

Missoula County, Montana

Community Health Assessment

2011



Missoula City-County Health Department

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Introduction and Acknowledgement

In the fall of 2010, with the leadership of the Public Health Accreditation Board and the passing of the Patient Protection and Affordable Care Act, Community Health Assessments became necessary in order to best determine the needs of the community. The Community Health Assessment (CHA) workgroup was formed to address the logistics of completing a CHA, as well as choosing data and indicators. This workgroup was made up of representatives from the Missoula City-County Health Department, Community Medical Center, Saint Patrick Hospital and Health Sciences Center, and Partnership Health Center.

Missoula City-County Health Department has tracked and published [*Missoula Measures*](#), which grew out of a community health indicators project initiated by Missoula city and county and joined by local health and social service agencies over two decades ago. [*Missoula Measures*](#) was designed to provide information for indicator projects, initiatives, grant proposals, and reports and it's on-line presence (<http://www.co.missoula.mt.us/measures/>) is updated regularly for these uses. Over 200 experts in social, health and community topics were consulted in the origination of this project and many continue to provide consultation for annual updates.

Through various workgroup meetings, a decision was made to use the steps outlined in the Association for Community Health Improvement's Community Health Assessment Toolkit for this Community Health Assessment. Data was then collected and organized and prospective indicators were identified. Much of this data was drawn from [*Missoula Measures*](#).

In late summer of 2011 the initial workgroup was expanded to include representatives throughout the community. Participants included, in addition to the original workgroup, representatives from the Air Quality Advisory Council, Curry Health Center, Maternal Child

Health Advisory Council, Missoula Aging Services, Missoula Indian Center, Water Quality Advisory Council, WORD Inc, and the YWCA.

The final draft version of this assessment was approved by the Board of Health in November 2011 to be released for public comment. It was available for comment in a variety of formats, including print and electronic, through December 31, 2011. Revisions were made based upon input from the Board of Health and suggestions from the public.

Through the many meetings and document revisions, the following Community Health Assessment was produced. This document will be followed by a Community Health Improvement Plan which will identify selected indicators from this Community Health Assessment and outline methods and resources in which the community can work to improve those indicators. The Community Health Assessment and the Community Health Improvement Plan are intended to be updated and revised every three years.

We would like to sincerely thank the many community members and community organizations who contributed knowledge and expertise to this project. We hope this Community Health Assessment may be used as a resource for the public, private organizations, and other members of the community as we move forward to continue working to improve the health of the Missoula County communities.

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Community Profile



General Information and Geography

Montana is a state of more than 989,000 people and encompasses 145,552 square miles¹. Missoula County is situated in the Rocky Mountains in the western portion of Montana. It is made up of 2,598 square miles and sits at an elevation of approximately 3,200 feet¹. Missoula County encompasses five large valleys, and more than 1,975 miles of rivers, streams, and named tributaries run across the surface of the county². Western Montana is primarily a mountainous region with abundant wildlife. The first inhabitants of the Missoula area were American Indians from the Salish tribe and the first permanent white settlement was established in 1860.

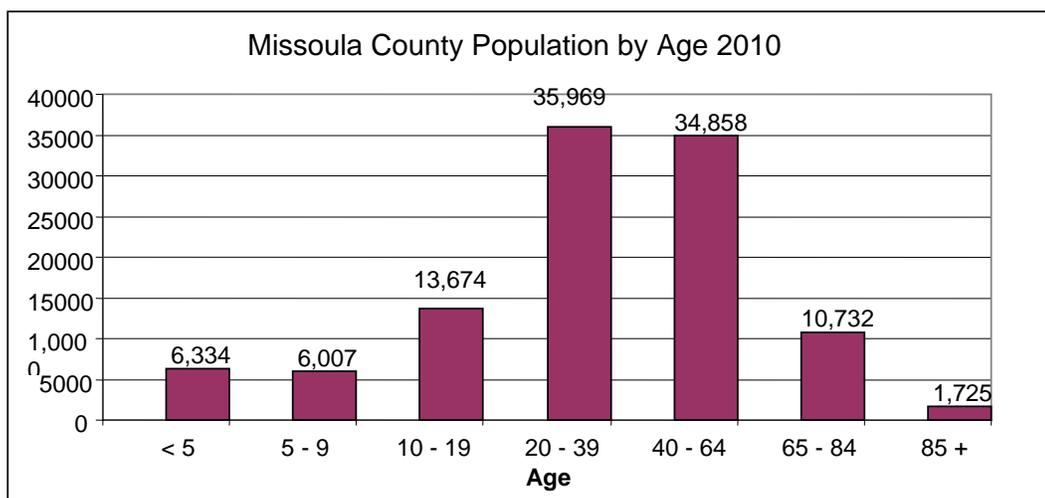
The total population of Missoula County in 2010 was 109,299, according to the 2010 US Census¹. The City of Missoula is the county seat and the only incorporated city in Missoula County, with a population of approximately 66,000 people or 61% of Missoula County's total population¹. Other towns and communities in Missoula County include Bonner/West Riverside, Clinton, East Missoula, Evaro, Frenchtown, Greenough, Huson, Lolo, Milltown, Orchard Homes, Potomac, Seeley Lake, Swan Valley, Turah, and Wye.

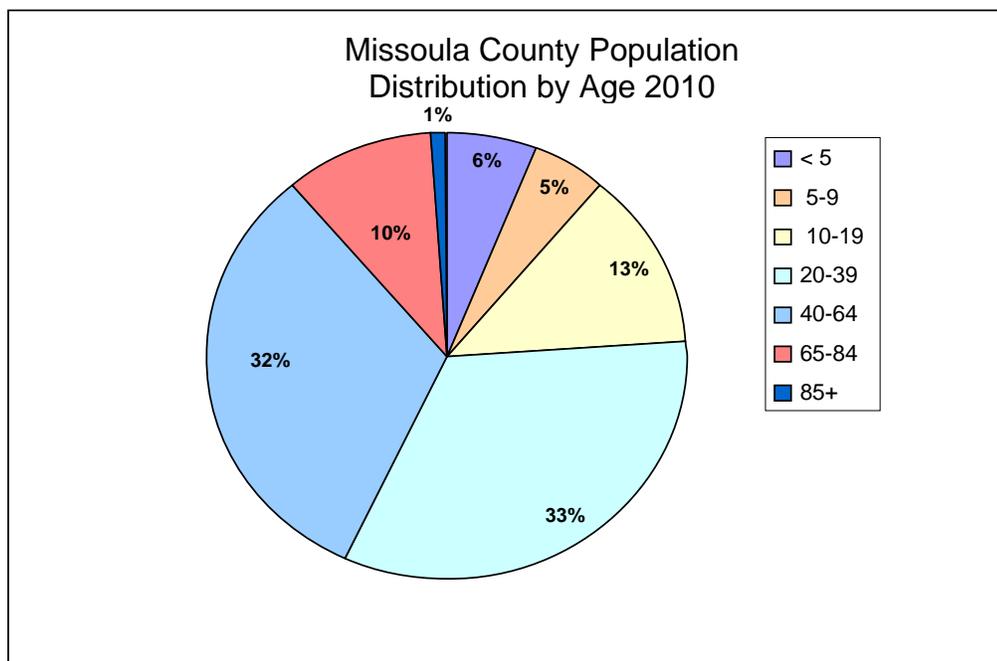
The City of Missoula is the regional trade center and medical hub for western Montana and is home to the University of Montana, the US Forest Service Northern Region Headquarters, Community Medical Center, and Saint Patrick Hospital and Health Sciences Center. Missoula is a tourist destination for outdoor enthusiasts, as well as a “jumping off” point for those traveling to Glacier National Park and Yellowstone National Park³.

The northern portion of Missoula County is a widely used recreational corridor for swimming, fishing, hunting and other outdoor activities with the Town of Seeley Lake acting as the center for recreational activities and visitors year round⁴. This is primarily due to the vast wilderness and accessibility of recreational rivers, streams, and lakes in the region⁴.

Population

Missoula County is the second most populated county in Montana¹. According to the US Census Bureau, in 2010 the population in Missoula County was 109,299. This is an increase of 14% (13,500 people) since 2000¹. The population of Missoula County is equally divided by sex and the median age of residents is 34.3¹. Approximately 11% of the population is aged 65 and over and 20% is age 18 and younger¹.





The racial profile of Missoula County residents is made up of 95.2% white, 4.1% Native American and Alaska Native, 1.8% Asian, 0.9% African American, and less than 1% other races¹. In Missoula County, 15% of the population aged 21-64 has a disability and 39% of the population over the age of 64 has a disability¹.

Race alone or in combination with one or more other races:		
White	104,004	95.2%
American Indian and Alaska Native	4,502	4.1%
Asian	1,925	1.8%
Black or African American	970	0.9%
Native Hawaiian and Other Pacific Islander	239	0.2%
Some Other Race	708	0.6%

Socio-cultural Environment

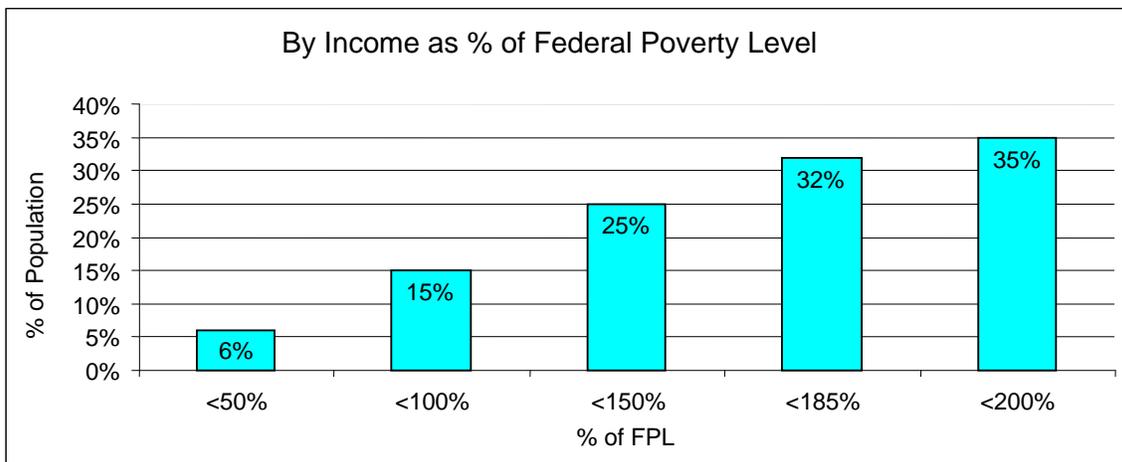
The socio-cultural environment of Missoula County is primarily white Anglo-Saxon with representation of Native American, Eastern European, and Hmong cultures.

