Missouri Department of Health and Senior Services
Division of Community and Public Health
Section for Environmental Public Health
Bureau of Environmental Epidemiology
Environmental Public Health Tracking Program

Missouri EPHT
Data & Statistical Guide

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Data Partners

The Missouri EPHT Network Portal hosts, displays, and links to data from a wide variety of program partners. These partners include:

- Missouri Department of Health and Senior Services (DHSS) bureaus and programs, such as:
  - Bureau of Environmental Epidemiology (BEE)
    - Health and Risk Assessment Program (HRAP)
    - Healthy Indoor Environments (HIE)
    - Environmental Surveillance (ES)
  - Bureau of Environmental Health Services (BEHS)
  - Bureau of Cancer and Chronic Disease Control (BCCDC)
  - Bureau of Health Care Analysis & Data Dissemination (BHCADD)
  - Bureau of Vital Records (BVR)
  - Office of Epidemiology (OE)
- Missouri Department of Natural Resources (DNR) units and programs, such as:
  - Division of Environmental Quality (DEQ)
  - Air Pollution Control Program (APCP)
  - Environmental Services Program (ESP)
  - Hazardous Waste Program (HWP)
  - Land Reclamation Program (LRP)
  - Solid Waste Management Program (SWMP)
  - Water Protection Program (WPP)
  - Public Drinking Water Branch (PDWB)
  - Water Pollution Control Branch (WPCB)
  - Regional and Satellite Offices
- Missouri Department of Conservation (MDC)
- Missouri Department of Social Services (DSS) - MO HealthNet
- Missouri Department of Agriculture (MDA)
- Missouri Department of Elementary and Secondary Education (DESE)
- Missouri Department of Economic Development (DED)
- Missouri Department of Transportation (MoDOT)
- Missouri Census Data Center (MCDC)
- Missouri Housing Development Commission (MHDC)
- Missouri Cancer Registry and Research Center (MCR-ARC)
- Office of Social and Economic Data Analysis (OSEDA)
- Area Agencies on Aging (AAA)
- Local Public Health Agencies (LPHAs)
- Agency for Toxic Substances and Disease Registry (ATSDR)
- National Aeronautics and Space Administration (NASA)
- National Center for Environmental Health (NCEH)
- National Institute for Environmental Health Sciences (NIEHS)
- National Institute for Occupational Safety and Health (NIOSH)
- National Oceanic and Atmospheric Administration (NOAA)
  - National Weather Service (NWS)

- National Program of Cancer Registries (NPCR)
- United States (US) Department of Agriculture (USDA)
- US Department of Energy (DOE)
- US Department of Health and Human Services (HHS)
  - Centers for Disease Control and Prevention (CDC)
- US Department of Housing and Urban Development (HUD)
- US Department of Interior (DOI)
  - United States Fish and Wildlife Service (USFWS)
  - United States Geological Survey (USGS)
- US Department of Transportation (DOT)
- US Environmental Protection Agency (EPA)
  - Region 7 Office - Kansas City
  - Office of Air and Radiation (OAR)
  - Office of Chemical Safety and Pollution Prevention (OCSPP)
  - Office of Enforcement and Compliance Assurance (OECA)
  - Office of Environmental Information (OEI)
  - Office of Solid Waste and Emergency Response (OSWER)
  - Office of Water (OW)
- State Environmental Health Indicators Collaborative (SEHIC)
- Council of State and Territorial Epidemiologists (CSTE)
- Association of State and Territorial Health Officers (ASTHO)
- North American Association of Central Cancer Registries (NAACCR)
- Surveillance Epidemiology and End Results (SEER)

More information on Missouri EPHT partners can be obtained from the Missouri EPHT Network Portal website, https://ephtn.dhss.mo.gov/EPHTN_Data_Portal/ or by contacting the Missouri EPHT Program Manager.

Data Sources and References

The Missouri EPHT Network Portal uses multiple data sources and references to create data sets, analyses, tables, charts, graphs, and tools. Specific data sources and references by content area are detailed below:

- Air Quality:
  - Missouri DNR:
    - Air Sampling Results
    - Missouri Emissions Inventory System (MOEIS)
    - Missouri Environmental Emergency Response Tracking System (MEERTS)
    - LRP Mining Database
  - MoDOT
  - CDC:
    - National EPHT Network Portal
  - US EPA:
    - AIRNow
    - AirExplorer
    - Air Quality Index (AQI)
    - Air Quality System (AQS) Database
- Acute Myocardial Infarction Hospitalizations:
  - BHCADD:
    - Patient Abstract System (PAS)
    - Emergency Department (ED)
    - Missouri Information for Community Assessment (MICA)
  - Office of Epidemiology:
    - Behavioral Risk Factor Surveillance System (BRFSS)
  - BCCDC:
    - Heart Disease and Stroke Prevention Program
- Asthma:
  - BHCADD:
    - PAS
    - ED
    - MICA
  - Office of Epidemiology:
    - BRFSS
  - BCCDC:
    - Asthma Prevention and Control Program
  - DESE:
    - Missouri School Health Profiles
- Birth Defects:
  - BHCADD:
    - PAS
    - ED
    - MICA

    - BVR
        - Birth Defects Registry
        - Missouri Electronic Vital Records (MoEVR) System
    - Office of Epidemiology:
        - BRFSS
    - the Hope program (formerly Children with Special Health Care Needs)
- Cancer:
    - MCR-ARC
    - BHCADD:
        - PAS
        - ED
        - MICA
    - Office of Epidemiology:
        - BRFSS
    - BCCDC
- Carbon Monoxide:
    - BEE
        - ES - Carbon Monoxide Surveillance
    - BHCADD:
        - PAS
        - ED
        - MICA
    - BVS
    - BVR
        - MoEVR
- Childhood Lead Poisoning:
    - BEE
        - HIE Program
        - Childhood Lead Poisoning Prevention Program (CLPPP)
        - Adult Blood Lead Epidemiology and Surveillance (ABLES)
    - BHCADD:
        - PAS
        - ED
        - MICA
    - BVS
- Housing
    - MCDC
    - OSEDA
    - MHDC
        - Point in Time Homeless Population Counts
    - US Census Bureau
    - US HUD
- Poverty
    - MCDC
    - DED
    - OSEDA

    - US Census Bureau

- Reproductive Outcomes:
    - BHCADD:
        - PAS
        - ED
        - MICA
    - BVR
        - Birth Defects Registry
        - MoEVR
    - Office of Epidemiology:
        - BRFSS
    - Women's Health
- Epidemiology for Public Health Practice:
    - BHCADD:
        - PAS
        - ED
        - MICA
    - BVR
        - MoEVR
    - BRDI
        - Communicable Disease
- Water Quality:
    - Missouri DNR:
        - Safe Drinking Water Information System (SDWIS)
        - Aquatic Invertebrate Sampling (AQUID)
        - Well Information Management System (WIMS)
    - MDC
    - MDA
    - BEE
        - HRAP
        - HIE
        - ES
        - Private Drinking Water
    - BEHS
        - On-Site Wastewater Treatment Program
    - US EPA

More information on Missouri EPHT data sources can be obtained from the Missouri EPHT Network Portal website, https://ephtn.dhss.mo.gov/EPHTN_Data_Portal/ or by contacting the Missouri EPHT Program Manager.

