  the national, state, and local public health levels.

Applications of Learning

The strategies and resources introduced in this chapter will enhance a public health
worker’s competency in:

   Analytic/Assessment Skills: Identifies relevant and appropriate data and
   information sources [1]

Introduction

Technology has markedly improved access to public health statistics. These statistics are
derived from data sets which are collections of logically related data arranged in a
prescribed manner. Data may represent information collected at the national, state or
local levels. Public health data sets may be conveniently envisioned as falling into two
broad categories. One category includes counts of individual health related events or
services. Counts are made of individuals who are provided particular health services.
These counts are normally geographically and chronologically proscribed. For example,

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one collection of data might focus on a population in the northeast United States between 1960 and 1980 while another might be limited to citizens of West Virginia. Specific events might include hospital emergency room visits, visits to WIC clinics, deaths attributed to a specific cause, and preventive services including cancer screenings or immunizations. Such counts of events, once aggregated, are useful in assessing general health needs and status, setting reimbursement levels, determining eligibility, evaluating care and program coverage and penetration rates. However, because data collection is limited to those who seek services, the results may or may not be representative of the general population.

A second category of data sets describes populations through the use of sampling techniques. Data collection systems that create these data sets survey a subset of a reference population. The reference population could be as broad as all citizens of the United States or it may be more narrowly constrained. Examples include many of the federal surveys of health status and health behaviors and health services utilization. The sampling techniques are used to identify an appropriate survey population [2].

Statistical reports including a mix of text, tables, and figures from data sets are available from an increasing number of federal, state and local sources through a variety of electronic modes including the Internet.

Important Features of Health Statistics and Data Sets

The Importance of Health Data
Health statistics and data are important because they measure a wide range of health indicators for a community. A community can be the entire United States, a region, state, county, or city. Health data provide comparisons for clinical studies, can be used to assess costs of health care, can help identify needed prevention targets for such programs as Healthy People 2010 and are important for program planning and evaluation by finding a baseline against which to measure in the evaluation phase.

The Context of Health Statistics
Health statistics are influenced by an organization’s perspective and bias. These biases can affect the collection device and eventual outcomes that are reported. They also can determine what data are collected and how the data are collected. Whenever possible, read the notes describing the reasons for and methods of data collection. Remember that statistics are collected to meet the needs of the collector.

The populations covered by different data collections systems may not be the same. Data on vital statistics and national expenditures cover the entire population. Most data on morbidity and utilization of health resources cover only the civilian non-institutionalized population.

Some information is collected in more than one survey and estimates of the same statistic may vary among surveys. For example, the National Health Interview Survey, the National Survey on Drug Use and Health, the Monitoring the Future Survey, and the Youth Risk Behavior Survey all measure cigarette use. But estimates of cigarette use may differ among these surveys because of different survey methodologies, sampling frames, questionnaires, definitions, and tabulation categories.
Key Features of Health Statistics
Health statistics are population based and many are collected and analyzed over time. Statistics often use geographic regions such as zip codes for determining health care coverage and comparisons of specific disease occurrences. Most studies focus on variation over time, space and social group.

Health Statistics Come from Diverse Sources
Many studies use administrative data. Administrative data, according to the Centers for Medicare and Medicaid Services (CMS), include enrollment or eligibility information, claims information, and managed care encounters. The claims and encounters may be for hospital and other facility services, professional services, prescription drug services, laboratory services or other services.

Surveys are designed to collect specific data and are often conducted by trained personnel who administer them by telephone or in-person.

CDC states that public health surveillance is the systematic collection, analysis, interpretation, and dissemination of health data on an ongoing basis, to gain knowledge of the pattern of disease occurrence and potential in a community, in order to control and prevent disease in the community.

Health Data on the Web

Statistical Information on the Web
The Internet is a good place to look for already compiled statistics. Current data from federal, state and local governments as well as non-governmental health statistical sources are increasingly available. Access to spatial information is becoming easier, allowing the creation of maps for visualizing statistical information. Keep in mind that while the Internet is a valuable tool, it is not the complete answer.

Remember that Web sites are produced by organizations for a variety of purposes. Web sites provide a variety of information in many formats including:

- Summaries and secondary material
- Full reports with tables
- Digital versions of data
- Full data sets

Statistical Information Not on the Internet
Not all health data sets and statistics are freely or publicly available on the Web. In some cases only summaries or partial data sets are available and the full sets must be purchased. New privacy concerns as a result of the HIPPA regulations may cause organizations to limit access to data. For example, the Centers for Medicare and Medicaid Services (CMS) states on its Web site that some data sets are so limited that a Medicare beneficiary might be identified when files are relinked although all direct identifiers are stripped out. CMS requires a signed Data Use Agreement (DUA) between CMS and the requestor to ensure that the data are protected in these files.
Finding Statistics and Data Sets on the Web
There are umbrella Web sites that point to statistical information and data resources. These are called portals and search engines. A portal is a Web site that is commonly used as a gateway to other Web sites. A search engine is a computer program that retrieves documents, files or data from a database or from a computer network (especially from the Internet). Search engine algorithms may give a higher ranking to a site that contains the keyword(s) that are specified by the user. Google is an example of a search engine that points to numerous statistics and data resources across the World Wide Web.

Case Study: Prevention of smoking among teens.
Ms. McBeal, a health educator in Lostlake, West Virginia is interested in developing a promotional campaign to decrease smoking among teens. To interest key players in the community she wants to create a presentation with information about tobacco use among teens with national, state and local statistical data, causes, adverse effects, and prevention.