Approximately 3% of Missoula County residents are Hispanic¹ and Missoula County is home to significant number of Hmong and Eastern European immigrants³. The Spanish, Hmong,

and Russian languages are present in the community. The various cultures in Missoula are celebrated and recognized through a variety of public and private events including Pow-Wows, religious celebrations, food, and other artistic venues².

Economics

The median household income in Missoula County in 2009 was \$42,598, this is just slightly below the 2009 US median household income of \$50,221⁵. Comparatively, the per capita income for Missoula County in 2009 was \$33,225 which is slightly higher than the US per capita income of \$27,041⁵. Approximately 15% of Missoula County residents are living with income at or below the Federal Poverty Level for household size⁵. This is equal to the Montana state poverty rate⁵. According to Montana Department of Labor and Industry, Missoula County's unemployment rate in March 2011 was 8.0%, with Montana's unemployment rate at 8.1%⁷. In 2010, 39.46% of Missoula County school children were eligible for free and reduced lunch, based on household size and income⁶.



The median purchase price of a single family home in Missoula County in August of 2011 was \$210,000. This is slightly higher than the median price of a home at the same time in 2010 at \$193,900⁷. Nationally, the median price of a single family home in August 2011 was \$168,400. According to CountyHealthRankings.org, 39% of the population in Missoula County reports living with high housing costs, meaning that the cost of housing exceeds 30% of household income⁸.

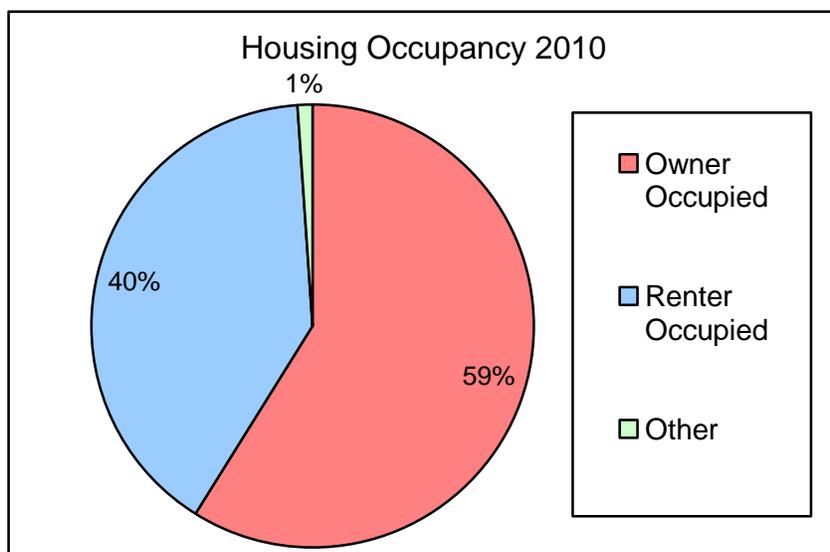
The cost of living index in the City of Missoula is approximately 104³. The cost of living index is calculated by averaging the cost of housing, groceries, utilities, transportation, healthcare, and other miscellaneous expenses and comparing this to the national average³. The national average cost of living index is 100. Missoula’s cost of living is 4% higher than the national average³.

The following table represents the top 20 private employers in Missoula County, listed in alphabetical order. This information is based on 4th quarter of fiscal year 2009 from the Montana Department of Labor and Industry Quarterly Census of Employment and Wages Program (QCEW). This list includes ONLY private industry employers subject to unemployment insurance. Railroads, tribal entities, and government agencies are excluded.

Business Name	Size Class	Business Name	Size Class
Allegiance Benefits	6	Albertson’s	7
Costco	6	Village Health Care Center	7
Good Food Store	6	Western Montana Clinic	7
Missoula Developmental Service	6	Western Montana Mental Health Center	7
Missoulia	6	DirecTV Customer Service	8
Progressive Personal Care	6	Express Employment	8
Safeway	6	Opportunity Resources	8
Target	6	Wal-Mart	8
Town Pump	6	Community Medical Center	9
YMCA	6	St Patrick Hospital	9
Employment Size Class Coding based on # of employees: Class 9 = 1,000+ employees, Class 8 = 500 - 999, Class 7 = 250 - 499, Class 6 = 100 - 249, Class 5 = 50 - 99, Class 4 = 20 - 49, Class 3 = 10 - 19			

Housing

There are 50,106 total housing units in Missoula County¹. Approximately 92% are occupied, with the remaining 8% vacant¹. Homeowner vacancy rate in 2010 was 1.8% and the rental unit vacancy rate was 4.5%¹. Of the occupied housing units, 59% are owner occupied and 40% are occupied by renters¹. This is slightly higher than the US average of 34% of dwellings occupied by renters⁴².



Household types can be categorized based on whether they are family households or non-family households. Missoula County consists of slightly more family households (56%) than non-family households¹. The average household size is 2.3 persons, and the average family size is 2.88¹. Twenty-four percent of family households include children under age 18 and approximately 30% of those are single-parent households¹. Non-family households make up the remaining 43%¹. These include people living alone and those living with non-relatives.

Although the data is not available regarding number of Lesbian, Gay, Bisexual, and Transgender

(LGBT) households in Missoula County, the Missoula City Council passed a city ordinance in 2010 protecting rights of the LGBT members of the community.

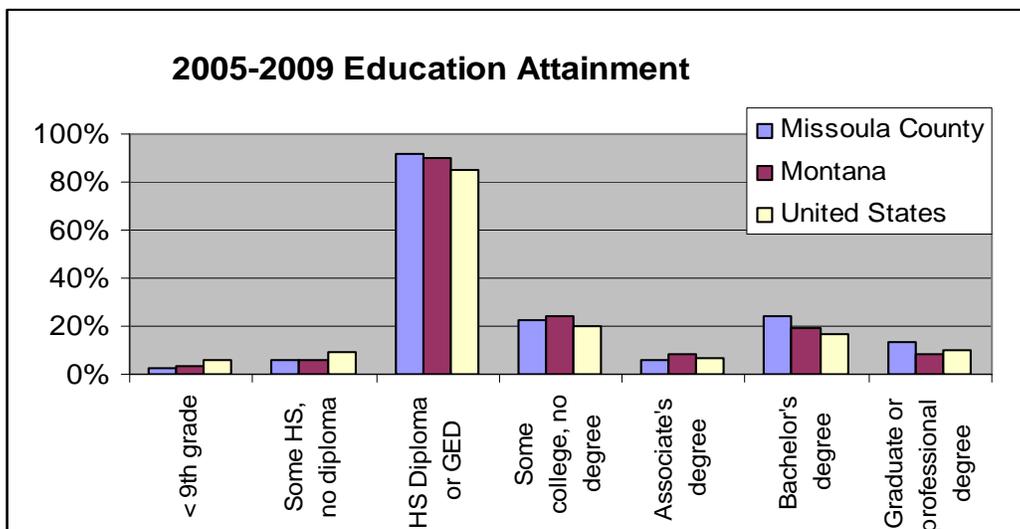
Based on data from 2005 to 2009, 77% of Missoula County residents have lived in their present dwelling for more than one year⁹. Approximately 14% have moved within Missoula County in the preceding year and 9% have moved to Missoula County from other areas⁹. Of the 9% from other areas, 5% have relocated to Missoula County from within the state of Montana and the other 4% have relocated from other states⁹.

Education

Missoula County has 184 licensed childcare and pre-school facilities¹⁰. The county also has 29 Elementary and Middle Schools and 5 High Schools¹¹. According to Montana Office of Public Instruction, in 2010 there were 12,664 students enrolled in grades Kindergarten through Twelve. Approximately 90% of students enrolled in 9th grade in Missoula County complete high school within 4 years¹¹.

Missoula is also home to the University of Montana and the University of Montana's College of Technology, and provides distance learning campuses for Montana State University, Walla Walla University, and Wild Rockies Field Institute.

In 2009, 91% of Missoula County residents over the age of 25 had obtained a High School Diploma or GED and 24% of Missoula County residents over the age of 25 had obtained a Bachelor's Degree⁵.



The University of Montana is a four-year, primarily non-residential, higher education and research institution located in Missoula amid the mountains of western Montana⁴⁹. Beyond traditional classroom lectures and seminars taught by renowned faculty, campus offers web- and video-based classes to rural and place-bound learners⁴⁹. In spring semester of 2011, there were 15,106 students enrolled, of which 80% were undergraduates and 20% were post baccalaureate students⁴⁹. The average student age is 26 with 54% female and 46% males⁴⁹. Seventy-three percent of students are in-state students, 25% are out-of-state, and 2% are international students⁴⁹. Nearly 80% of new freshmen live on campus and 27% of all undergraduates live on campus⁴⁹.

Key Health and Community Resources

Health and Social Services

Missoula County has 2 hospitals, 2 community health clinics, 4 nursing home facilities, 2 hospice facilities, and 18 assisted living facilities⁵. There are 69 practicing Primary Care

Physicians (including Family Practitioners, Internists, Pediatricians and 9 Ob/Gyn's.)³² There are also 84 Dentists, and 71 Dental Hygienists⁵. In addition, there is one inpatient mental health facility and multiple outpatient mental health clinics. Missoula County also has an Urban Indian Health Program.

Missoula County has 6 temporary emergency homeless shelter resources, 2 community organizations that offer free meals, and 5 organizations that offer food pantry services. The county Office of Public Assistance is located in the City of Missoula as well as the Missoula City-County Health Department and WIC offices. Missoula also has multiple non-profit organizations aimed at providing social services to residents in need.

Community Resources

There are multiple agencies, both governmental and non-profit, that act as resources to the Missoula County communities. These resources include emergency housing services, food banks and food pantry services, charitable medical care, emergency crisis stabilization, and many more (Appendix I).