Measures

¹mea·sure *noun* \ˈme-zhər, ˈmā-\

Definition of MEASURE

1 **a** (1) : an adequate or due portion (2) : a moderate degree; *also* : MODERATION, TEMPERANCE (3) : a fixed or suitable limit : BOUNDS <rich beyond *measure*>

b : the dimensions, capacity, or amount of something ascertained by measuring

c : an estimate of what is to be expected (as of a person or situation)

d (1) : a measured quantity (2) : AMOUNT, DEGREE

- Definition provided by Merriam-Webster®

Analyzing raw data to create measures allows values to be calculated and assigned to each condition or situation. These values assist in monitoring and evaluating the potential future risk, as well as the effectiveness of interventions and preventative actions. These values usually appear as summary characteristics or statistics; such as a sum, percentage, or rate and are commonly known as measures. The EPHT Network creates measures for each indicator within each content area.

In general, measures are commonly used for:

- Incidence – the rate of occurrence or influence of the risk of developing some new condition within a specified period of time.
- Prevalence – the percentage of a population that is affected with a particular cause/condition at a given time period.
- Morbidity – the relative incidence of disease that alters health and quality of life.
- Mortality – the number of deaths in a given location or time period.

Explanations of the types of measures available across the EPHT Network include:

- **Counts**
  A count is the sum of occurrence of a cause/condition. Counts are calculated by adding the total value for each individual, group, and/or location.

  value + value = count

Example:
In Missouri during calendar year 2008, there were 7,830 males and 5,560 females that were hospitalized for an acute myocardial infarction.

$$7{,}830 + 5{,}560 = 13{,}390$$

The count is 13,390. This means that 13,390 people in Missouri were admitted to the hospital for an acute myocardial infarction in 2008.

- **Averages**
  An average is a single value that represents the general significance of a set of unequal values. Averages are calculated by adding the values for each individual, group, and/or location, then dividing the sum by the number of values.

$$(\text{value} + \text{value}) \ / \ \text{count of values} = \text{average}$$

Example:
In Missouri there were 824 babies born with a birth defect in 2004, 965 in 2005, and 827 in 2006.

$$(824 + 965 + 827) \ / \ 3 = 872$$

The average is 872. This means that on average, 872 babies were born with a birth defect in Missouri in each year between the years 2004 and 2006.

- **Percentages**
  A percentage is a part of a whole value expressed in hundredths. A percentage is calculated by dividing the value of the part by the value of the whole, then multiplying the product by 100.

$$\frac{\text{Value of Part}}{\text{Value of Whole}} \ X \ 100 = \text{percentage}$$

  The percent sign (%), is a mathematical symbol that indicates the preceding number is divided by one hundred.

Example:
In Missouri there were 8,266 people hospitalized for Asthma in 2008. In Clay County, Missouri there were 287 people hospitalized for Asthma in 2008.

$$\frac{287}{8{,}266} \ X \ 100 = 3.47\%$$

The percentage is 3.47%. This means that 3.47% of all Missourians hospitalized for Asthma in 2008 are from Clay County, Missouri.

- **Rates**
  A rate is a measure of the frequency of occurrence of a cause/condition. Rates are calculated by dividing a numerator by a denominator, then multiplying the product by a constant.

$$\frac{\text{numerator}}{\text{denominator}} \text{ X constant = rate}$$

  The numerator is the number of people affected by a specific cause/condition. The denominator is the total number of people potentially affected by the same specific cause/condition; this is sometimes shown as the "at-risk population". The constant is a number chosen to give the result an understandable context, typically this number is shown in thousands (e.g. 1,000: 10,000: 100,000).

Example:
In calendar year 2009, 92,697 Missouri children less than six years old were tested to determine their blood lead level. According to the US Census Bureau, 445,566 children less than six years old resided in Missouri.

$$\frac{92{,}697}{445{,}566} \text{ X } 10{,}000 = 2{,}080.43$$

The rate is 2,080.43 per 10,000. This means that for every 10,000 children less than six years old living in Missouri in 2009; 2,080 were tested for the presence of lead in their blood. This value could also be stated as approximately 1/5th or 20%.

There are several different types of rates. The most common are:

- Crude
  Crude rates are the overall frequency which has not been adjusted for significant factors which might have influenced the rate. Crude rates are recommended as a summary measure when it is not necessary to adjust or accommodate for other factors.

- Adjusted
  Adjusted rates have been statistically modified to eliminate the effect of different distributions in the different populations. This allows health measures such as rates of diseases and deaths to be compared between several communities with different groups. The most common factor used to adjust rates is age; other factors can also be used, such as race or gender.

- Aggregated
  Aggregate rates are calculated by summing or combining multiple data elements. The practice of using aggregated data is sometimes done to increase statistical power when the amount of data may be limited. It may also be used when displaying the data element individually could potentially compromise confidentiality or provide identifying information on

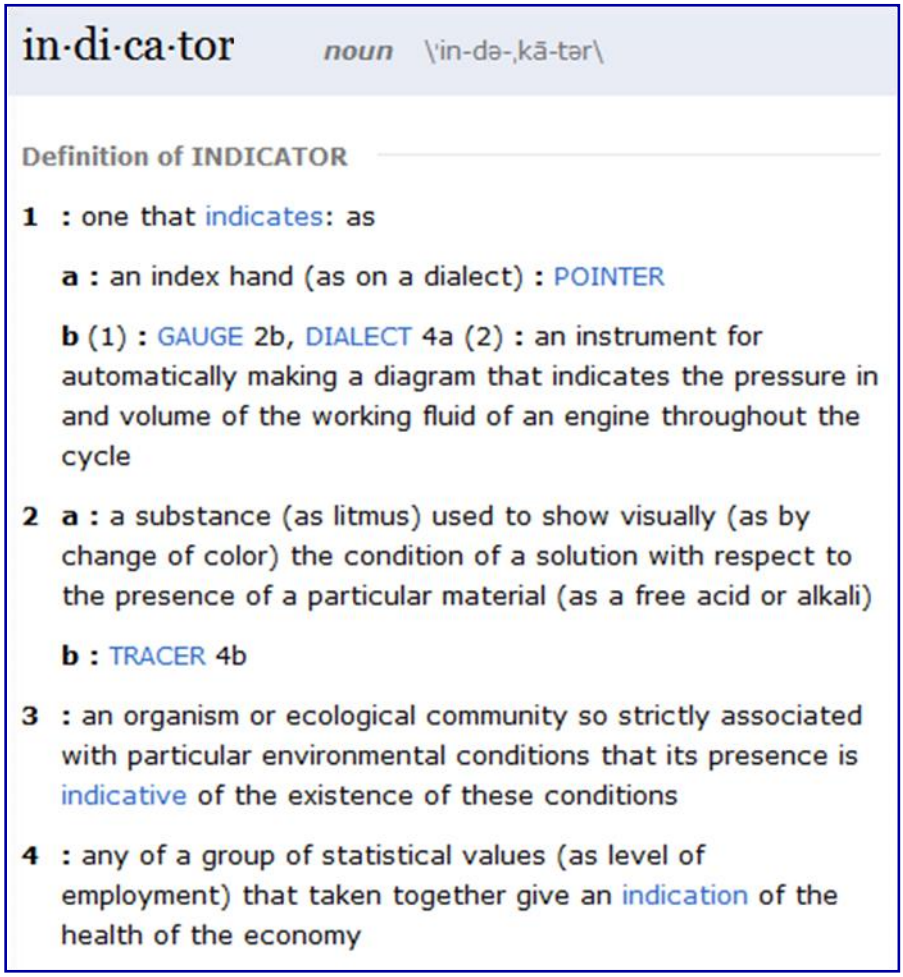
a specific demographic or geography. For example, if a county had a specific health condition with only one case for a specific race or gender, that rate would be aggregated by all races and/or genders before being displayed.