Search Tips for Google on Smoking and Teens
Click on Advanced Search
Enter smoking on the first line,
Enter “youth teens children” on the line marked “with at least one of the words,”
Scroll down to Domain,
Enter .gov (This will narrow the search to only government Web sites.)
Google Results include:
MedlinePlus – Smoking and Youth

What are Internet Portals?
Internet Portals are subject focused, information directories. Typically they do not have their own local content. They point to content created by others. Key word searches within portals can be effective. However, not all portals have keyword searching. You need to know what you are looking for and you need to identify the correct information portal for that need. Several are listed in the material that follows.
Health Statistics Portals/Gateways

**Partners in Information Access for the Public Health Workforce**
<http://phpartners.org/>

**MedlinePlus**
<http://medlineplus.gov/>
See Health Topic – Health Statistics

**HSS Data Council Gateway to Data and Statistics – Federal Government**
<http://aspe.hhs.gov/statinfo/>

**Statistical Abstract of the United States – U.S. Census Bureau**
<http://www.census.gov/statab/www/>

**FedStats – Federal Government**
<http://www.fedstats.gov/>

**State & County QuickFacts – U.S. Census Bureau – Federal Government**
<http://quickfacts.census.gov/qfd/>

**Statistical Resources on the Web – University of Michigan**
<http://www.lib.umich.edu/govdocs/stats.html>

**State Health Facts Online - Kaiser Family Foundation**
<http://www.statehealthfacts.kff.org/>

Federal Government Health Statistics Agencies

There are several federal agencies that gather, analyze, and report statistical data useful for public health purposes. Among these are:

**National Center for Health Statistics (NCHS)**
<http://www.cdc.gov/nchs/>
This is the principal health statistics agency in the U.S. It is part of the Centers for Disease and Control and Prevention (CDC).

**Agency for Healthcare Research and Quality (AHRQ)**
<http://www.ahrq.gov/>
AHRQ is the lead scientific research federal agency charged with supporting research designed to improve the quality of healthcare, reduce its cost, improve patient safety, decrease medical errors, and broaden access to essential services.

**Substance Abuse and Mental Health Services Administration (SAMHSA)**
<http://www.samhsa.gov/>
SAMHSA’s Office of Applied Studies (OAS) provides the latest national data on 1) alcohol, tobacco, marijuana and other drug abuse, 2) drug related emergency department episodes and medical examiner cases, and 3) the nation’s substance abuse treatment system.
Centers for Medicare and Medicaid Services (CMS) (formerly HCFA)  
<http://www.cms.gov/>
CMS offers researchers and other health care professionals a broad range of quantitative information from estimates of future Medicare and Medicaid spending to enrollment, spending, and claims data.

Data Sets: Federal

A variety of data sets are available from federal agencies. Some Web sites provide interactive interfaces that allow users to download data for manipulation offline. Others allow users to query a data set or collection of data sets with Web-based tools. Information can be extracted and used in custom-made tables.

National Library of Medicine

**Health Data Tools and Statistics** - Partners in Information Access for the Public Health Workforce  
<http://phpartners.org/health_stats.html>
This public health portal has categorized data tools and statistics into these subcategories: Health Statistics, National Public Health Data Sets, State and Local Public Health Data Sets, Public Health Infrastructure Data, Search for Other Tools, and Tools for Data Collection and Planning.

**Health Services and Sciences Research Resources (HSRR)** – National Information Center on Health Services Research and Health Care Technology (NICHSR)  
This is a directory of research datasets and instruments used in health services research and public health. Entries have URLs for more information and most have pre-formulated PubMed/MEDLINE searches.

**Toxicology and Environmental Health** – Specialized Information Services  
<http://sis.nlm.nih.gov/Tox/ToxMain.html>
Hazardous Substances Data Bank has chemical data valuable for environmental health concerns.

Agency for Healthcare Research and Quality

**HCUP – Healthcare Cost and Utilization Project**  
<http://www.ahcpr.gov/data/hcup/>
The HCUP is a family of health care databases and related software tools and products developed through a federal-state-industry partnership. HCUP databases bring together the data collection efforts of state data organizations, hospital associations, private data organizations, and the federal government to create a national information resource of discharge-level health care data. HCUP includes the largest collection of longitudinal hospital care data in the United States, with all-payer, discharge-level information beginning in 1988. These databases enable
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research on a broad range of health policy issues, including cost and quality of health services, medical practice patterns, access to health care programs, and outcomes of treatment at the national, state, and local market levels. It also includes information on admission rates and mean charges by DRG (Diagnostic Related Groups) codes.

**MEPS – Medical Expenditure Panel Survey**
<http://www.meps.ahrq.gov/default.htm>
MEPS is a survey of the civilian population living in U.S. communities. MEPS produces nationally representative statistics on health care expenses, including the type of medical services used, how frequently they are used, the cost of services, and how they are paid for, as well as health conditions and health insurance availability and coverage. MEPS also collects extensive information on employer-based health insurance plans.

**Centers for Disease Control and Prevention (CDC)**

**Behavioral Risk Factor Surveillance System (BRFSS)**
<http://www.cdc.gov/brfss/>
BRFSS is the world’s largest telephone survey; it tracks health risks of adults in the United States. A federal and state partnership allows data collection at the national, state and local levels.

**National Health Care Survey (NHCS)**
<http://www.cdc.gov/nchs/nhcs.htm>
The NHCS is a collection of health care provider surveys, obtaining information about the facilities that supply health care, the services rendered, and the characteristics of the patients served.

**National Health Interview Survey (NHIS)**
<http://www.cdc.gov/nchs/nhis.htm>
NHIS is a continuing nationwide survey of the U.S. civilian noninstitutionalized population conducted in households. Each week a probability sample of households is interviewed by trained personnel of the U.S. Bureau of the Census to obtain information about the health and other characteristics of each living member of the sample household.

**National Health and Nutrition Examination Survey (NHANES)**
<http://www.cdc.gov/nchs/nhanes.htm>
NHANES is a survey that collects information about the health and diet of people in the United States. It is unique in that it combines a home interview with health tests that are done in a mobile examination center.

**National Immunization Survey**
<http://www.cdc.gov/nip/coverage/default.htm#NIS>
A large on-going survey of immunization coverage among U.S. preschool children (19 - 35 months old).
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National Notifiable Disease Surveillance System (NNDSS)
<http://www.cdc.gov/epo/dphsi/nndss.htm>

National Vital Statistics System
<http://www.cdc.gov/nchs/nvss.htm>
Compiles information from states on vital events - births, deaths, marriages, divorces, and fetal deaths.