Many of the resources are limited and there has been an increase in service utilization in the past few years. Some of the organizations are operating at capacity or beyond capacity in an attempt to continue meeting the needs of the Missoula County communities. The Missoula Food Bank reports an increase of over a thousand unique households utilizing their services since 2003. Free and discounted medical care at local hospitals, donated to those in need, has more than doubled in the past 5 years. The number of Missoula County school children accessing the free and reduced lunch program has dramatically increased since 2008. Although emergency shelter is available, many times there is a waiting list to obtain permanent housing and temporary shelters are often filled to capacity.

Religious Institutions

Missoula residents belong to a wide variety of religious faiths, including virtually every Christian denomination as well as Jewish, Islam, Buddhism, and those taking part in traditional American Indian ceremonies³. Approximately 32% of the population is affiliated with a religious congregation and there are currently 96 places of worship in Missoula County³.

Public Safety

Safety of Missoula county residents is protected by several divisions of law enforcement, EMT, Search and Rescue, and city and rural fire departments. Law enforcement divisions in the county include Missoula County Sheriff's Department¹², City of Missoula Police Department¹³, and Montana Highway Patrol. There is also a satellite office of the Federal Bureau of Investigation Salt Lake City Region¹⁴.

The Missoula County Detention Center is located in the City of Missoula¹². It has three divisions: a long-term juvenile detention center, a county jail for men and women, and a state regional prison¹². The total capacity of the Detention Center is almost 400¹². The detention center also has a clinic, library, school, counselors, dentist, phone system, commissary (store), banking, housing, churches, courts, and a staff that provides maintenance and security functions¹². They provide visiting areas for families, friends, and attorneys¹².

The crime rate is defined as the number of crimes committed per 100,000 population¹⁵. The crime index is the total of the 7 most serious crimes used to measure the crime rate¹⁵. The 7 crimes are homicide, rape, robbery, aggravated assault, burglary, larceny, and motor vehicle theft¹⁵. The crime rate in Missoula County in 2009 was 2,867 and the crime index was 3,113¹⁵. This is comparable to the crime rate and index in counties of similar size in Montana¹⁵.

Public Health and Medical Services Preparedness and Response

The Missoula County Emergency Operations Plan (EOP) prepared by the Office of Disaster Emergency Services (DES) designates the Missoula City-County Health Department (MCCHD) as the lead agency to coordinate the organization and mobilization of medical, public health, and mental health emergency management activities (Emergency Support Function 8: Public Health and Medical Services Annex)³². MCCHD established the Health Emergency Advisory Team (HEAT) for the coordination of public health and medical preparedness activities³². HEAT is comprised of healthcare representatives from MCCHD, Missoula County hospitals, EMS, nursing homes, home care agencies, American Red Cross, University of Montana Curry Health Center, and Missoula Indian Center³². During an emergency, HEAT may provide technical consultation to the Missoula County Health Officer or designee³².

Transportation Services

There are many transportation services available to the public in Missoula County. The primary transportation services utilized include the Missoula public transit system, Missoula Ravalli Transportation Services, the Missoula International Airport, as well as Yellow Cab, Green Cab, and MediCab services.

Mountain Line is currently the provider for public transit services in the Missoula urban area¹⁶. Mountain line provides fixed route services within a 36 square mile area including the City of Missoula, East Missoula, Bonner, Target Range, Rattlesnake, and Mullan Road¹⁶. Mountain Line also provides Para-transit services for residents with disabilities and Senior Van services¹⁶. Special event transportation for community events such as Farmers Market, Out to

Lunch, and Western Montana Fair are also provided¹⁶. In Fiscal Year 2009, over 849,150 trips were recorded on Mountain Line's fixed routes¹⁶.

The Missoula International Airport is located just outside of Missoula. Five major airlines fly to and from Missoula. Missoula International Airport is also home to the largest aerial firefighting depot in the United States and is the base of operations for the "smokejumpers"¹⁷.

Missoula Ravalli Transportation Management Association provides carpooling and vanpooling services from outlying communities into the urban Missoula area. The communities served include Hwy 93 South from Hamilton to Missoula, Hwy 93 North from Ronan to Missoula, and Interstate 90 from Alberton to Missoula. Over 150 people in Western Montana currently participate in these services¹⁸.

Many taxi services are available in the Missoula urban area including Yellow and Green Cabs. Medicab service is available for transportation to and from non-emergency medical, dental or psychiatric appointments.

Governmental Agencies

Missoula County is governed by three Commissioners, each elected to staggered six-year terms¹². All legislative, executive, and administrative powers and duties of the local government not specifically reserved by law or ordinance to other elected officials reside in the Commission¹². Other elected officials include: County Auditor, County Clerk and Recorder/Treasurer, County Superintendent of Schools, County Attorney, County Sheriff/Coroner, Clerk of District Court, and two County Justices of the Peace¹².

Main county offices are located in the City of Missoula, including the offices of the elected officials as well as Missoula City-County Health Department, WIC, Office of Public

Assistance, and Public Works among others¹². There is also an extension office of the county offices in Seeley Lake to serve residents in the northern region of the county¹²

Recreation

Multiple forms of recreation are available to Missoula County residents. With vast wilderness and public access to recreational waters, the opportunities for outdoor enthusiasts are numerous. Some of the most popular recreational activities are hiking, fishing, hunting, camping, skiing, boating, biking, and snowmobiling³.

The City of Missoula has over 400 acres of maintained city parkland, 20,000 trees, 22 miles of trails, and 3,300 acres of conservation lands¹³. Seeley Swan Valley Chain of Lakes is located in the northern end of the valley and lies between the Bob Marshall Wilderness and the Mission Mountain Wilderness, providing a gateway to outdoor recreational activities⁴.

Senior Citizens Centers are located both in the City of Missoula and the Town of Seeley Lake. Communities throughout the county also house a variety of community centers where residents can congregate.

In addition, Missoula County is also home multiple sports programs including a minor league baseball team (Missoula Osprey), hockey team (Missoula Maulers), rocky mountain football team (Missoula Phoenix), and many other sports activities³. Missoula County Public Schools¹⁹ and the University of Montana also offer numerous sports and athletic opportunities to the students²⁰.

Missoula Parks and Recreation, US Forest Service, Fish Wildlife and Parks, Missoula Conservation District and many other public and non-profit organizations work to preserve and maintain open lands and recreational opportunities for Missoula County residents.

Health Profile

Morbidity and Mortality

In Missoula County, the median age at death for Caucasians is 79 while the median age at death for American Indians is 55⁵. The top three leading causes of death are Cancer, Heart Disease, and Chronic Lower Respiratory Disease (CLRD)⁵. The incidence rate for cancer in Missoula County is 437.2/100,000 population⁵. This is slightly lower than the incidence rate for cancer in the state of Montana, which is 455.5/100,000⁵. The heart disease death rate is 139.4/100,000 population, with the age adjusted heart disease rate at 155.1/100,000 population⁵.

Missoula County had 7,469 persons in 2009 that died a premature death. Premature death is defined by County Health Rankings as “death that occurs before a person reaches an expected age.”⁸ Many of these deaths are thought to be preventable⁸.

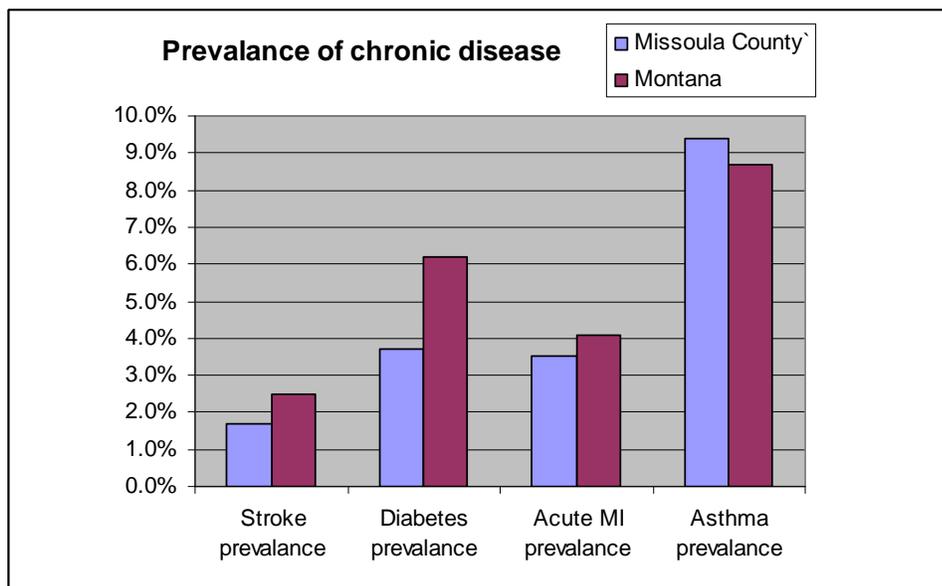
Chronic Disease

Chronic disease such as diabetes, asthma, and heart disease continue to be a burden throughout the United States²².

According to data collected from 2005-2008 by the Center for Disease Control and Prevention (CDC) Behavioral Risk Factor Surveillance System (BRFSS), 6.2% of Montanan’s and 3.7% of Missoula County residents had ever been diagnosed with diabetes²¹.

Approximately 9% of adults in Missoula County report having been diagnosed with asthma²¹. According to the 2009 BRFSS, the lifetime prevalence of asthma in children under 18 years of age is 9.1% in Missoula County. In addition, in Missoula County, there are approximately 16 asthma related hospitalizations per year in children under age 18.

In Missoula County, the hospitalization rate for stroke based on data collected from 2000-2008 was 173/100,000 population²¹. The hospitalization rate for acute myocardial infarction based on data for the same time period was 137/100,000 population²¹.



Infectious Disease

The reduction in incidence of infectious disease is the most significant public health achievement of the past 100 years²³. Much of this progress is a result of improvements in basic hygiene, public education about disease transmission, food production and handling, and water treatment²³. The development and use of antimicrobial drugs have reduced illness and death from a number of infectious diseases²³. Another significant factor is the development and use of vaccines. Notwithstanding the progress made, infectious diseases remain important causes of illness and death in the US, with many new emerging diseases posing new threats, as well as the new concern of biological weapons²³.

The following tables summarize reportable diseases in Missoula County from 2002 through 2010.