A rolling rate is another example of an aggregated rate. Rolling rates are calculated across a time period that will overlap another time period. For example, data may be cumulated for the time period of 2000 – 2002, 2001 – 2003, and 2002 – 2004. Rolling rates are most often displayed in three, five, and ten year intervals.

Aggregated data is sometimes referred to as cumulative or cumulated data.

Some rates may include a confidence interval. A confidence interval is a range around a value that conveys how reliable and stable the value is. In general, the smaller the confidence interval range is the more reliable and stable the value will be. For example, a 95% confidence interval can be thought of as a range of values or interval that contains the “true value” 95% of the time. If the analysis was conducted 100 times, 95 of those times the final value would fall within the range and 5 of those times the final value would fall either higher or lower than the range. Confidence intervals are sometimes referred to as “margins of error”.

Indicators and Nationally Consistent Data and Measures



in·di·ca·tor *noun* \ˈin-də-ˌkā-tər\

Definition of INDICATOR

1 : one that indicates: as

a : an index hand (as on a dialect) : POINTER

b (1) : GAUGE 2b, DIALECT 4a (2) : an instrument for automatically making a diagram that indicates the pressure in and volume of the working fluid of an engine throughout the cycle

2 **a** : a substance (as litmus) used to show visually (as by change of color) the condition of a solution with respect to the presence of a particular material (as a free acid or alkali)

b : TRACER 4b

3 : an organism or ecological community so strictly associated with particular environmental conditions that its presence is indicative of the existence of these conditions

4 : any of a group of statistical values (as level of employment) that taken together give an indication of the health of the economy

- Definition provided by Merriam-Webster®

EPHT Network content has been conceptually divided into hazard, exposure, and health outcome areas. Content workgroups (CWG), comprised of state and local health professionals, focused on developing measures specific to one of these groups.

Additionally, the content is divided conceptually into indicator areas. These areas represent high-level concepts within each content team domain. Within each indicator, the content workgroups developed one or more measures that represent specific ways the indicator can be measured in time and place. The majority of all measures for an indicator are reported in a single table using a standard template.

The Missouri EPHT Network Portal follows the requirements and recommendations detailed in the National EPHT's "Centers for Disease Control and Prevention Standards for Nationally Consistent Data and Measures within the Environmental Public Health Tracking Network" [Version 3.0 | June 20, 2013] and "how-to" guides (see Appendix) for the creation of indicators and Nationally Consistent Data and Measures (NCDM).

Indicators and NCDMs available on Missouri's EPHT Network Portal, by content area, include:

Acute Myocardial Infarction	
Indicator	**Measure**
Hospitalizations for Acute Myocardial Infarction (AMI)	Annual number of hospitalizations for AMI by state and county
	Annual average daily number of hospitalizations for AMI, by month by state and county
	Annual maximum daily number of hospitalizations for AMI by month by state and county
	Annual minimum daily number of hospitalizations for AMI by month by state and county
	Annual rate of hospitalization for AMI among persons 35 and over by age group (total, 35-64, 65+) per 10,000 population by state and county
	Annual age-adjusted rate of hospitalization for AMI persons 35 and over per 10,000 population by state and county

The data used to calculate and/or compile these measures was provided by DHSS/ BHCADD.

Air Quality	
Indicator	**Measure**
Ozone – Days above regulatory standard	Annual number of days with maximum 8-hour average ozone concentration over the National Ambient Air Quality Standard, by county, and Metropolitan Statistical Area (MSA) (where monitors exist)
	Annual number of person-days with maximum 8-hour average ozone concentration over the National Ambient Air Quality Standard, by county, and MSA (where monitors exist)
Particulate Matter ($PM_{2.5}$)- Days above regulatory standard	Annual percent of days with $PM_{2.5}$ levels over the National Ambient Air Quality Standard, by county (where monitors exist)
	Annual person-days with $PM_{2.5}$ over the National Ambient Air Quality Standard, by county (where monitors exist)

Annual $PM_{2.5}$ Level	Annual average ambient concentrations of $PM_{2.5}$ (based on seasonal averages and daily measurement), by county (where monitors exist)
	Annual percentage of population living in counties exceeding the National Ambient Air Quality Standard (compared to percentage of population living in counties that meet the standard, and the percentage of the population living in counties without $PM_{2.5}$ monitors), by state

The data used to calculate and/or compile these measures was provided by the Missouri DNR, US EPA, and the CDC's National EPHT Network.

Asthma	
Indicator	**Measure**
Hospitalizations for Asthma	Annual number of hospitalizations for asthma by state and county
	Annual average daily number of hospitalizations for asthma, by month by state and county
	Annual maximum daily number of hospitalizations for asthma by month by state and county
	Annual minimum daily number of hospitalizations for asthma by month by state and county
	Annual rate of hospitalization for asthma by age group (total, 0-4, 5-14, 15-34, 35-64, and 65+) per 10,000 population by state and county
	Annual age-adjusted rate of hospitalization for asthma per 10,000 population by state and county

The data used to calculate and/or compile these measures was provided by DHSS/ BHCADD.

Birth Defects	
Indicator	**Measure**
Prevalence of Birth Defects	5 year prevalence of Anencephaly per 10,000 live births by state & county
	5 year prevalence of Spina Bifida (without anencephaly) per 10,000 live births by state & county
Prevalence of Birth Defects – *continued*	5 year prevalence of Hypoplastic Left Heart Syndrome per 10,000 live births by state & county
	5 year prevalence of Tetralogy of Fallot per 10,000 live births by state & county
	5 year prevalence of Transposition of the Great Arteries (vessels) per 10,000 live births by state & county
	5 year prevalence of Cleft Lip with or without Cleft Palate per 10,000 live births by state & county
	5 year prevalence of Cleft Palate without Cleft Lip per 10,000 live births by state & county
	5 year prevalence of Hypospadias per 10,000 live male births by state & county
	5 year prevalence of Gastroschisis per 10,000 live births by state & county
	5 year prevalence of Upper Limb Deficiencies per 10,000 live births by state & county
	5 year prevalence of Lower Limb Deficiencies per 10,000 live births by state & county
	5 year prevalence of Trisomy 21 per 10,000 live births by state & county and by maternal age at delivery (<35, ≥ 35)

The data used to calculate and/or compile these measures was provided by DHSS/BVS, BVR, and BHCADD.