Youth Risk Behavior Surveillance System (YRBSS)
<http://www.cdc.gov/nccdphp/dash/yrbs/index.htm>
The YRBSS includes national, state, and local school-based surveys of representative samples of 9th through 12th grade students. These surveys are conducted every two years, usually during the spring semester. The national survey, conducted by CDC, provides data representative of high school students in public and private schools in the United States. The state and local surveys, conducted by departments of health and education, provide data representative of the state or local school district.

Substance Abuse and Mental Health Services Administration

National Survey on Drug Use & Health (formerly called the National Household Survey on Drug Abuse)<http://www.samhsa.gov/oas/nhsda.htm>
This is the primary source of information on the prevalence, patterns, and consequences of alcohol, tobacco, and illegal drug use and abuse in the general U.S. civilian non-institutionalized population, aged 12 and older.

Drug Abuse Warning Network (DAWN)<http://dawninfo.samhsa.gov/>
Relies on emergency department and medical examiner data.

Drug and Alcohol Services Information System (DASIS)<http://www.samhsa.gov/oas/dasis.htm#DASISinfo>
Includes substance abuse treatment facilities data.

Alcohol and Drug Services Study (ADSS)<http://www.samhsa.gov/oas/adss.htm>
Nationally representative survey of substance abuse treatment facilities and clients

Centers for Medicare and Medicaid Services (CMS) (Formerly HCFA)

Acute Inpatient Prospective Payment System
<http://cms.hhs.gov/providers/hipps/default.asp>
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Cost Data Sets
<http://cms.hhs.gov/data/download/default.asp>
This file contains cost, statistical, and other data used in establishing the Home Health Agency (HHA) Cost Limits for fiscal periods beginning after October 1, 1999.

Medicare Current Beneficiary Survey (MCBS)
<http://www.cms.hhs.gov/MCBS/default.asp>
A continuous, multipurpose survey of a nationally representative sample of aged, disabled, and institutionalized Medicare beneficiaries. MCBS produces two files annually, Access to Care and Cost and Use

Data Sets: State and Local

State and local data can be found through federal government and national organization Web sites.

Federal Government and National Organization Sources

Behavioral Risk Factor Surveillance System (BRFSS)
<http://www.cdc.gov/brfss/>
Mentioned previously in this chapter as one of the data sets available from the CDC, BRFSS can be used to access state and local data. BRFSS is the world’s largest telephone survey; it tracks health risks of adults (persons over 18) in the United States. States can add questions on a wide range of important health issues, such as diabetes, arthritis, tobacco use, folic acid consumption, health care coverage, and even terrorism. For example, following the September 11, 2001, terrorist attack on the World Trade Center, New York, New Jersey, and Connecticut added questions to their Behavioral Risk Factor Surveys to measure the psychological effects of this traumatic event. BRFSS data can also be analyzed to examine smaller geographic areas within states. In 2003, CDC analyzed 2002 BRFSS state data for SMART BRFSS (Selected Metropolitan/Micropolitan Area Risk Trends from the BRFSS). This project produced data for 98 metropolitan and micropolitan statistical areas (MMSAs) and showed that the prevalence of high-risk health behaviors varied substantially among selected MMSAs.

<http://www.childstats.gov/>
This Web site provides federal and state statistics and reports on children and their families.

FEDSTATS – Federal government
<http://www.fedstats.gov/>
Provides access to official statistics collected and published by more than 100 federal agencies, much of it at the state level.
**State & County QuickFacts** – U.S. Census Bureau
<http://quickfacts.census.gov/qfd/>  
QuickFacts tables are summary profiles showing frequently requested data items from various Census Bureau programs. Profiles are available at the national, state, and county level.

**State and Local Area Integrated Telephone Survey** - CDC
<http://www.cdc.gov/nchs/slaits.htm>

**State Health Departments** - CDC
<http://www.cdc.gov/mmwr/international/relres.html>

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**Search Tip for State Health Departments on Teens and Smoking**

Ms. McBeal would:
**Click** on State Health Departments
<http://www.cdc.gov/mmwr/international/relres.html>
**Select the state** she wanted (*in this case West Virginia*)
**Click on the map** or
**Select West Virginia** from the pull down menu
**Click** on the Public Health tab at the top right of the screen to get to the WV Bureau for Public Health. OR
**Enter** a term in the Search box in the middle of the screen and search by Keyword.

**State Profiles** - Children’s Defense Fund
<http://www.childrensdefense.org/states/state_profiles.htm>

**State Health Facts Online** - Kaiser Family Foundation
<http://www.statehealthfacts.kff.org/>

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**Search Tip for State Health Facts Online on Teens and Smoking**

Ms. McBeal would:
**Click** West Virginia on the map. (*This will bring up various West Virginia state Web sites.*)
**Click** on Health Status on the left hand bar
**Scroll down** to Smoking
**Click** on Rate by Age. She would find that the table includes ages 18-65+ not younger teens. The smoking rates shown are taken from the Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS surveys the population aged 18-65+.  
**Be sure you Select the option to Show Notes and Sources for each table you view.**

**Statistics for Cities and Other Places** – U.S. Census Bureau
<http://www.census.gov/epcd/www/places.htm>
Access to statistics for locations smaller than states e.g., Grafton, West Virginia.
State and Local Data Sources

Many states have their own systems for reporting data. Usually these systems include births, deaths, marriages, and divorces. A core public health function is statewide injury data collection and analysis. This data collection provides data for mortality statistics found on most state public health Web sites. Check individual state public health department Web sites to find what is provided. Often local statistics are available by census tract, community, county and region. Cities and regions are also providing Internet access to data.

**Arizona Public Health Services**
<http://www.hs.state.az.us/plan/index.htm>
Provides population-level data on patterns and trends in health status of Arizonans.