Non- Sexually Transmitted Disease									
	2002	2003	2004	2005	2006	2007	2008	2010	
Campylobacter	21	8	16	14	13	20	23	25	
Pertussis	1	0	18	8	12	2	10	20	
Rocky Mountain Spotted	0	13	1	0	0	0	NA	0	
Salmonella	10	0	1	0	10	12	9	13	
Shigella	0	0	0	0	0	3	0	0	
Tuberculosis	0	2	0	0	1	0	NA	0	
Sexually Transmitted Disease									
	2002	2003	2004	2005	2006	2007	2008	2009	2010
HIV/AIDS	1	0	1	25	NA	1	6	31	0
Chlamydia	218	203	247	246	248	280	281	429	388
Gonorrhea	9	6	8	11	13	13	6	10	16
Syphilis	0	0	3	0	NA	3	2	2	0

* Due to the option for anonymous testing for HIV/AIDS, these numbers may be a reflection of under-reporting.

Hepatitis – acute and chronic combined	2006	2007	2008	2009	2010
Hepatitis A	2	1	5	0	1
Hepatitis B	12	6	22	23	18
Hepatitis C	51	19	71	99	85

*Missoula City-County Health Department, Infectious Disease

Behavioral Risk Factors

Behavioral factors can play a key role in the health of a community or population. Many behavioral and/or lifestyle factors can be changed to better improve health and prevent injury.

In Missoula County, preventative services and screenings are generally well utilized. Ninety-two percent of Missoula County residents report always or nearly always wearing a seatbelt while traveling by automobile²¹. Just over 77% of adults over age 65 report receiving an influenza vaccination in the past 12 months and approximately 70% of adults over age 65 have been vaccinated against pneumococcal pneumonia²¹. Nearly 17% of adults over the age of 18 report condom use as their primary form of contraception²¹. Eighty-six percent of women age 18 and over report receiving a Pap test within the past 3 years and 76% of women age 40 and over

report receiving a mammogram in the past 2 years²¹. Just over 58% of the population over age 50 have been screened for colon cancer by having a sigmoidoscopy or a colonoscopy²¹.

Nearly 38% of adults in Missoula County are overweight and 17% are considered obese²¹. When questioned, 79% of adults report inadequate intake of fruits and vegetables²¹ and 93% of UM students report inadequate intake of fruit and vegetables⁵⁰. Inadequate intake of fruits and vegetables is defined by the CDC as consuming fewer than five servings of fruits and vegetables per day. Among UM students approximately 57% report eating 1-2 servings of fruit and vegetables per day and 33% report eating 3-4 servings⁵⁰. Approximately 17% of adults over age 20 in Missoula County report no leisure time activity²¹.

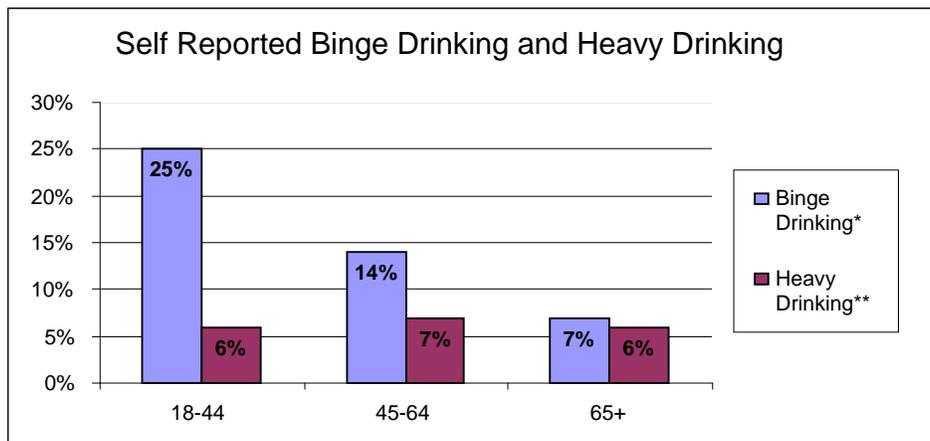
Of Missoula County residents age 18 and over, 19% report that they are “currently smoking tobacco”²¹. Approximately 15% of Missoula County mothers self-reported smoking tobacco during pregnancy⁵.

Research shows that the younger children and adolescents are when they start drinking alcohol, the more likely they will be to engage in behaviors that harm themselves and others. According to Missoula Underage Substance Abuse Prevention Team (MUSAP), 13% of Missoula kids have consumed alcohol by the age of 11. Missoula teens report that in the past month 94% of their peers drank alcohol, however only 41% report that they actually did drink alcohol.

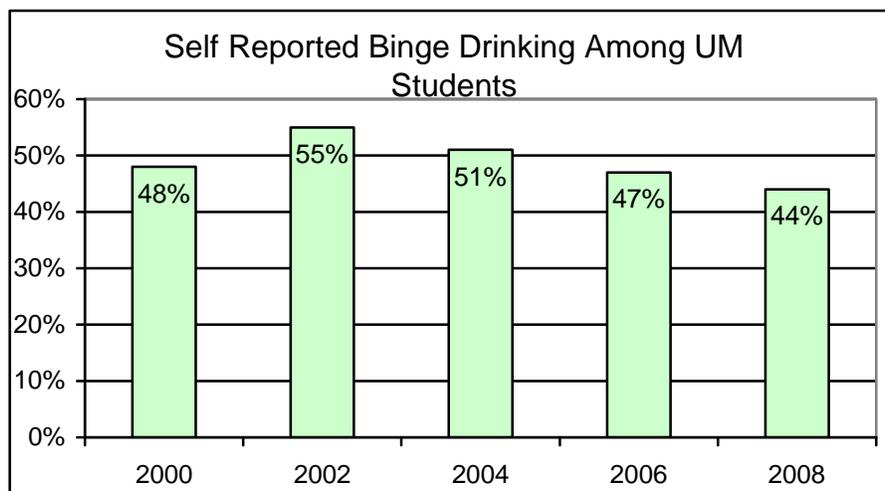
In Missoula County, Minor In Possession (MIP) is a citation given for unlawful possession of alcohol for those persons under the legal drinking age of 21. In 2010 there were 914 MIP’s in Missoula County and in 2008, there were 836 MIP’s.

Binge drinking is defined as adults who report least one instance of having 5 or more alcoholic beverages on one occasion for men or 4 or more alcoholic beverages for women in the

past 30 days²¹. Heavy drinking is defined as adults who reported having more than two drinks per day for men and more than one drink per day for women during the past 30 days²¹. Binge drinking has been reported by nearly 18% of the population age 18 and over and 6% report heavy drinking²¹.



In 2008, according to the National College Health Assessment for the University of Montana, approximately 44% of students reported consumption of five or more drinks at one sitting with in the two weeks prior to being surveyed⁵⁰. This represents a decline in binge drinking in University of Montana students over the past eight years⁵⁰.

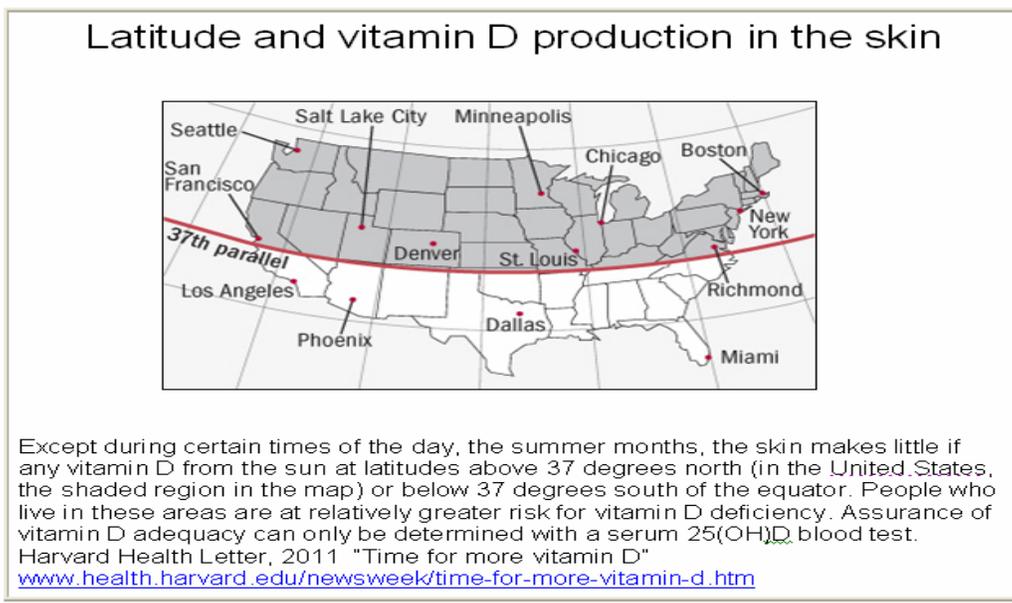


In addition to the decline in binge drinking, University of Montana students report increased implementation of protective factors while drinking such as eating prior to or while drinking, having a sober driver, and keeping track of how many drinks are consumed in a period of time⁵⁰. Ninety-seven percent of students report usually or always implementing a protective factor while drinking in 2008⁵⁰.

Vitamin D

Adequate levels of vitamin D help protect bone health, our immune system and helps prevent certain chronic diseases including some cancers, diabetes, and multiple auto-immune conditions³⁴. Vitamin D helps ensure that the body absorbs and retains calcium and phosphorus, both critical for building bone³⁴. Laboratory studies show that vitamin D can reduce cancer cell growth, can increase muscle strength and reduce falls in older people, and plays a critical role in controlling infections³⁴.

Vitamin D deficiency is a world-wide epidemic, with recent estimates indicating that the vast majority of the population is at risk. Missoula residents are at risk for vitamin D inadequacy in part, because of our latitude or distance from the equator³⁴. Missoula's latitude is 47, reducing our opportunity to obtain vitamin D from sun exposure³⁴. If it is low, a therapeutic supplemental dose of vitamin D can return it to normal followed by maintenance dose once tests show that the low level has been corrected³⁴.



Socioeconomic factors

Socioeconomic factors contribute to substantially worse health outcomes. Missoula County is home to several groups of high risk and vulnerable populations²⁴. Included in this category are members of the community that are homeless, residents living in poverty, families who lack adequate emotional and/or social support.