Cancer	
Indicator	**Measure**
Incidence of Selected Cancers	5 year number of cases of Mesothelioma by state
	5 year age-adjusted incidence rate of Mesothelioma per 100,000 population by state
	Annual number of cases of Melanoma of the Skin by state
	5 year number of cases of Melanoma of the Skin by state and county
	Annual age-adjusted incidence rate of Melanoma of the Skin per 100,000 population by state
	5 year age-adjusted incidence rate of Melanoma of the Skin per 100,000 population by state and county
	Annual number of cases of Liver and Intrahepatic Bile Duct Cancer by state
Incidence of Selected Cancers – *continued*	5 year number of cases of Liver and Intrahepatic Bile Duct Cancer by state and county
	Annual age-adjusted incidence rate of Liver and Intrahepatic Bile Duct Cancer per 100,000 population by state
	5 year age-adjusted incidence rate of Liver and Intrahepatic Bile Duct Cancer per 100,000 population by state and county
	Annual number of cases of Kidney and Renal Pelvis Cancer by state
	5 year number of cases of Kidney and Renal Pelvis Cancer by state and county
	Annual age-adjusted incidence rate of Kidney and Renal Pelvis Cancer per 100,000 population by state
	5 year age-adjusted incidence rate of Kidney and Renal Pelvis Cancer per 100,000 population by state and county
	Annual number of cases of Breast Cancer in females by Age group (<50, ≥50, total) by state
	5 year number of cases of Breast Cancer in females by Age group (<50, ≥50, total) by state and county
	Annual age-adjusted incidence rate of Breast Cancer in females per 100,000 population by Age group (<50, ≥50, total) by state

	5 year age-adjusted incidence rate of Breast Cancer in females per 100,000 population by Age group (<50, ≥50, total) by state and county
	Annual number of cases of Lung and Bronchus Cancer by state
	5 year number of cases of Lung and Bronchus Cancer by state and county
	Annual age-adjusted incidence rate of Lung and Bronchus per 100,000 population by state
	5 year age-adjusted incidence rate of Lung and Bronchus Cancer per 100,000 population by state and county
	Annual number of cases of Bladder Cancer (including in situ) by state
	5 year number of cases of Bladder Cancer (including in situ) by state and county
	Annual age-adjusted incidence rate of Bladder Cancer (including in situ) per 100,000 population by state
	5 year age-adjusted incidence rate of Bladder Cancer (including in situ) per 100,000 population by state and county
Incidence of Selected Cancers – *continued*	Annual number of cases of Brain and other nervous systems Cancer by state
	5 year number of cases of Brain and other nervous systems Cancer by state and county
	Annual age-adjusted incidence rate of Brain and other nervous system Cancer per 100,000 population by state
	5 year age-adjusted incidence rate of Brain and other nervous system Cancer per 100,000 population by state and county
	Annual number of cases of Brain and Central Nervous System Cancer in children (<15 years and <20 years) by state
	Annual Age-adjusted incidence rate of Brain and Central Nervous System Cancer in children (<15 years and <20 years) per 1,000,000 population by state
	Annual number of cases of Thyroid Cancer by state
	5 year number of cases of Thyroid Cancer by state and county
	Annual age-adjusted incidence rate of Thyroid Cancer per 100,000 population by state
	5 year age-adjusted incidence rate of Thyroid Cancer per 100,000 population by state and county

	Annual number of cases of Non-Hodgkin‘s Lymphoma by state
	5 year number of cases of Non-Hodgkin‘s Lymphoma by state and county
	Annual age-adjusted incidence rate of Non-Hodgkin‘s Lymphoma per 100,000 population by state
	5 year age-adjusted incidence rate of Non-Hodgkin‘s Lymphoma per 100,000 population by state and county
	Annual number of cases of Leukemia by state
	5 year number of cases of Leukemia by state and county
	Annual age-adjusted incidence rate of Leukemia per 100,000 population by state
	5 year age-adjusted incidence rate of Leukemia per 100,000 population by state and county
	Annual number of Leukemia in children (<15 years and <20 years) by state
	Annual age-adjusted incidence rate of Leukemia in children (<15 years and <20 years) per 1,000,000 population by state
Incidence of Selected Cancers – *continued*	Annual number of cases of Chronic Lymphocytic Leukemia by state
	Annual age-adjusted incidence rate of Chronic Lymphocytic Leukemia per 100,000 population by state
	Annual number of cases of Acute Myeloid Leukemia by state
	Annual age-adjusted incidence rate of Acute Myeloid Leukemia per 100,000 population by state
	Annual number of Acute Myeloid Leukemia in children (<15 years and <20 years) by state
	Annual age-adjusted incidence rate of Acute Myeloid Leukemia in children (<15 years and <20 years) per 1,000,000 population by state
	Annual number of cases of Acute Lymphocytic Leukemia in children (<15 years and <20 years) by state
	Annual age-adjusted incidence rate of Acute Lymphocytic Leukemia in children (<15 years and <20 years) per 1,000,000 population by state
	Annual number of cases of Oral Cavity and Pharynx Cancer by state
	5 year number of cases of Oral Cavity and Pharynx Cancer by state and county

	Annual age-adjusted incidence rate of Oral Cavity and Pharynx Cancer per 100,000 population by state
	5 year age-adjusted incidence rate of Oral Cavity and Pharynx Cancer per 100,000 population by state and county
	Annual number of cases of Larynx Cancer by state
	5 year number of cases of Larynx Cancer by state and county
	Annual age-adjusted incidence rate of Larynx Cancer per 100,000 population by state
	5 year age-adjusted incidence rate of Larynx Cancer per 100,000 population by state and county
	Annual number of cases of Esophagus Cancer by state
	5 year number of cases of Esophagus Cancer by state and county
	Annual age-adjusted incidence rate of Esophagus Cancer per 100,000 population by state
	5 year age-adjusted incidence rate of Esophagus Cancer per 100,000 population by state and county
Incidence of Selected Cancers – *continued*	Annual number of cases of Pancreas Cancer by state
	5 year number of cases of Pancreas Cancer by state and county
	Annual age-adjusted incidence rate of Pancreas Cancer per 100,000 population by state
	5 year age-adjusted incidence rate of Pancreas Cancer per 100,000 population by state and county

The data used to calculate and/or compile these measures was provided by MCR-ARC.

Carbon Monoxide	
Indicator	**Measure**
Hospitalizations for Carbon Monoxide (CO) Poisoning	Annual number of hospitalizations for CO poisoning by cause/intent (unintentional fire-related, unintentional non-fire related, and unknown intent) by state
	Annual crude rate of hospitalization for CO poisoning per 100,000 population by cause/intent (unintentional fire-related, unintentional non-fire related, and unknown intent) by state

	Annual age-adjusted rate of hospitalization for CO poisoning per 100,000 population by cause/intent (unintentional fire-related, unintentional non-fire related, and unknown intent) by state
Emergency Department Visits for Carbon Monoxide Poisoning	Annual number of emergency department visits for CO Poisoning by cause/intent (unintentional fire-related, unintentional non-fire related, and unknown intent) by state
	Annual crude rate of emergency department visits for CO poisoning per 100,000 population by cause/intent (unintentional fire-related, unintentional non-fire related, and unknown intent) by state
	Annual age-adjusted rate of emergency department visits for CO poisoning per 100,000 population by cause/intent (unintentional fire-related, unintentional non-fire related, and unknown intent) by state
Carbon Monoxide Poisoning Mortality	Annual number of deaths from CO poisoning by cause/intent (unintentional fire-related, unintentional non-fire related, and unknown intent) by state
Carbon Monoxide Poisoning Mortality - *continued*	Annual crude rate of death from CO poisoning per 100,000 population by cause/intent (unintentional fire-related, unintentional non-fire related, and unknown intent) by state
	Annual age-adjusted rate of death from CO poisoning per 100,000 population by cause/intent (unintentional fire-related, unintentional non-fire related, and unknown intent) by state
Reported Exposure to Carbon Monoxide	Annual number of unintentional CO exposures reported to poison control centers by resulting health effect and treatment in a healthcare facility by state
	Annual crude rate of unintentional CO exposures reported to poison control centers per 100,000 population by resulting health effect and treatment in a healthcare facility by state
Home Carbon Monoxide Detector Coverage	Annual percent of Behavioral Risk Factor Surveillance System (BRFSS) respondents reporting at least one CO detector in their household by state

The data used to calculate and/or compile these measures was provided by DHSS/BEE, BVS, BVR, and BHCADD.