**California Department of Health Services**
<http://www.dhs.ca.gov/>
This Web site provides a link to the County Health Status Profiles

**EpiQMS – Washington State Department of Health** and **Pennsylvania Department of Health**
<http://ecapps.health.state.pa.us/epiqms/>
This is an interactive health statistics Web site that can produce numbers, rates, graphs, charts, maps, and county profiles using various demographic variables (age, sex, race, etc.) from birth, death, cancer and population datasets for the state and counties.

**MASSCHIP - Massachusetts Community Health Information**
<http://masschip.state.ma.us/>
This site provides health statistics for the entire state, cities and regions within the state. It allows one to use data to create predefined or custom reports. Access to the site is free but requires registration.

**Texas Center for Health Statistics**
<http://www.tdh.texas.gov/dpa/a_shdpa.htm>
The Center provides statistical health information from official sources in Texas. Some data are accessible online.

**Houston Healthways**
<http://hhw.library.tmc.edu/>
A public health Web site dedicated to Houston and Harris County public health needs, with links to resources on specific diseases and public health concerns.
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International Data

<http://unstats.un.org/unsd/>
The Statistics Division compiles statistics from many international sources and produces global updates in specialized fields of statistics. Free access is provided to country specific population data.

World Bank Group Data and Statistics-
<http://www.worldbank.com/data/>
Provides data derived, either directly or indirectly, from official statistical systems organized and financed by national governments. Click on Data by Topic to find several options including health.

World Health Organization - Statistical Information System (WHOSIS)
<http://www3.who.int/whosis/menu.cfm>
The WHO Statistical Information System is the guide to health and health-related epidemiological and statistical information available from the World Health Organization.

Search Tip for WHOSIS on Teens and Smoking
Ms. McBeal would find statistics such as 50% of youth who continue to smoke will die from smoking.
Go to:http://www3.who.int/whosis/menu.cfm
Click on Statistics by Disease or Condition
Click on #8. Tobacco
Click on Tobacco (Health Topics page)
Click on Tobacco Free Initiative <http://www.who.int/tobacco/en/>
Click on #5 Youth (http://www.who.int/tobacco/en/atlas7.pdf ) for statistics on children and smoking.

Pan American Health Organization (PAHO)
<http://www.paho.org/>

Organisation for Economic Co-operation and Development (OECD)
<http://www.oecd.org/home/>
Select Statistics from the left menu bar, select Health
Federal Statistics

In addition to data sets, many federal agencies provide access to reports, tables and figures that present results of statistical analysis of health data.

National Library of Medicine

MedlinePlus - Health Statistics
This site provides access to Web sites that contain compiled health statistics, often on a topic or by an audience.

Search Tip for MedlinePlus Health Statistics on Teens and Smoking

Ms. McBeal would:
Scroll down to Children
Click on Child Health USA
Click on Table of Contents
Scroll down to Adolescents and
Click on Cigarette Smoking
She could also find information on Healthy People 2010.
Click on Leading Health Indicators
The third Leading Health Indicator is Tobacco Use. This indicator relates to HP2010 Objective 27-2b. - Reduce cigarette smoking by adolescents. She could find statistics on tobacco use by adolescents. Also, she might approach the HP2010 coordinator to work with her.

Centers for Disease Control and Prevention

CDC Wonder
<http://wonder.cdc.gov/>
Allows users to query dozens of numeric data sets on CDC’s mainframe and other computers, via “fill-in-the blank” request screens. Public-use data sets about mortality, cancer incidence, hospital discharges, AIDS, behavioral risk factors, diabetes, and many other topics are available for query. The requested data can be readily summarized and analyzed.
<http://wonder.cdc.gov/wonder/data/DataSets.html> This site lists the more than 30 data sets that can be queried by CDC Wonder.

Data 2010 – The Healthy People 2010 Database
<http://wonder.cdc.gov/DATA2010/>
Interactive database system contains the most recent monitoring data for tracking Healthy People 2010. Has national and state level data. Users can construct tables for specific objectives, or objectives identified by focus areas, data source, or by select population.
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Data and Statistics
<http://www.cdc.gov/scientific.htm>
This parent agency of NCHS has a Web site with a listing of scientific data and statistics.

NCHS Health E-Stats
NCHS gathers compiled statistics from its printed publications at this Web site.

Prevalence Data from the BRFSS (Behavioral Risk Factor Surveillance System)
<http://apps.nccd.cdc.gov/brfss/>
Users can query the BRFSS data sets for statistical information.

Youth 2001 Online
<http://www.cdc.gov/nccdphp/dash/yrbs/2001/youth01online.htm>
Youth 2001 Online provides interactive access to Youth Risk Behavior Survey (YRBS) results. You can display detailed results by location(s), question, demographic variables, and survey year. The survey provides a representative sample of 9th to 12th grade students.

Search Tip for Youth 2001 Online on Teens and Smoking:
Ms. McBeal can find an abundance of statistics on tobacco use by adolescents. She would:
Click on <http://www.cdc.gov/nccdphp/dash/yrbs/2001/youth01online.htm>
Click on Display Detailed Results
Click on West Virginia
Click on Tobacco Use
Click on Year to get charts.
Click on Select Comparisons for additional charts. Ms. McBeal can find 2001 statistics for the United States. The states vary as to whether they include 2001.

Agency for Healthcare Research and Quality

HCUPnet – Interactive Tool for Hospital Statistics
<http://www.ahcpr.gov/data/hcup/hcupnet.htm>
Interactive access to national statistics and trends and selected state statistics about hospital stays. It generates statistics using data from the Nationwide Inpatient Sample (NIS), the Kids’ Inpatient Database (KID), and the State Inpatient Databases (SID) for states that participate. HCUPnet is part of the Healthcare Cost and Utilization Project (HCUP)

HIVnet - Interactive Tool for Statistics on Use of HIV Resources
<http://www.ahcpr.gov/data/hivnet.htm>
Interactive tool that provides information on inpatient and outpatient utilization by persons with HIV disease. This tool is focused on health services delivery.
MEPSnet
<http://www.ahrq.gov/data/mepsnet.htm>
Interactive online service that presents data from the Medical Expenditure Panel Survey (MEPS). MEPSnet is a set of statistical tools: MEPSnet/IC and MEPSnet/HC. These two tools use information gathered from organizations and household respondents, respectively.