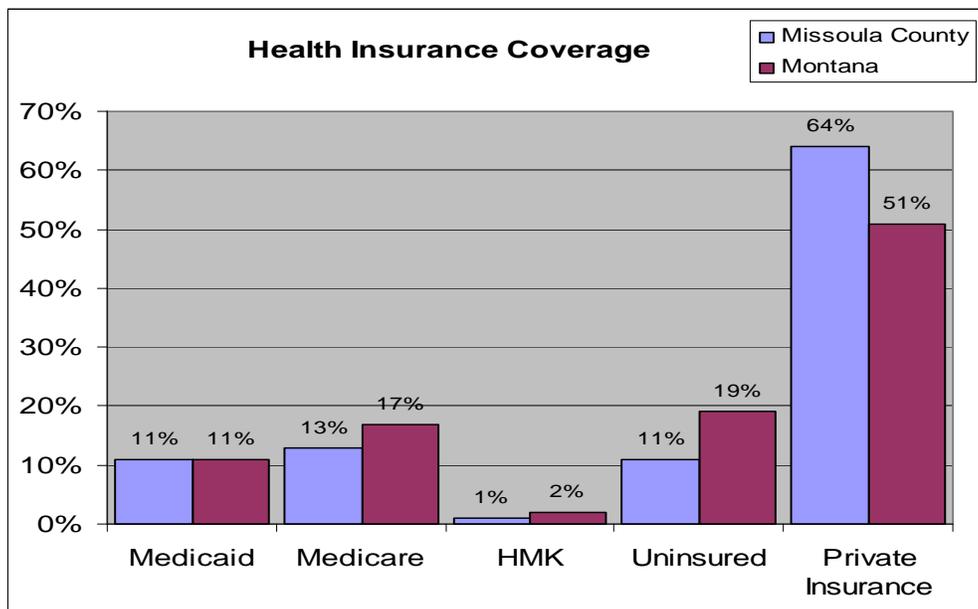
A homeless person is defined by the U.S. Department of Housing and Urban Development as “an individual who lacks a fixed, regular, and adequate nighttime residence; and an individual who has a primary nighttime residence that is a supervised publicly or privately operated shelter designed to provide temporary living accommodations (including welfare hotels, congregate shelters, and transitional housing for the mentally ill); an institution that provides a temporary residence for individuals intended to be institutionalized; or a public or private place not designed for, or ordinarily used as, a regular sleeping accommodation for human beings²⁵. In Missoula County in 2010, it was estimated that there were over 600 homeless persons according

to federal definitions of homeless²⁶. This is an increase of roughly 21% over the previous year's survey count²⁶.

Almost every positive personal and community outcome is negatively affected by poverty, including short- and long-term health²⁴. Of particular concern are children living in poverty. Poverty is, to a great extent, a community problem of resources, rather than just an individual problem²³. The status of resources like affordable housing, transportation, education and training, jobs providing a living wage, health insurance, and available child care contribute an area's poverty rate²⁴. According to the 2009 County Health Profile, approximately 15% of the population in Missoula County is living at or below the federal poverty level and 19% of children under age 18 are living in poverty⁵.

Approximately 30% of Missoula County children are living in single parent households⁸. According to County Health Rankings, when questioned approximately 16% of Missoula County respondents report not receiving adequate social or emotional support⁸. This is slightly lower than the state of Montana in which 18% of respondents report not receiving adequate social or emotional support⁸.

Lack of health insurance can present a significant barrier to individuals' and families' ability to access health care services. In addition to lower quality care, lack of health insurance can lead to an economic burden for the individual, family, and community. Twenty-five percent of the population of Missoula County was beneficiaries of a government payer for healthcare costs such as Medicaid, Medicare, or Healthy Montana Kids⁵. Approximately 11% of the county population is without health insurance²¹.



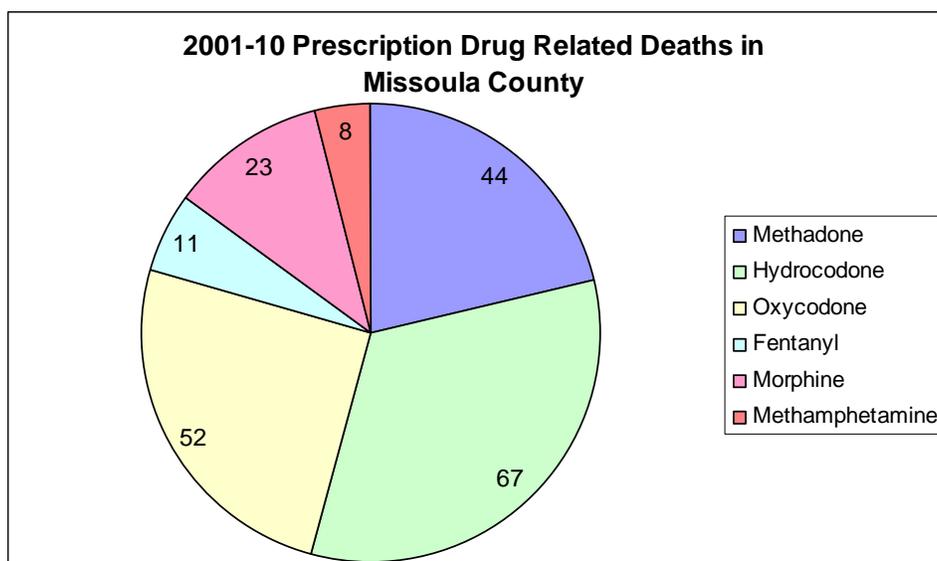
Mental Health

There are many different types of mental health disorders. Mental health disorders can include addiction, depression, anxiety, obsessive compulsive disorder, and many more. It is estimated that 22% of Americans suffer from a mental health disorder²⁷.

Many mental health disorders can be managed with a combination of lifestyle changes and medication²⁴. Adequate treatment options and support is vital to a community’s well being²⁴. Missoula County has an inpatient mental health facility as well as many outpatient mental health clinics⁵. Direct intake for emergency mental health crisis can be obtained through Saint Patrick Hospital Emergency Room and ongoing outpatient care can be provided through a multitude of private mental health practitioners. Western Montana Mental Health Center has an affiliate clinic in Missoula and is one of the largest private mental health providers in Montana. Missoula County also has a partial hospitalization treatment facility for adolescents with emotional, behavioral, or mental health disorders²⁸.

Mental and emotional health are rising concerns at University of Montana⁴⁹. In 2010, nearly a quarter (22%) of students reported suffering from depression in the past year with 33% of the students taking medication to treat their depression⁵⁰. According to student self-reporting, 22% surveyed had ever been diagnosed with depression and 30% had been diagnosed within the last school year⁵⁰.

Of significant concern in Missoula County, the number of deaths related to prescription drug misuse has risen over the past several years. The six top prescription drugs that have been related with abuse and subsequent death include Methadone, Hydrocodone, Oxycodone, Fentanyl, Morphine, and Methamphetamine.

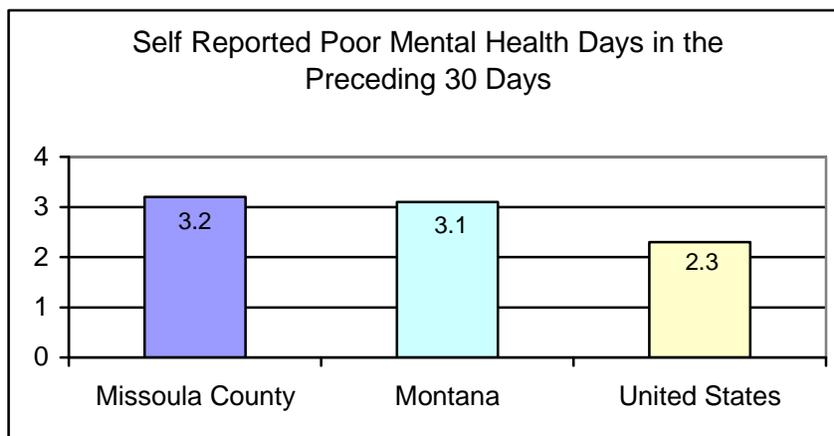


Montana's drug overdose death rate of 14.1 per 100,000 people in 2008 is higher than the national rate of 11.8 (2007)⁵³. Nationally, drug overdose death rates in the US have more than tripled since 1990 and 75% of these are attributable to prescription drugs.⁵²

Missoula's Prescription Drug Abuse Prevention Committee works to lower the risk of death associated with prescription drugs through various community programs such as the coordinated Prescription Drug Disposal Days. Through this program, citizens can safely dispose

of unwanted or expired prescription drugs. This helps to reduce the risk of prescription drug abuse by limiting access to prescription medications that are no longer in use by the person for whom they were prescribed.

According to the BRFSS, Missoula County residents reported an average of 3.2 poor mental health days in the preceding 30 days⁸. Montana's average was 3.1, while national benchmark is set at 2.3 days / 30 days⁸.



Maternal Child Health

Fertility rate, prenatal care, and infant mortality rates can be important indicators for the health of a community. Babies need a healthy start in life with adequate care, nutrition, and health care. These factors can contribute to lifelong health and success.

In 2009, Missoula County's fertility rate was estimated to be 24.4/1,000 females aged 15-19 and 52.7/1,000 females aged 15-44⁵. Approximately 69% of pregnant women received prenatal care in the first trimester and 79% received adequate care during pregnancy⁵. There were 15.1 live births per 1,000 population in 2009⁵. The infant mortality rate was 3.8⁵. 7% of babies are born at 5 pounds and 8 ounces or less and 1.3% of babies were born at 3 pounds and 4 ounces or less⁸. Between 2004 and 2008, the rate of births to adolescents between the ages of 15

and 17 was 9.3/1,000²¹. During the same time period, 10.5% of all births were premature, or less than 37 weeks gestation²¹.

The American Academy of Pediatrics recommends that babies be breastfed exclusively, with no baby formula or added foods or beverages, for the first six months of life²⁹. Breast milk is the ideal food for newborns and young babies²⁹. It's inexpensive, convenient, and it's uniquely tailored to meet all of a baby's nutritional needs for the first six months of life according to William Dietz, MD, director of CDC's division of nutrition and physical activity²². Missoula County has many programs and organizations available to assist women and infants to reach their breastfeeding goals. According to Missoula County WIC program, from July 2009-September 2009, approximately 85% of new moms who are enrolled in WIC initiated breastfeeding, 35% of those continued to breastfeed exclusively at 3 months, 17% continued to breastfeed exclusively at 6 months, and 23% were breastfeeding either exclusively or in combination with baby formula at 12 months³⁰.