Childhood Lead Poisoning*	
Indicator	**Measure**
Testing Coverage and Housing Age	3 year testing period by annual birth cohort number of children born in the same year and tested for lead before age 3 by state and county
	3 year testing period by annual birth cohort percent of children born in the same year and tested before age 3 by state and county
	Annual number of children younger than 5 years living in poverty (as measured in 2000 census) by state and county
	Annual percent of children younger than 5 years living in poverty (as measured in 2000 census) by state and county
	Annual number of homes built before 1950 (as measured in the 2000 Census) by state and county
	Annual percent of homes built before 1950 (as measured in the 2000 Census) by state and county

*The Childhood Lead Poisoning measures can be displayed as the one indicator described above or as two indicators splitting the age of housing measures from the testing and poverty measures. The two indicators would be (1) Testing Coverage and (2) Age of Housing. At the time of this publication, revised and new Childhood Lead Poisoning indicators are under review by the CWG.

The data used to calculate and/or compile these measures was provided by DHSS/BEE, MCDC, and the US Census Bureau.

Reproductive Outcomes & Vital Statistics	
Indicator	**Measure**
Prematurity	Annual percent of preterm (less than 37 weeks gestation) live singleton births by state and county
	5 year annual average percent of very preterm (less than 32 weeks gestation) live singleton births by state and county
Low Birthweight	Annual percent of low birthweight (less than 2500 grams) live term singleton births by state and county
	5 year annual average percent of very low birthweight (less than 1500 grams) live singleton births by state and county
Mortality	5 year annual average infant (less than 1 year of age) Mortality Rate per 1,000 live births by state and county
	5 year annual average neonatal (less than 28 days of age) Mortality Rate per 1,000 live births by state and county
	5 year annual average perinatal (equal to or greater than 28 weeks gestation to less than 7 days of age) Mortality Rate per 1,000 live births (plus fetal deaths equal to or greater than 28 weeks gestation) by state and county
	5 year annual average postneonatal (equal to or greater than 28 days to less than 1 year of age) Mortality Rate per 1,000 live births
Fertility	Annual total Fertility Rate per 1,000 women of reproductive age by state and county
Sex Ratio at Birth	Annual male to female sex ratio at birth (term singletons only) by state and county

The data used to calculate and/or compile these measures was provided by DHSS/BVS, BVR, and BHCADD.

*Water Quality***	
Indicator	**Measure**
Arsenic Level and Potential Population Exposures	Annual distribution of number of community water systems by mean arsenic concentrations (micrograms per liter) by year by state
	Annual distribution of number of people served by community water systems by mean arsenic concentrations (micrograms per liter) by year by state
	Annual distribution of number of community water systems by maximum arsenic concentrations (micrograms per liter) by year by state
	Annual distribution of number of people served by community water systems by maximum arsenic concentrations (micrograms per liter) by year by state
	Quarterly distribution of number of community water systems by mean arsenic concentrations (micrograms per liter) by quarter by state
	Quarterly distribution of number of people served by community water systems by mean arsenic concentrations (micrograms per liter) by quarter by state
Nitrate Level and Potential Population Exposures	Annual distribution of number of community water systems by mean nitrate concentrations (milligrams per liter) by year by state
	Annual distribution of number of people served by community water systems by mean nitrate concentrations (milligrams per liter) by year by state
	Annual Distribution of number of community water systems by maximum nitrate concentrations (milligrams per liter) by year by state
	Annual Distribution of number of people served by community water systems by maximum nitrate concentrations (milligrams per liter) by year by state
	Quarterly distribution of number of community water systems by mean nitrate concentrations (milligrams per liter) by quarter by state
	Quarterly distribution of number of people served by community water systems by mean nitrate concentrations (milligrams per liter) by quarter by state
Disinfection Byproducts (DBP) Level and Potential Population Exposure (TTHM)	Annual distribution of number of community water systems by mean trihalomethane (THM) concentrations (micrograms per liter) by year by state

Disinfection Byproducts (DBP) Level and Potential Population Exposure (TTHM) - *continued*	Annual distribution of number of people served by community water systems by mean trihalomethane (THM) concentrations (micrograms per liter) by year by state
	Annual distribution of number of community water systems by maximum trihalomethane (THM) concentrations (micrograms per liter) by year by state
	Annual Distribution of number of people served by community water systems by maximum trihalomethane (THM) concentrations (micrograms per liter) by year by state
	Quarterly distribution of number of community water systems by mean trihalomethane concentrations (micrograms per liter) by quarter by state
	Quarterly distribution of number of people served by community water systems by mean trihalomethane (THM) concentrations (micrograms per liter) by quarter by state
Disinfection Byproduct: Levels and Potential Population Exposures (HAA5)	Annual distribution of number of community water systems by mean haloacetic acids (HAA5) concentrations (micrograms per liter) by year by state
	Annual distribution of number of people served by community water systems by mean haloacetic acids (HAA5) concentrations (micrograms per liter) by year by state
	Annual distribution of number of community water systems by maximum haloacetic acids (HAA5) concentrations (micrograms per liter) by year by state
	Annual distribution of number of people served by community water systems by maximum haloacetic acids (HAA5) concentrations (micrograms per liter) by year by state
	Quarterly distribution of number of people served by community water systems by mean haloacetic acids concentrations (micrograms per liter) by quarter by state
	Quarterly distribution of number of people served by community water systems by mean haloacetic acids (HAA5) concentrations (micrograms per liter) by quarter by state
Public Water Use	Annual number of people receiving water from community water systems by state

** At the time of publication of this document, these water measures and additional water measures were under review by the CWG.

The data used to calculate and/or compile these measures was provided by DNR.

Complete NCDM files are compiled and submitted to CDC following the EPHT Content Workgroup recommendations and "how-to" guides (see Appendix). These files, as well as Extensible Markup Language (XML) Schema files, are available for download on Missouri's EPHT network portal at http://health.mo.gov/living/environment/epht/.

Metadata

Metadata is "data about data." It assists in the understanding of data by describing the content, quality, condition, access, and other characteristics of the data.

Questions answered by metadata include:

- Why was the data created or collected?
- How was the data created or collected?
- Who created or collected the data?
- When was the data last updated?
- How can the data be obtained?

All data included on the EPHT Network Portal must contain metadata that adheres to the Federal Geographic Data Committee (FGDC) Content Standard for Digital Geospatial Metadata (FGDC-STD-001-1998). Initially created for geospatial data, this standard was identified as robust enough to describe non-geospatial data. Tracking Network stakeholders have developed a profile from this standard that includes all required elements of the standard and additional elements identified by the stakeholders necessary to describe EPHT Network resources.

You can learn more at the FGDC homepage (http://www.fgdc.gov/) or from the Tracking Network Metadata Content Guidance Document (see Appendix).