Centers for Medicare and Medicaid Services (CMS)

Statistics, Data and Research Information
<http://cms.hhs.gov/researchers/statsdata.asp>
Provides an annotated list of public use data files, statistics and statistical publications.

Substance Abuse and Mental Health Services Administration (SAMHSA)

On-Line Analysis of Alcohol, Tobacco, and Drug Use
<http://www.samhsa.gov/oas/SAMHDA.htm>
System provides ready access to substance abuse and mental health research data. The site also includes links to detailed analysis provided in data tables by Topic and Data Type.

Quick Statistics - - State Profiles
<http://wwwdasis.samhsa.gov/webt/NewMapv1.htm>
Get state level data from TEDS which provides information on the demographic and substance abuse characteristics of the 1.9 million annual admissions to treatment for abuse of alcohol and drugs in facilities that report to individual state administrative data systems. Also get statistics from N-SSATS an annual survey designed to collect data on the location, characteristics, and use of alcohol and drug abuse treatment facilities and services throughout the 50 states, the District of Columbia, and other U.S. jurisdictions. These resources are good examples of systems that uses state level administrative data.

Substance Abuse and Mental Health Data Archive (SAMHDA)
<http://www.icpsr.umich.edu/SAMHDA/>
Data files, documentation, and reports are downloadable from the Web site and in public use format. The Web site features an online data analysis system (DAS) that allows users to conduct analyses on selected datasets within the archive. SAMHDA also provides user support through e-mail and a toll-free helpline.

Environmental Protection Agency (EPA)

EPA Information Sources, Databases and Software
<http://www.epa.gov/epahome/Data.html>
Lists many categories of resources.
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Health Resources and Services Administration (HRSA)

**Data and Statistics**  
<http://www.hrsa.gov/data.htm>  
Provides Web links to data sources and statistics available from HRSA.

**Statistical Information by Subject**

**Geographic Information Systems (GIS)**

GIS data sets can be useful for many purposes. They are used primarily to display data geographically. In public health, applications for GIS are becoming more accessible as geo-coded health data and environmental exposure data increasingly become available, and new and easier-to-use GIS software is developed. The U.S. Agency for Toxic Substances Disease Registry (ATSDR) uses GIS to monitor the health of persons living near hazardous waste sites, and to identify areas of potential concern resulting from accidental release of chemicals in the environment. The Centers for Disease Control and Prevention (CDC) uses GIS for disease surveillance, and the Environmental Protection Agency (EPA) uses it to support risk assessment, environmental justice analysis, and ecological assessments.

**GIS and Public Health** – National Center for Health Statistics (NCHS), CDC  
<http://www.cdc.gov/nchs/gis.htm>

**Search Tip for GIS and Public Health on Teens and Smoking:**
Ms. McBeal would find that West Virginia has a high number of lung cancer deaths among black males. This audience might benefit from a “Quit smoking campaign.”

**Click on GIS and Public Health** <http://www.cdc.gov/nchs/gis.htm>  
**Click on Selected Maps**  
**Click on Lung Cancer**  
**Browse the maps** showing lung cancer deaths by race and gender.

**Injury Maps** - National Center for Injury Prevention and Control, CDC  
<http://www.cdc.gov/ncipc/maps/>  
Injury Maps, CDC Injury Center's interactive mapping system, provides access to the geographic distribution of injury-related mortality rates in the United States. Injury Maps allows you to create county-level and state-level maps of age-adjusted mortality rates for the entire United States and for individual states.

**Geographic Analysis Tool for Health & Environmental Research (GATHER)**  
- Agency for Toxic Substances and Disease Registry (ATSDR)  
<http://gis.cdc.gov/>  
GATHER is an online spatial data access system that provides members of the public health community access to spatial data that is pertinent to the analysis and exploration of public health issues.
EnviroMapper Storefront – U.S. Environmental Protection Agency (EPA)  
View federal, state, and local information about environmental conditions and features in an area of your choice.

Dartmouth Atlas of Health Care – Center for the Evaluative Clinical Sciences at Dartmouth Medical School  
<http://www.dartmouthatlas.org/>  
The Atlas project focuses on how medical resources are distributed and used in the United States.

Cancer Mortality Maps & Graphs – National Cancer Institute (NCI), NIH  
<http://www3.cancer.gov/atlasplus/>  
Provides interactive maps, graphs (which are accessible to the blind and visually-impaired), text, tables and figures showing geographic patterns and time trends of cancer death rates for the time period 1950-1994 for more than 40 cancers.

Hospital and Health Care Records

National Hospital Discharge and Ambulatory Surgery Data  
<http://www.cdc.gov/nchs/about/major/hdasd/listpubs.htm>

Medical Expenditure Panel Survey [MEPS]  
<http://ahrq.gov/data/mepsix.htm>

HCUP  
<http://ahrq.gov/data/hcup/>

Center for Mental Health Services [CMHS]  
<http://www.mentalhealth.org/cmhs/MentalHealthStatistics/>

Mortality and Morbidity Data

Mortality Data from the National Vital Statistics System  
<http://www.cdc.gov/nchs/about/major/dvs/mortdata.htm>
Includes mortality, cause of death, data based on death certificates.