Vaccines can protect from outbreaks of disease and save lives³¹. Before widespread immunizations in the United States, infectious diseases killed and disabled thousands of children³¹. A child born in the United States today can be protected from 17 diseases before they reach adulthood³¹.

Although Montana law requires full vaccination before kindergarten, many children are left at risk for a variety of reasons: lack of health care coverage, poverty, religious belief, lack of education of parents, or fear of unproven vaccine side effects²². Immunization levels at age two reflect the status of the community's commitment to provide accessible preventive health care to young children and families³¹. In 2008, according to the National Immunization Survey,

Montana was last out of all 50 states with only 59% of children fully immunized between 19 and 36 months²².

Child Abuse, Neglect, and Foster Care

Child and Family Services Division (CFSD) is part of the Department of Public Health and Human Services. CFSD is divided into five regions. The Region V, Western Montana, office is located in Missoula and serves Flathead, Lake, Lincoln, Mineral, Missoula, Ravalli, and Sanders counties⁵¹.

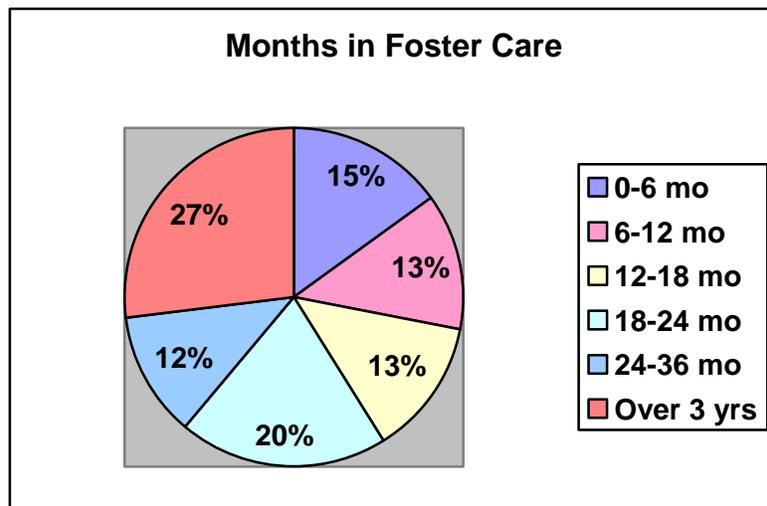
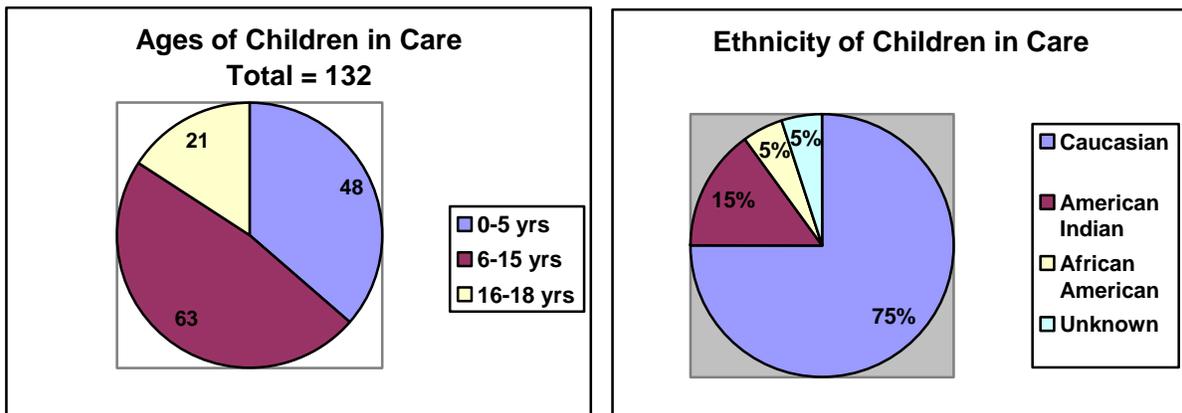
The CFSD Mission Statement and Statement of Purpose is to keep children safe and families strong by protecting children who have been or are at substantial risk of abuse, neglect or abandonment⁵¹. They strive to assure that all children have a family who will protect them from harm and recognize the protective capacities of families and incorporate them in assessments, decision making and actions with the goal of improving safety, permanency and well being for children⁵¹. They encourage communities to strengthen their prevention efforts and to share responsibility for the safety of its children and families⁵¹.

The core values of CFSD are that children have the right to grow and develop in safe and permanent family environments, the safety of children is dependent on the actions/omissions of adults, when families and communities collaborate, the possibility for success is increased, and the safety of children in our care is dependent upon multi-level stewardship of human and financial resources⁵¹.

The division provides state and federally mandated protective services to children who are abused, neglected, or abandoned⁵¹. This includes receiving and investigating reports of child abuse and neglect, working to prevent domestic violence, helping families to stay together or reunite, and finding placements in foster or adoptive homes⁵¹.

As of April 1st, 2011, Missoula County had a total of 132 children in out-of-home placements³⁴. Between the years 2008 and 2010, the average number of children removed from the home per year was 48³⁴. According to national figures, more than 60% of children in foster care have chronic medical conditions and 25% of foster children have three or more chronic health problems. In addition, dental problems affect one-third to one-half of the children in foster care³⁴. On average, children in foster care experience 3 placements per year³⁴.

Additional demographic data for Missoula County children in out-of-home placements as of April 1st, 2011 include:



These critically vulnerable children often have complex, intense, and urgent health care needs³⁴. The Missoula office of CFSD works closely with Missoula City-County Health Department's Foster Child Health Program to assure coordination of health services that improve both short- and long-term health³⁴. Through Missoula City-County Health Department, the Foster Child Health Program provides Public Health Nursing Home Visitation services³⁴. These services help to assure a medical home and dental home with and appropriate care based on the assessment of the child's primary care provider and dentist, a comprehensive plan of care for each foster child in the program that addresses physical, social, emotional, developmental, and mental health needs, personal health record that will provide accurate identification of concerns and guidance in planning comprehensive health care, and comprehensive and relevant health education for foster parents related to caring for their foster child³⁴.

Environment

Having a healthy environment is an important component to any community²³. Healthy built environments include complete streets, sidewalks, and bikeways, recreational access to safe parks and green spaces, established trails and connectedness, well-designed population density, and an appropriate mix of housing and affordability²⁴. It is also important that residents have limited travel (0.25 miles) to destinations for services and recreation. Healthy built environments encourage access to mass transit, green buildings and design, and reduced vehicle miles traveled²⁴. These factors all contribute to healthier lifestyles, better quality of life, and longer life²⁴.

Missoula County residents are committed to healthy environments including clean air, water, and food. Many Missoula programs and organizations contribute to planning, design, and implementation of healthier environments²³.

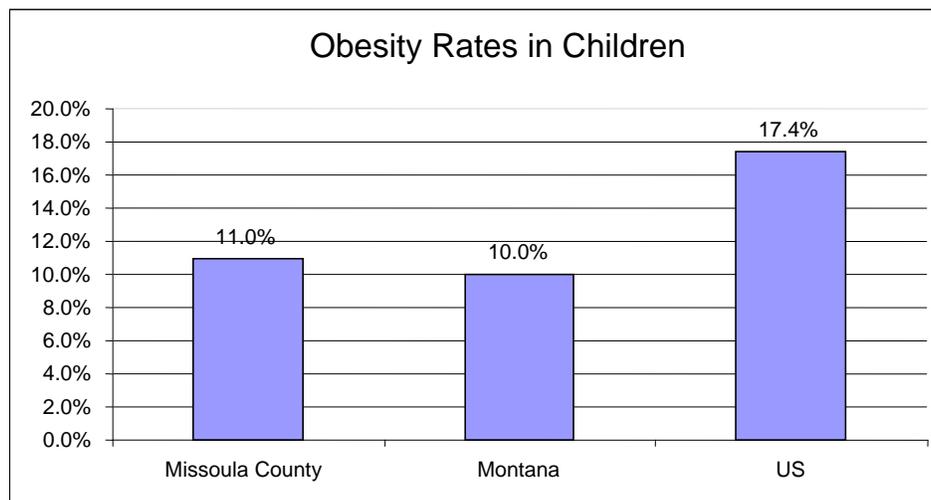
Leading Health Indicators

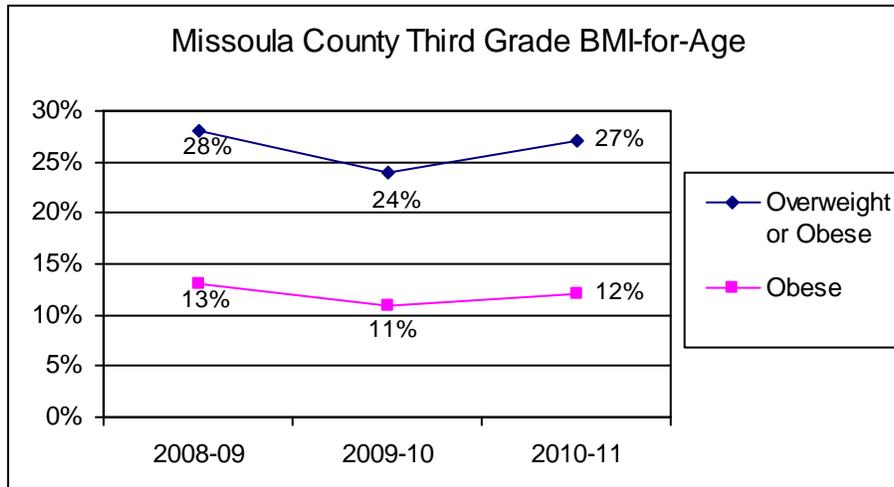
Nutrition and Weight Status

Obesity is a problem throughout the United States and is the second leading cause of preventable death in the US²². For adults 20 years and older, Body Mass Index (BMI) is a number calculated from a person's height and weight (weight [kg] / height [m²]) and is reliable indicator of how much body fat a person has²². Overweight in adults is defined as having a BMI between 25.0 and 29.9²². Obesity in adults is having a BMI 30.0 or higher²². In children and adolescents, BMI is calculated based on age, sex, height, and weight²².