The Missouri EPHT Network Portal includes a metadata search tool. Missouri's EPHT metadata is available at http://health.mo.gov/living/environment/epht/. National EPHT metadata is available at http://ephtracking.cdc.gov/showIndicatorsData.action.

Diseases and Conditions Reportable In Missouri

The reporting of cases of disease is important in the planning and evaluation of prevention and control programs, the assurance of appropriate medical treatment, and in the detection of common-source outbreaks. In Missouri, the authority to require notification of cases of disease is the responsibility of DHSS.

DHSS has compiled a listing of 91 conditions and/or diseases that must be reported. These conditions and/or diseases are detailed in the Missouri Code of State Regulations, 19 CSR 20.20, Reporting Communicable, Environmental, and Occupational Diseases (see Appendix).

Public Health Surveillance is defined as the ongoing and systematic collection, analysis, and interpretation of outcome specific data for use in the planning, implementation, and evaluation of public health practice.

A surveillance system includes the functional capacity for data collection and analysis as well as the timely dissemination of these data to persons who can undertake effective prevention and control activities.[1]

Reporting of cases of diseases and related conditions is a vital step in controlling and preventing the spread of disease. The data obtained from mandatory reporting by physicians, clinicians, and other health providers is used to:

- provide the basis for determining public health priorities;
- observe and establish trends in the incidence and prevalence of disease;
- identify potential disease outbreaks;
- plan and implement prevention and control programs;
- geographically distribute resources; and
- evaluate the success or failure of prevention and control programs.

Additional information on mandatory reporting of conditions and/or diseases in Missouri is available at http://health.mo.gov/living/healthcondiseases/communicable/communicabledisease/manuals.php. Questions regarding mandatory reporting should be addressed to the Division of Community and Public Health via e-mail to info@health.mo.gov or by calling 573.751.6113.

[1] Thacker SB. Historical development. In: Teutsch SM, Churchill RE, eds. Principles and Practice of Public Health Surveillance. New York, NY: Oxford University Press; 1994:3.

Missouri's Statutes, Rules, and Regulations Pertaining to Specific Data

Please Note: This listing provides a reference to the statutes, rules, and regulations that affect the most commonly requested data. This listing is not all-inclusive of all potential state statutes, rules, and/or regulations that could apply to a particular situation or request. Each request for data made to DHSS will be carefully reviewed and evaluated prior to the release of any data.

Vital Records Data

Missouri State Statutes and Code of Regulations allow for the release of record level vital records data by the Missouri Department of Health and Senior Services. The below listed statutes only apply to vital events occurring within Missouri's borders. The records of vital events that occur to Missouri residents in other states are the property of the state where the events take place.

193.045.2(4), RSMo, authorizes the state registrar to provide to the state or local health agencies copies of or data derived from certificates and reports required under sections 193.005 to 193.325, deemed necessary for state or local health planning and program activities…such copies or data shall remain the property of the department and the uses made of them shall be governed by the state registrar.

193.245(1), RSMo, the department to disclose upon request, a listing of persons who are born or who die on a particular date, but no information from the record other than the name and date of such birth or death shall be disclosed.

193.245(2), RSMo, allows the department to authorize disclosure of information contained in vital records for legitimate research purposes.

193.255.4, RSMo, authorizes the state registrar, upon request by federal, state, local and other public or private agencies, to furnish copies or data of any other vital statistics… for statistical or administrative purposes upon such terms or conditions as may be prescribed by regulation, provided that such copies or data shall not be used for purposes other than those for which they were requested unless so authorized by the state registrar.

19 CSR 10-10.090 Access to Vital Records: (1) (B) 3. No data shall be furnished from records for research purposes until the state registrar of vital records has received and approved a formal request for the research project. (1) (B) 2. The term research means a systematic study designed to develop or contribute to generalizable knowledge. The term generalizable means to emphasize the general character rather than specific details of, to formulate general principles or inferences from particulars. (1) (D) authorizes the state registrar or the local custodian – when deemed in the public interest and not for purposes of commercial solicitation or private gain – to furnish copies of

records or data from records to public agencies administrating health, welfare, safety, law enforcement, education or public assistance programs and to private agencies approved by the state registrar.

Under section 610.035, RSMo, the department is prohibited from disclosing any Social Security number of a living person unless such disclosure is permitted by federal law, federal regulation, or state law.

Section 208.120, RSMo prohibits the department from disclosing any information obtained by them in the discharge of their official duties relative to the identity of applicants for, or recipients of, benefits or the contents of any records (e.g., Medicaid, Food Stamps). Public assistance information can be provided on de-identified records only.

45 C.F.R. Part 160 and Part 164. Vital Records requestors for research or administrative purposes will only be provided access to the minimum information necessary to achieve their specific research or administrative requests. Requestors are prohibited from disclosing any information that would identify a person and are also prohibited from the re-release of the data provided.

Patient Abstract System (PAS) Data

Missouri State Statutes and Code of Regulations allow for the release of PAS data by DHSS. The Department and other "public health authorities" are authorized to utilize PAS information for epidemiologic studies and for surveillance. The below listed statutes apply to Missouri residents only.

192.067(1), RSMo, the department, for purposes of conducting epidemiological studies to be used in promoting and safeguarding the health of the citizens of Missouri … is authorized to receive information from patient medical records.

192.067(2), RSMo, Medical information…may be released by the department only in a statistical aggregate form that precludes and prevents the identification of patient, physician, or medical facility except that medical information may be shared with other public health authorities and coinvestigators of a health study if they abide by the same confidentiality restrictions required of the department of health and senior services… The department of health and senior services, public health authorities and coinvestigators shall use the information collected only for the purposes provided …

192.665(9), RSMo, "Patient abstract data", data submitted by hospitals which includes but is not limited to date of birth, sex, race, zip code, county of residence, admission date, discharge date, principal and other diagnoses, including external causes, principal and other procedures, procedure dates, total billed charges, disposition of the patient and expected source of payment with sources categorized according to Medicare,

Medicaid, other government, workers' compensation, all commercial payors coded with a common code, self-pay, no charge and other.

192.667(7), RSMo, Information obtained by the department under the provisions of section 192.665 and this section shall not be public information…The department of health and senior services may authorize the use of the data by other research organizations pursuant to the provisions of section 192.067… The department shall not release data in a form which could be used to identify a patient. Any violation of this subsection is a class A misdemeanor.

19 CSR 10-33.010 Reporting Patient Abstract Data by Hospitals and Ambulatory Surgical Centers: (1)(A) Coinvestigator means any person or organization that applies to the department to be a coinvestigator of an epidemiological study; (C) Epidemiological study means research using patient abstract data to understand, promote or safeguard the health of a defined population. No marketing study or study designed to use data on a specific provider shall be considered an epidemiological study; (M) Public health authority means a federal, state or local governmental agency which has as its mission and responsibility the promotion and safeguarding of the public's health.

19 CSR 10-33.010 Reporting Patient Abstract Data by Hospitals and Ambulatory Surgical Centers: (12) Any person may apply to the department to be a coinvestigator of an epidemiological study using patient abstract data. A research protocol shall be submitted which includes all of the following: (A) A description of the proposed study; (B) The purpose of the study; (C) A description of the data elements needed for the study; (D) A description of a tape or a report if either is required; (E) A statement indicating whether the study protocol has been reviewed and approved by an institutional review board; (F) A description of data security procedures, including who shall have access to the data; and (G) A description of the proposed use and release of the data.