CDC assumed responsibility for collecting and publishing national data on notifiable diseases in 1961. As of 1998, 52 infectious diseases were notifiable at the nation level. Currently, there are about 56. (see <http://www.cdc.gov/epo/dphsi/phs/infdis2004.htm>) The statistical summary of notifiable diseases in the United States is published to accompany each volume of the Morbidity and Mortality Weekly Report. These surveillance data are presented by the week they were reported to CDC by public health officials in state and territorial health departments. HTML versions are available from:

National Notifiable Disease Surveillance System (NNDSS)  
<http://www.cdc.gov/epo/dphsi/nndsshis.htm>
Suggestions for Trainers

**MMWR Search**
<http://www.cdc.gov/mmwr/mmwrsrch.htm>

**Public Health Preparedness**

**Bioterrorism and Emerging Infections Site** – Agency for Healthcare Research and Quality
<http://www.bioterrorism-uab.ahrq.gov/>
This site has been designed to provide resource information and continuing education about rare infections and potential bioterrorist agents.

**Emergency Preparedness and Response** – Centers for Disease Control and Preparedness
<http://www.bt.cdc.gov/>
Includes links to additional information on agents, diseases and other threats.

**Preparation and Planning**
<http://www.bt.cdc.gov/planning/index.asp>

**Pulsenet**
<http://www.cdc.gov/pulsenet/pus.htm>
This branch of CDC conducts active surveillance for laboratory-confirmed cases of seven bacterial and two parasitic organisms

**Chemical Warfare Agents** – National Library of Medicine
Includes links to government and non-governmental Web sites, information about specific chemical agents with health effects and pre-formulated searches of Toxline

**MedlinePlus Biodefense and Bioterrorism** - National Library of Medicine

**MedlinePlus Chemical Weapons** - National Library of Medicine

**Toxicology and Environmental Health**

**TOXNET** – Specialized Information Services, National Library of Medicine
A variety of databanks and databases on toxicology, hazardous chemicals, and related areas including TRI, Toxics Release Inventory, and HSDB, Hazardous Substances Data Bank.
Suggestions for Trainers

Search Tip on TOXNET on Tobacco for Teens and Smoking:
Ms. McBeal can find facts about the chemicals in cigarettes using HSDB. She would:
**Click on** <http://toxnet.nlm.nih.gov/>
**Click** HSDB button in left hand bar
**Enter** tobacco in the Search Box; **Click** Search button
**Click** NICOTINE entry

IRIS (Integrated Risk Information System) – Environmental Protection Agency
<http://www.epa.gov/iris/>
A collection of computer files covering individual chemicals with human health effects that may result from exposure to various chemicals in the environment.

EnviroFacts
<http://www.epa.gov/enviro/>
An online tool to access multiple EPA databases.

Browse EPA Topics
<http://www.epa.gov/ebtpages/alphabet.html>

NIOSH Safety and Health Topic: Chemical Safety
<http://www.cdc.gov/niosh/topics/chemical-safety/default.html#msds>
Lists NIOSH databases and other resources including Pocket Guide to Chemical Hazards (NPG).

California – Office of Environmental Health Hazard Assessment
<http://www.oehha.ca.gov>

EXTONET
<http://ace.orst.edu/info/extoxnet/ghindex.html>

Other Resources

**Disability Data** - U.S. Census Bureau
<http://www.census.gov/hhes/www/disability.html>

**Injuries, Illnesses and Fatalities** – Bureau of Labor Statistics
<http://www.bls.gov/iif/>
Provides data on illnesses and injuries on the job and data on worker fatalities.

**FactFinder** - U. S. Census Bureau
<http://factfinder.census.gov/servlet/BasicFactsServlet>

**TransStats** - Bureau of Transportation Statistics
<http://www.transtats.bts.gov/>
Using the Data

Tools for Building Reports and Tables

**DataFerrett: Federal Electronic Research and Review Extraction Tool**  
<http://ferret.bls.census.gov/>  
A search system for extracting and tabulating data across heterogeneous statistical data sources.

**DataWeb** – A collaborative effort between the U.S. Census Bureau and CDC  
<http://www.thedataweb.org/>  
A network of online data libraries. Uses DataFerret as its browser.

**Epi Info**  
<http://www.cdc.gov/epiinfo/about.htm>  
Epi Info is a public domain software package designed for the global community of public health practitioners and researchers. It provides for easy form and database construction, data entry, and analysis with epidemiologic statistics, maps, and graphs. CDC supports the development of this product.

Building Your Own Tables

**WISQARS (Web-based Injury Statistics Query and Reporting System)**  
<http://www.cdc.gov/ncipc/wisqars/>  
An interactive database system that provides customized reports of injury related data.

**Data Warehouse on Trends in Health and Aging**  
<http://www.cdc.gov/nchs/agingact.htm>

Resources to Help You Learn More

**Behavioral Risk Factor Surveillance System - Training**  
<http://www.cdc.gov/brfss/training.htm>  
CDC provides several training options from a 37-slide easy to understand Overview to a complete Operational and Users guide.

**Data Skills Online**  
<http://www.sph.unc.edu/toolbox/index.htm>  
This is a Web-based, self-instructional toolbox. It was developed to provide public health professionals at state and local levels with tools for enhancing their analytic and technology skills focused on quantitative and qualitative data collection and analysis.
Suggestions for Trainers

Glossary
<http://cms.hhs.gov/glossary/>
This glossary explains terms found on the Centers for Medicare and Medicaid Services Web site.

Glossary of Epidemiology Terms
<http://www.cdc.gov/nccdphp/drh/epi_gloss.htm>
Developed by CDC for the Internet. The Dictionary of Epidemiology, 2nd edition, edited by J.M. Last was helpful in providing a number of the definitions according to the Web site.

Glossary of Terms
<http://secure.cihi.ca/cihiweb/dispPage.jsp?cw_page=partner_glossary_e>
Canadian Institute for Health Information

NCHS Definitions
<http://www.cdc.gov/nchs/datawh/nchsdefs/list.htm>
An alphabetical listing of many terms used at NCHS

Online Trainings Available From The North Carolina Center for Public Health Preparedness
<http://www.sph.unc.edu/nccphp/training/training_list/>
Free short audio self-study tutorials are available on the following topics: Acute Disease Surveillance and Outbreak Investigation, Biostatistics, Bioterrorist Agents, Emerging and Reemerging Disease Agents, Epidemiology Methods, Geographic Information Systems (GIS) and a general section on Tools.