Individuals who are at a healthy weight are less likely to develop chronic disease risk factors, chronic diseases, and experience complications during pregnancy. Individuals who maintain a healthy weight are also more likely to live longer²⁴.

Based upon data collected and evaluated by the MCCHD, 27% of Missoula County 3rd graders are either overweight (14%) or obese (13%)³². According to Healthy People 2020, in the United States 17.4% of children aged 6 to 11 were obese²⁴. Healthy People 2020's national target is to reduce this proportion to 15.7% obese²⁴.



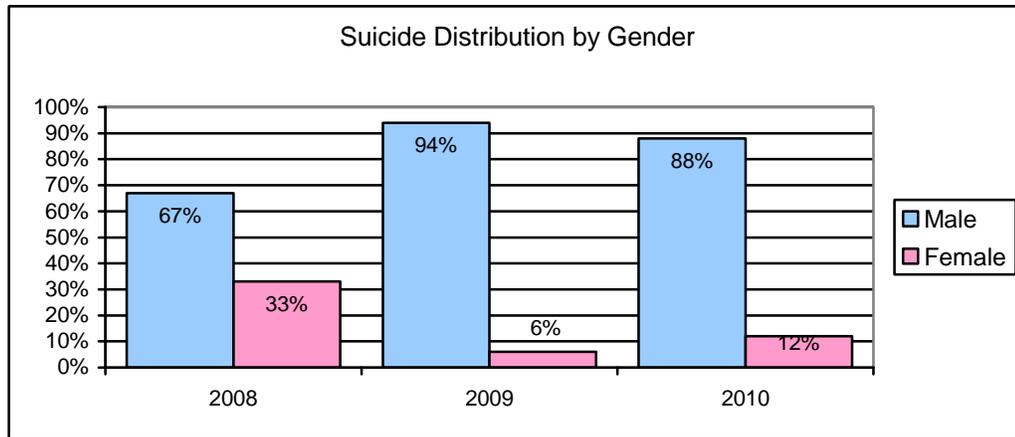


Preventable Injury

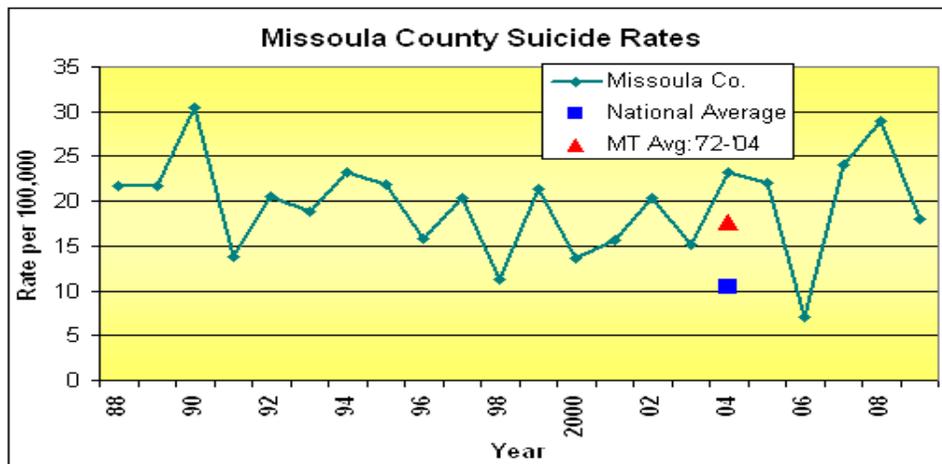
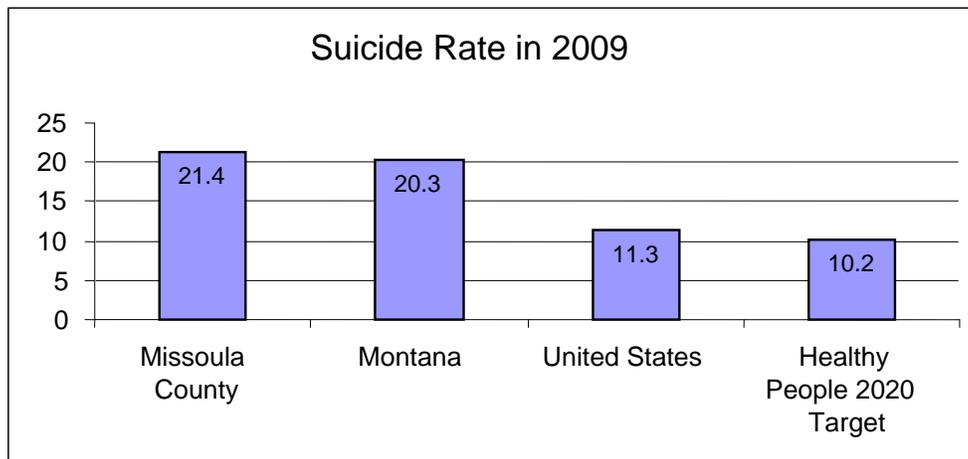
Suicide

Suicide is one of the leading causes of death for adults: Nationally, 11 of every 100,000 Americans of all ages took their own lives in 2007²³. More men than women died by suicide, and firearms were the most common method used by both²³. Nationally, suicide is the third leading cause of death among young people 15 to 24 years of age, taking more than 12 of every 100,000 American young people³³.

These numbers do not represent all the suicide attempts, nor deaths not reported as suicide, e.g., motor vehicle crashes caused by suicidal behavior; family members withholding information for insurance reasons; or fear of the stigma attached to suicide, etc²³. Nationwide, there are 25 suicide attempts for every completed suicide; and only a small percentage of suicide-related injuries are treated by medical personnel and subsequently reported as attempted suicide²³. From 2008 through 2010 in Missoula County, the suicide rate among men was significantly higher than women. The ages ranged from 15 to 98, with an average age of 46 in 2008, 46 in 2009, and 39 in 2010.



In Missoula County in 2009, the suicide rate was 21.4/100,000 population²¹. This is nearly twice the national average of 11.3/100,000²¹. Healthy People 2020's target is to reduce this rate to 10.2/100,000 population²⁴.

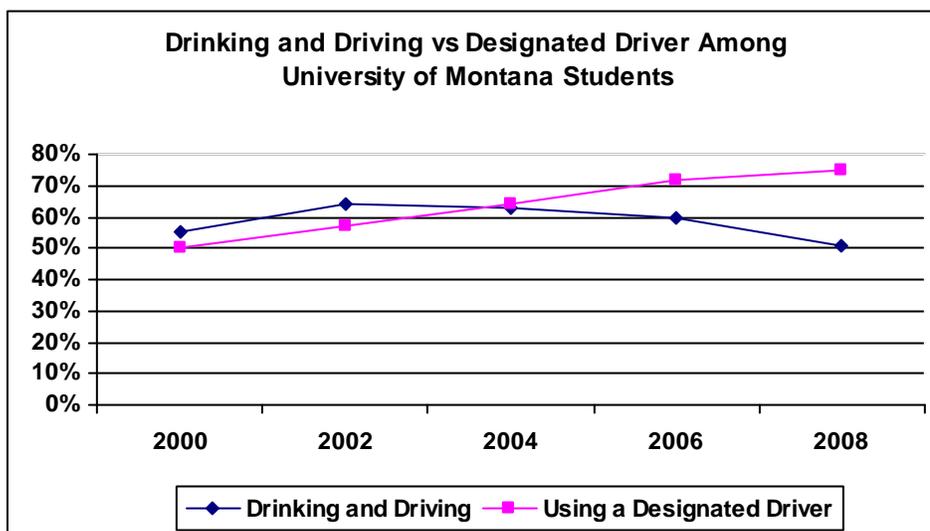


Driving Under the Influence of Alcohol/Drugs (DUI)

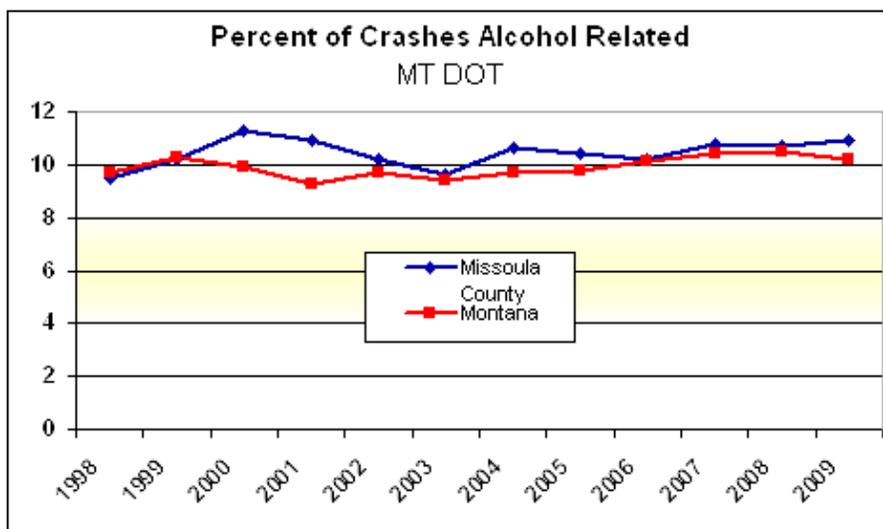
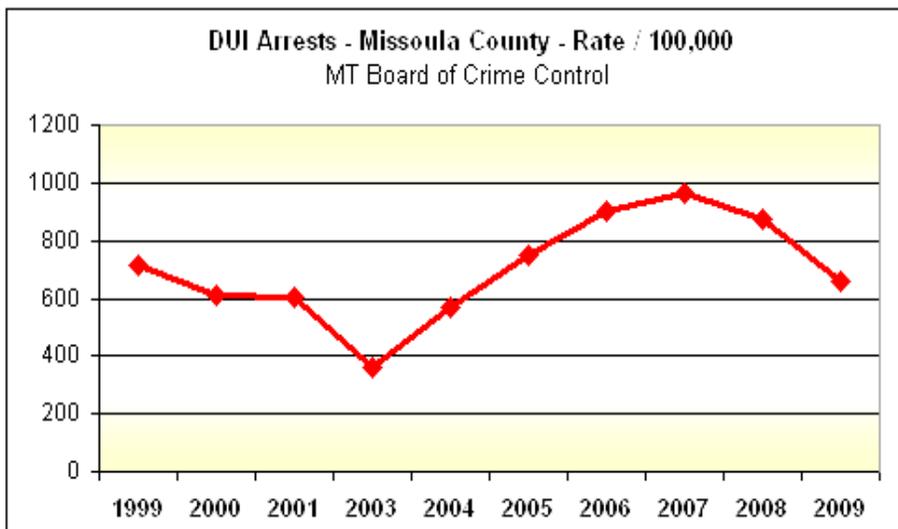
Missoula County ranks number one in the state for severe injury traffic crashes (involving either fatalities or incapacitating injuries), and second in the state for alcohol-involved crashes, and pedestrian, bike, and motorcycle crashes. Primary contributing factors are impaired driving, inattentive driving, speed to fast for conditions, failure to yield the right of way, and non-use of seat belts and child safety seats. Approximately 10% of motor vehicle crashes involve alcohol⁵.