19 CSR 10-33.010 Reporting Patient Abstract Data by Hospitals and Ambulatory Surgical Centers: (13) The director of the department shall appoint a data release advisory committee composed of three (3) persons representing the health care industry and three (3) persons representing researchers and consumers. The advisory committee shall review all research protocols of persons applying to be a coinvestigator of an epidemiological study using patient abstract data. The advisory committee shall make a recommendation to the director whether the coinvestigator protocol should be accepted, accepted with conditions, or rejected. The committee shall consider: (A) The review made by the staff of the department; (B) Whether the proposed study meets the definition of an epidemiological study; (C) The potential for the coinvestigator or any other person to use the data for nonepidemiological purposes; (D) The professional expertise of the applicant to conduct the study; (E) The appropriateness of the proposed study design; (F) The willingness and ability of the applicant to protect the identity of any patient, physician, or provider; and (G) The data security measures and final disposition of the data proposed.

19 CSR 10-33.010 Reporting Patient Abstract Data by Hospitals and Ambulatory Surgical Centers: (14) The coinvestigator shall agree to the confidentiality, security and release of data requirements imposed by the department and shall agree to the review and oversight requirements imposed by the department.

19 CSR 10-33.010 Reporting Patient Abstract Data by Hospitals and Ambulatory Surgical Centers: (15) Data released to the coinvestigator shall not be rereleased in any form by the coinvestigator without the prior authorization of the department. Authorization for subsequent release of the data shall be considered only if the proposed release does not identify a patient, physician or provider.

19 CSR 10-33.010 Reporting Patient Abstract Data by Hospitals and Ambulatory Surgical Centers: (16) The following data elements permit identification of a patient, physician or provider, and are not to be rereleased by a coinvestigator: patient name; patient Social Security number; any datum which applies to fewer than three (3) patients, physicians or providers; physician number; provider number; and a quantity figure if one (1) entity contributes more than sixty percent (60%) of the amount.

19 CSR 10-33.010 Reporting Patient Abstract Data by Hospitals and Ambulatory Surgical Centers: (17) The department shall release only those patient abstract data elements to the coinvestigator which the department determines are essential to the study. The Unique Physician Identification Number (UPIN) associated with any patient abstract data shall not be released to any coinvestigator. If the research being conducted by a coinvestigator requires a physician number, the department may create a unique number which is not the UPIN. The department shall not provide information which links the unique number to the name of the physician.

19 CSR 10-33.010 Reporting Patient Abstract Data by Hospitals and Ambulatory Surgical Centers: (18) No epidemiological study conducted with a coinvestigator shall be approved unless the department determines that: (A) The epidemiological study has public benefit sufficient to warrant the department to expend resources necessary to oversee the project with the coinvestigator; (B) The department has sufficient resources available to oversee the project with the coinvestigator; and (C) The data release advisory committee reviewed the study and the director of the department authorized approval.

19 CSR 10-33.010 Reporting Patient Abstract Data by Hospitals and Ambulatory Surgical Centers: (19) Public health authorities and coinvestigators receiving data shall be informed by the department of the penalty for violating section 192.067, RSMo.

Frequently Asked Data Questions

When I run a query on Missouri's EPHT Network Portal, why do some of the values display as stars?

The query results will display stars (**) when the count or rate in certain cells has been suppressed either because the observed number of events is very small and not appropriate for publication, or it could be used to calculate the number in a cell that has been suppressed. Suppression is a statistical practice that is used to protect patient confidentiality and potentially identifying information by withholding or excluding small numbers within a specific demographic or geography.

Why isn't all the data the same on both the Missouri and National EPHT Network Portals?

There are many scientifically valid reasons that the data presented on the Missouri and National EPHT Network Portals may not be identical, including:

- Not every state or government health agency collects data on every condition and/or disease. Even when data is collected for the same condition and/or disease, different data elements may be required.
- Condition and/or disease definitions can vary between jurisdictions.
- Data element definitions can vary between jurisdictions.
- Conditions and/or diseases may have drastic seasonal variations across geographic areas.
- Different datasets and/or sources may have been used.
- Suppression of small cell values or complimentary suppression may be used.
- Data may be aggregated by different ages, races, or other demographic.

Specific questions regarding data differences should be addressed to the Missouri EPHT Program Manager via e-mail at EPHTN@health.mo.gov or by calling 573.751.6102.

Why isn't record level data for health conditions available on Missouri's EPHT Network Portal?

Patient level records are not public information, and may be shared only with other public health authorities and coinvestigators of a health study if they abide by the same confidentiality restrictions required by DHSS under section 192.067, RSMo.

In addition, federal law protects patient privacy. All requests for health information must be reviewed and approved by governing bodies. Agreements between agencies protect information and how it is used. All users must sign confidentiality agreements to ensure privacy and information must be stored in a secure environment. Access to this level of data will always be restricted and strictly controlled with all agencies and individuals held accountable by law.

What is the "Secure" EPHT Network Portal?

Missouri's Secure EPHT Network Portal provides the same information as the public portal. The only difference between the two portals is that data available on the secure portal has not been suppressed. This data is available only to those people who have a legitimate need-to-know, such as other public health authorities or in some instances, coinvestigators of a health study.

To request a secure user account, please complete and submit the "Secure User Access" request available at http://health.mo.gov/living/environment/epht/index.php. After submitting the request, the local security officer will contact you for further information.

Questions regarding the process of obtaining a secure user account should be addressed to the Missouri EPHT Program Manager via e-mail at EPHTN@health.mo.gov or by calling 573.751.6102.

The data I want isn't available on the Missouri EPHT Network Portal. How can I request it?

To submit a special request for specific data for research, a principal investigator must submit a completed Application for Missouri Vital Records or Patient Abstract System Data for Research Purposes. The application requires detailed information about the study protocol, justification for all data elements requested (each data element must be related to the hypotheses), and measures to ensure the confidentiality and security of the data. All information must be clear, consistent and specific. General descriptions do not allow accurate assessment of the value of the study or the need for the data items. Release of data from vital records and/or the Patient Abstract System by DHSS is granted to an agency/institution for the sole purpose of the research project described in the protocol application. The applicant will be required to complete and sign an Agreement for Oversight. All persons that will have access to the data must be listed in the application and will be required to sign the Confidentiality Pledge prior to being granted access to the study data.

It is the principal investigator's responsibility to design a valid study that would make a contribution to public health, and it is not the department's role to help refine a faulty study or a poorly described study until it meets generally acceptable scientific standards. Protocols of this nature will be rejected and further processing of such applications will be discontinued. An application will be immediately rejected if it is determined that:

1. it does not clearly describe a well-designed research or epidemiologic study,
2. the data will be used for commercial or marketing purposes, or private gain,
3. being a co-investigator would overburden the department, or

4. there is reason to believe that confidentiality of the data would be jeopardized by its release.

Researchers interested in obtaining DHSS data should first familiarize themselves with the data sets prior to designing their studies (see Data and Surveillance Systems available at http://health.mo.gov/data/index.php). Only those data elements related to the hypotheses and necessary for the study should be requested. The principal investigator will be notified of any discrepancy between the list of data elements requested in the research protocol and those determined by DHSS staff to be needed. Vital Records and Patient Abstract Data custodian contact information may be found at http://health.mo.gov/data/pdf/contactus.pdf.