Research Data Assistance Center (ResDAC)
<http://www.resdac.umn.edu/Index.asp>
Provides technical assistance to researchers interested in using Medicare and/or Medicaid data

State Health Access Data Assistance Center (SHADAC)
<http://www.shadac.org/>
SHADAC, funded by the Robert Wood Johnson Foundation, helps states monitor rates of health insurance coverage and to understand factors associated with uninsurance. SHADAC provides targeted policy analysis and technical assistance to states that are conducting their own health insurance surveys and/or using data from national surveys.

TOXNET Training Manual – SIS, NLM
Selected US Government Publications

<http://www.cdc.gov/nchs/hus.htm>  
The full-text of this annual report on national trends in health statistics is available on the Internet.

*Vital and Health Statistics Series*, NCHS  
Series 1 through Series 24 (commonly called the Rainbow Series) are available in html.

*Morbidity and Mortality Weekly Report* (MMWR)  
<http://www.cdc.gov/mmwr/index.html>  
The data in the weekly *MMWR* are provisional, based on weekly reports to CDC by state health departments.

Case Study: Prevention of smoking among teens – Possible Solution

This is how Ms. McBeal could find the information she needs.  
**Click** on FEDSTATS <http://www.fedstats.gov/> (Listed under Health Data Gateways/Portals) to get some general population information  
**Select** West Virginia in the drop down box  
**Click** the Submit button.  
She discovered that 22.3% of the population in West Virginia is under 18 years of age.  
She also discovered that only 2.7% of the population spoke a language other than English at home. So, she may only need to create a campaign in English.
Suggestions for Trainers

<http://www.fedstats.gov/>

FedStats
The gateway to statistics from over 100 U.S. Federal agencies

Links to statistics

★ Topic links - A to Z - Direct access to statistical data on topics of your choice.

★ MapStats - Statistical profiles of States, counties, Congressional Districts, and Federal judicial districts.

★ Statistics by geography from U.S. agencies - International comparisons, national, State, county, and local.

★ Statistical reference shelf - Published collections of statistics available online including the Statistical Abstract of the

Links to statistical agencies

★ Agencies listed alphabetically with descriptions of the statistics they provide and links to their websites, contact information, and key statistics.

★ Agencies by subject - Select a subject:

  Agriculture

★ Press releases - The latest news and announcements from individual agencies.

★ Kids' pages on agency websites.

★ Data access tools - Selected agency online databases.
Next she wanted the health facts. She would:

- Click on Partners in Information Access for the Public Health Workforce
  <http://phpartners.org/>
- Click on Health Data Tools and Statistics
- Click on FASTATS A - Z from the National Center for Health Statistics
- Click S under the Topic Links A - Z.
- Click on Smoking.

<http://www.cdc.gov/nchs/fastats/smoking.htm>
Ms. McBeal wanted other CDC data on Smoking.

Click on the Centers for Disease Control and Prevention Web site, <http://www.cdc.gov>

Click on Diseases and Conditions on the left navigation bar.

Click on Tobacco Use (Under Risk Factors)

http://www.cdc.gov/nccdphp/bb_tobacco/

Ms McBeal Clicked on Tobacco Web Site on the right side of the screen.
Suggestions for Trainers

<http://www.cdc.gov/tobacco/index.htm>

Overview
Some quick tobacco information and links

Publications Catalog
A catalog and order form of available publications

Surgeon General's Reports
SOIs related to tobacco

Research, Data, and Reports
Facts categorized by topic. Plus a list of all the MMWR releases.

How To Quit
Guides to help quit using tobacco products

Educational Materials
Helpful information for parents, educators, professionals, and youth
She Clicked Overview and found useful facts.

<http://www.cdc.gov/tobacco/issue.htm>

**Overview**

Tobacco use remains the leading preventable cause of death in the United States, causing more than 440,000 deaths each year and resulting in an annual cost of more than $75 billion in direct medical costs.

Nationally, smoking results in more than 5.6 million years of potential life lost each year.

Approximately 80% of adult smokers started smoking before the age of 18. Every day, nearly 4,000 young people under the age of 18 try their first cigarette.

More than 6.4 million children living today will die prematurely because of a decision they will make as adolescents — the decision to smoke cigarettes.

**Mission Statement**

**OSH Summary for 2002**

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Clicking on **Tobacco Use in the United States** she discovered many more useful facts. Armed with these statistics Ms. McBeal is confident she can persuade the city council to fund a campaign.

Ms. McBeal also could find a data resource using the NLM Health Services/Science Research Resources (HSRR) database.

Click on <http://www.nlm.nih.gov/nichsr/hsrr_search/>

Type teens smoking in the Search box

Click Search.
Suggestions for Trainers


Health Services and Sciences Research Resources

HSRR contains information about research datasets and instruments/indices employed in Health Services Research, and the Behavioral and Social Sciences and Public Health with links to PubMed and additional resources.

Search:

Enter one or more term(s) to search. Enter a multi-word term or phrase in quotes.

Search All Records (default)
Search Datasets only
Search Instruments/Indices only
Search Software only
Search results for (teens smoking).

6 tools found.