Additional information on Missouri DHSS data release policies, procedures, and guidelines are available at http://health.mo.gov/data/policies.php.

Suggestions for adding additional data sets, sources, and/or content areas to Missouri's EPHT Network Portal should be addressed to the Missouri EPHT Program Manager via e-mail at EPHTN@health.mo.gov or by calling 573.751.6102.

Can I share data that I've obtained from Missouri's EPHT Network Portal?

You can share data obtained from Missouri's public EPHT Network Portal; however, sharing of data obtained by special request or from Missouri's Secure EPHT Network Portal is forbidden.

Releasing, sharing, or publishing DHSS-provided data or subsets of such data to any person or entity not directly identified in the study personnel section of the application or annual review form is not allowed.

Analytic tables, graphs, charts, or maps produced from DHSS-provided data for analytic purposes are allowable and not considered re-release.

What criteria are used to determine if a research study will be approved by DHSS?

Studies and/or research projects must meet the following specific standards and criteria:

- be scientifically valid and statistically sound;
- contribute to public health practice;
- not use Missouri Department of Health and Senior Services' resources unreasonably and unnecessarily;
- be conducted ethically and with integrity;
- be in compliance with state and federal statutes and regulations, including confidentiality provisions;
- be reviewed by the Missouri Department of Health and Senior Services' Institutional Review Board when required; and

- be consistent with Missouri Department of Health and Senior Services' policy.

Is there a cost for accessing the data on the Missouri EPHT Network Portal?

There is no cost for accessing data on Missouri's EPHT Network Portal; however, special requests for data may have a cost associated. In an effort to recover the service cost incurred for staff time and other expenses involved in data delivery, DHSS may charge fees for data and services based on the fee schedule (http://health.mo.gov/data/pdf/datafeepolicy.pdf). Fees are assessed for preparation of data based on programming time and materials. Payment is required before data files can be released.

Questions regarding Missouri's EPHT Network Portal should be addressed to the Missouri EPHT Program Manager via e-mail at EPHTN@health.mo.gov or by calling 573.751.6102.

Acronyms Used in this Guide	Meaning
AAA	Area Agencies on Aging
ABLES	Adult Blood Lead Epidemiology and Surveillance
AMI	Acute Myocardial Infarction
APCP	Air Pollution Control Program
AQI	Air Quality Index
AQS	Air Quality System
AQUID	Aquatic Invertebrate Database
ASTHO	Association of State and Territorial Health Officers
ATSDR	Agency for Toxic Substances and Disease Registry
BCCDC	Bureau of Cancer and Chronic Disease Control
BEE	Bureau of Environmental Epidemiology
BEHS	Bureau of Environmental Health Services
BHCADD	Bureau of Health Care Analysis & Data Dissemination
BRFSS	Behavioral Risk Factor Surveillance System
BVR	Bureau of Vital Records
BVS	Bureau of Vital Statistics
CDC	Centers for Disease Control and Prevention
cL	centiliter
CLPPP	Childhood Lead Poisoning Prevention Program
CO	Carbon Monoxide
CSR	Code of State Regulations
CSTE	Council of State and Territorial Epidemiologists
CWS	Community Water System
CWG	Content Workgroup
DBP	Disinfection Byproduct
DCPH	Division of Community and Public Health
DED	Department of Economic Development
DEQ	Division of Environmental Quality
DESE	Missouri Department of Elementary and Secondary Education
DHSS	Department of Health and Senior Services
dL	deciliter
DNR	Department of Natural Resources
DOE	US Department of Energy
DOI	Department of Interior
DOT	Department of Transportation
DSS	Department of Social Services
ED	Emergency Department
EPA	Environmental Protection Agency

Acronym	Meaning
EPHI	environmental public health indicator
EPHT	Environmental Public Health Tracking
ES	Environmental Surveillance
ESP	Environmental Services Program
FGDC	Federal Geographic Data Committee
HAA5	Haloacetic Acids
HHS	Health and Human Services
HIE	Healthy Indoor Environments
HRAP	Health and Risk Assessment Program
HUD	Housing and Urban Development
HWP	Hazardous Waste Program
ICD	International Classification of Diseases
LPHAs	Local Public Health Agencies
LRP	Land Reclamation Program
MCDC	Missouri Census Data Center
MCL	maximum contaminant level
MCR-ARC	Missouri Cancer Registry and Research Center
MDA	Missouri Department of Agriculture
MDC	Missouri Department of Conservation
MEERTS	Missouri Environmental Emergency Response Tracking System
MHDC	Missouri Housing Development Commission
MICA	Missouri Information for Community Assessment
mL	milliliter
MoDOT	Missouri Department of Transportation
MOEIS	Missouri Emissions Inventory System
MoEVR	Missouri Electronic Vital Records
MSA	Metropolitan Statistical Area
NAACCR	North American Association of Central Cancer Registries
NASA	National Aeronautics and Space Administration
NCDM	Nationally Consistent Data & Measures
NCEH	National Center for Environmental Health
NIEHS	National Institute for Environmental Health Sciences
NIOSH	National Institute for Occupational Safety and Health
NOAA	National Oceanic and Atmospheric Administration
NPCR	National Program of Cancer Registries
NWS	National Weather Service
OAR	Office of Air and Radiation
OCSPP	Office of Chemical Safety and Pollution Prevention
OECA	Office of Enforcement and Compliance Assurance
OEI	Office of Environmental Information

Acronym	Meaning
OSEDA	Office of Social and Economic Data Analysis
OSWER	Office of Solid Waste and Emergency Response
OW	Office of Water
PAS	Patient Abstract System
PDWB	Public Drinking Water Branch
$PM_{2.5}$	Particulate Matter 2.5 micrometers or less
ppb	part per billion
ppm	part per million
RSMo	Revised Statutes of Missouri
SDWIS	Safe Drinking Water Information System
SEPH	Section for Environmental Public Health
SEER	Surveillance Epidemiology and End Results
SEHIC	State Environmental Health Indicators Collaborative
SWMP	Solid Waste Management Program
THM	Trihalomethane
TTHM	Total Trihalomethanes
US	United States
USDA	United States (US) Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WIMS	Well Information Management System
WPCB	Water Pollution Control Branch
WPP	Water Protection Program
XML	Extensible Markup Language
ZCTA	ZIP Code Tabulation Areas

Guide Development and Maintenance

This guide will continue to be revised and updated, as needed, as the program progresses. As part of the EPHT program's ongoing self-assessment, DHSS will meet periodically with partner entities throughout the year and review this guide to determine whether revisions are needed. Revisions will be published annually.

The Data & Statistical Guide is posted on the DHSS Internet site and available at: https://ephtn.dhss.mo.gov/EPHTN_Data_Portal/pdf/dataandstatisticalguide.pdf.

Appendixes:

A. Indicators and Data https://ephtracking.cdc.gov/
B. Metadata Search https://ephtracking.cdc.gov/
C. Missouri Code of State Regulations (CSR) – 19 CSR 20.20, Reporting Communicable, Environmental and Occupational Diseases https://www.sos.mo.gov/cmsimages/adrules/csr/current/19csr/19c20-20.pdf
D. List of Diseases and Conditions Reportable In Missouri https://health.mo.gov/living/healthcondiseases/communicable/communicabledisease/pdf/reportablediseaselist2.pdf