DataSets:

3 DataSets found.

- Legacy Media Tracking Survey
- National Youth Tobacco Survey
- Youth Risk Behavior Surveillance System

Instruments/Indices:

3 Instruments/Indices found.

- American Legacy Longitudinal Tobacco Use Reduction Study
- Legacy Media Tracking Survey Questionnaire
- National Youth Tobacco Survey Questionnaire

Ms McBeal found 3 datasets. 
Click on Youth Risk Behavior Surveillance System to see the HSRR record.
Youth Risk Behavior Surveillance System

Acronym: YRBSS
Title URL: http://www.cdc.gov/nccdphp/dash/yrbs/index.htm
Record Type: DataSet
Source: National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention (U.S.)
Source URL: http://www.cdc.gov/nccdphp/index.htm
Description: The Youth Risk Behavior Surveillance System (YRBSS) was developed to monitor priority health-risk behaviors that contribute to the leading causes of mortality, morbidity, and social problems among youth and adults in the United States. The YRBSS monitors six categories of behaviors: (1) behaviors that contribute to unintentional and intentional injuries; (2) tobacco use; (3) alcohol and other drug use; (4) sexual behaviors that contribute to unintended pregnancy and sexually transmitted disease, including human immunodeficiency virus (HIV) infection; (5) dietary behaviors; and (6) 

Click on Title URL in the HSRR record.
<http://www.cdc.gov/nccdphp/dash/yrbs/index.htm>

Click on 2001 SurveillanceSummary to see the MMWR summary article at <http://www.cdc.gov/mmwr/PDF/SS/SS5104.pdf>
Youth Risk Behavior Surveillance — United States, 2001

Jo Anne Gozorious, Ed.D.1
Laura Kamin, Ph.D.2
Susan K. Ritchie3
Barbara Williams, Ph.D.2
James G. Ross, M.D.2
Richard Lowry, M.D., M.S.2
Lloyd Kelbie, Ph.D.2
1Division of Adolescent and School Health
National Center for Chronic Disease Prevention and Health Promotion
2NCHS, Rockville, Maryland
3Olds Maris, Columbia, Maryland

Abstract

Problem/Condition: Prioritize high-risk behaviors, which contribute to the leading causes of mortality and morbidity among youth and adults; these behaviors contribute to unintentional injuries and violence, tobacco use; alcohol and other drug use; sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases (STDs), including human immunodeficiency virus (HIV) infection; unhealthy dietary behaviors; and physical inactivity. The YRBS includes a national school-based survey conducted by CDC as well as state, territorial, and local school-based surveys conducted by education and health agencies. This report summarizes results from the national survey, 34 state surveys, and 18 local surveys conducted among students in grades 9–12 during February–December 2001.

Results: In the United States, approximately three-fourths of all deaths among persons aged 10–24 years result from early four causes: motor-vehicle crashes, other unintentional injuries, homicide, and suicide. Results from the 2001 national Youth Risk Behavior Survey demonstrated that numerous high school students engage in behaviors that increase their likelihood of death from these four causes: 14.1% had rarely or never worn a seat belt during the 30 days preceding the survey; 30.7% had ridden with a driver who had been drinking alcohol; 17.4% had carried a weapon during the 30 days preceding the survey; 47.1% had drunk alcohol during the 30 days preceding the survey, 23.9% had used marijuana during the 30 days preceding the survey; and 8.8% had attempted suicide during the 12 months preceding the survey. Substantial morbidity and social problems among young persons also result from unintended pregnancies and STDs, including HIV infection. In 2001, 45.6% of high school students had ever had sexual intercourse; 42.1% of sexually active students had not used a condom at last sexual intercourse; and 2.3% had ever injected an illegal drug. Two-thirds of all deaths among persons aged 10–24 years result from only two causes: cardiovascular disease and cancer. The majority of risk behaviors associated with these two causes of death are initiated during adolescence. In 2001, 28.7% of high school students had smoked cigarettes during the 30 days preceding the survey; 78.6% had not eaten ≥5 servings per day of fruits and vegetables during the 7 days preceding the survey; 18.0% were overweight; and 67.8% did not attend physical education class daily.

Public Health Actions: Health and education officials at national, state, and local levels are using these YRBS data to analyze and improve policies and programs to reduce priority health-risk behaviors among youths. The YRBS data also are being used to measure progress toward achieving national health objectives for 2010 and of the 10 leading health indicators.

Introduction

In the United States, 76.6% of all deaths among youth and young adults aged 10–24 years result from only four causes: motor-vehicle crashes (31.4%); other unintentional injuries (12.2%); homicide (15.3%); and suicide (11.9%) (1). Substantial morbidity and social problems also result from the approximately 879,000 pregnancies that occur each year among women aged 15–19 years (2) and the estimated 3 million cases of sexually transmitted diseases (STDs) that occur each year among persons aged 10–19 years (3). Among adults aged ≥25 years, 64.6% of all deaths in the United States result from cardiovascular disease (41%) and cancer (23.6%) (2). Leading causes of mortality and morbidity

Suggestions for Trainers

Click on Browser Back button.
Click on Summary Results to go to:
Click on United States to get national statistics and trend information.


CDC
National Center for Chronic Disease Prevention and Health Promotion
Adolescent & School Health
Adolescent and School Health Home | Contact Us

2001 Information and Results
Summary Results

The fact sheets (below) summarize key results from the 2001 Youth Risk Behavior Survey for the United States and by state. Mortality data on leading causes of death also are included.

United States
Exercises

1. Find the 2001 report showing rates of immunization based on the National Immunization Survey. Are the rates going up or down?

   Suggested solution:  
   http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5130a2.htm

2. Locate the description of this survey and find out what its limits are.

   Suggested solution: Due to sampling methods and sample size constraints of the NIS, coverage for smaller geographical areas can not be estimated, http://www.cdc.gov/nip/coverage/faq.htm#6

3. According to the Youth Risk Behavior Surveillance System (YRBSS) has the number of students attending physical education (PE) classes daily in the US gone up or down from 1999 to 2001?

   Suggested solution:  
   Go to <http://www.cdc.gov/nccdphp/dash/yrbs/2001/youth01online.htm>, Click Display Detailed Results, Click United States, Click Physical Activity, Scroll to 3rd question and Click Trend.

4. Using the Health Services/Sciences Research Resources (HSRR), can you find state data sets that include physical activity?

   Suggested solution:  
   Go to <http://www.nlm.nih.gov/nichsr/hsrr_search/> , Enter physical activity, Click Search, California and North Carolina surveyed their residents for physical activity.

5. Go to West Virginia Bureau of Public Health, find information on Health Statistics. Is it possible to receive special assistance with statistical analysis for research projects?

   Suggested solution:  
   <http://www.wvdhhr.org/bph>, Click on Health Statistics, Click on Special Requests.
References