The Missoula County DUI Task Force, under the umbrella of the Missoula City-County Health Department, is an important mechanism for decreasing the alcohol-related injury and fatality rates in Missoula County. Initial funding comes from driver license reinstatement fees. The Task Force engages in a variety of activities such as: responsible alcohol sales & service training to prevent over-service and sales to minors, alcohol compliance checks, overtime traffic patrols, and safe ride programs.

Self reported drinking and driving has declined in recent years among University of Montana students, while the reported use of a designated sober driver has steadily increased.



Healthy People 2020’s proposed goal is to decrease the rate of alcohol-impaired driving (0.08+ blood alcohol content [BAC]) fatalities. Nationally, in 2008, 0.40 deaths per 100 million vehicle miles traveled involved a driver or motorcycle rider with a BAC of 0.08 or greater²⁴. In Montana in 2008, 0.84 deaths per 100 million vehicle miles traveled involved a driver or motorcycle rider with a BAC of 0.08 or greater⁴³. In Missoula County, in 2008, there were 10 traffic fatalities in alcohol-impaired-driving crashes. This is a rate of 9.32 traffic fatalities in alcohol-impaired-driving crashes per 100,000 population.



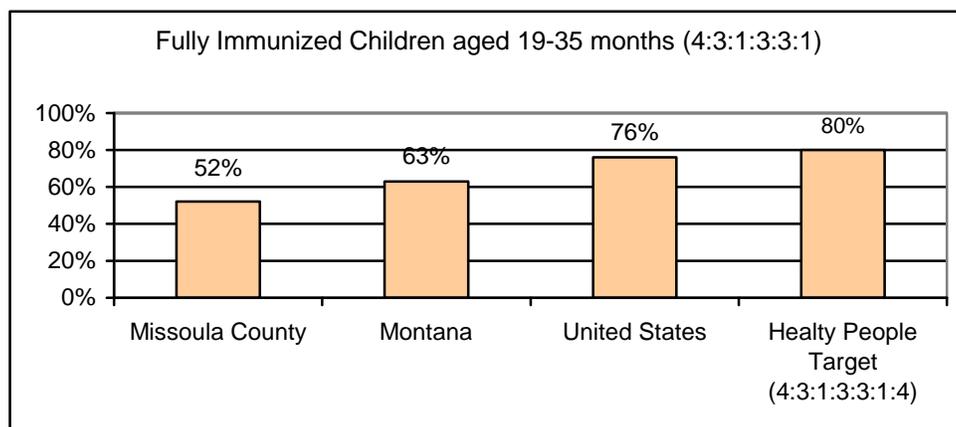
Maternal Child Health

Immunizations

Immunizations are an important way to trigger the immune system in order to prevent serious and sometimes life-threatening infectious disease²³. Children need 80% of their vaccinations in the first two years of life, which requires multiple doses of vaccine and five or more visits to a health care provider³¹.

Full immunization by 35 months of age is described by the Centers for Disease Control and Prevention as having received 4 DTaP, 3 Polio, 1 MMR, 3 Hib, 3 Hepatitis B, 1 Varicella, and 4 doses of PCV²². This is also known as the 4:3:1:3:3:1:4 series²². Until recent years, the calculations of fully immunized children did not include the PCV vaccine. Therefore, the following percentages are based on the 4:3:1:3:3:1 series.

Based on DPHHS's yearly clinic reviews in 2008, 52% of Missoula County children were fully immunized by 35 months of age³⁴. Sixty-three percent of Montana children aged 19-35 months were considered fully immunized²². According to the CDC's National Immunization Survey, 70% of children nationwide aged 19-35 months are fully immunized²⁴. The Healthy People 2020 target for this indicator is 80% of 19-35 month olds fully immunized with the 4:3:1:3:3:1:4 series²⁴.

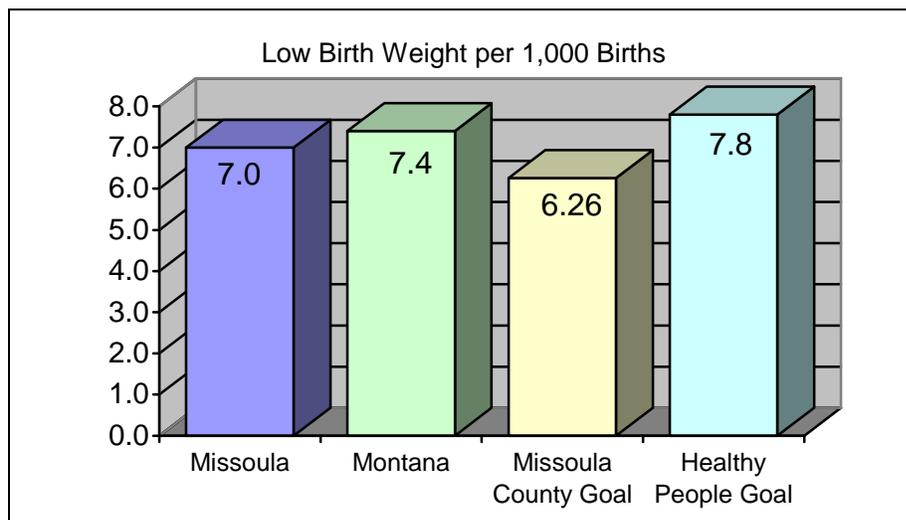


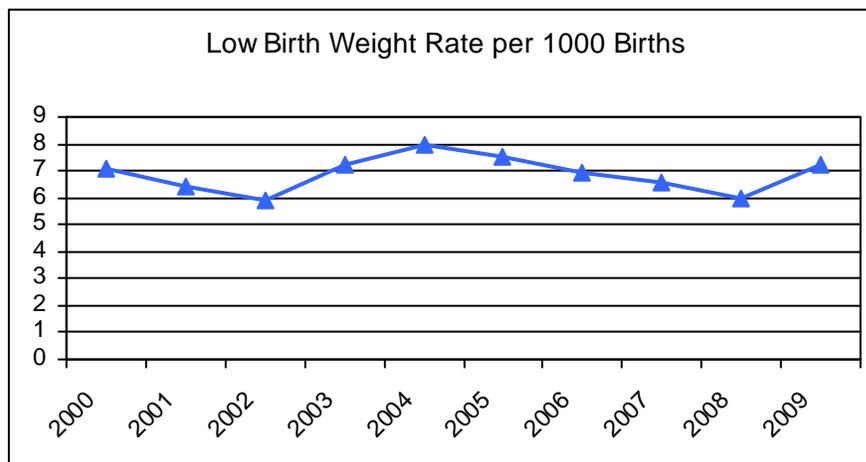
There are numerous reasons cited for low immunization rates. Barriers to full immunization include perceived cost of the immunizations, parents' fear of vaccine-related diseases and disabilities, lack of comprehensive immunization records for each child, and reluctance of some physicians to allow parents to alter vaccine schedules²³.

Birth Weight

Low birth weight infants (less than 5 lbs 8 oz) include those born too early, as well as those suffering from retarded intrauterine growth²³. The long term cost to society for medical and social services for them is frequently high²³. They begin their lives in neonatal intensive care units, and are at much higher risk for a host of developmental and physical problems through out their lives²³. Birth weight also reflects socioeconomic status, race, maternal age, education, access to health care, and tobacco, alcohol, and drug use of the mother²³.

In Missoula County in 2009 there were 7.0 babies born with low birth weight per 1,000 births⁵. Montana is currently at 7.4/1,000⁵. Healthy People 2020's proposed goal is 7.8/1,000 births²⁴. Missoula County would like to reduce this rate to 6.26 per 1,000 births.





Disparities in Health

Over the past three decades, goals included in Healthy People have been to reduce or eliminate disparities experienced by Americans²⁴. Healthy People 2020 define a *health disparity* as “a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage. Health disparities adversely affect groups of people who have systematically experienced greater obstacles to health based on their racial or ethnic group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion.”²⁴

Native Americans and Alaska Natives frequently contend with barriers to receiving quality medical care⁴⁴. These barriers include cultural barriers, geographic isolation, and low income⁴⁴. The median age at death for Native Americans and Alaska Natives is significantly lower than that of the general population. Some of the leading causes of death among Native Americans and Alaska Natives include heart disease, cancer, unintentional injury, and diabetes⁴⁴.

One of Missoula County’s primary resources for addressing problems and obstacles related to health disparity is Partnership Health Center (PHC)³⁵. PHC is a non-profit health clinic

that provides health care, dental services, case management services, pharmacy, and referral services to members of the community who are uninsured or underinsured³⁵.

Another important resource to address health disparities in Missoula County is the Missoula Indian Center. The Missoula Indian Center is an Urban Indian Health Program that offers outreach and referral services to Native Americans living off of the reservation. Native Americans can receive medical and dental referral services, transportation to an Indian Health Services clinic, mental health counseling and addiction services, diabetes counseling and education, HIV testing and education, and cultural support services.

Diabetes in Native American and Alaska Natives

Diabetes can be a devastating disease in many aspects, including physically, emotionally, and financially. Diabetes is a complex metabolic disorder that is characterized by high blood sugar levels⁴⁵. Type 1 diabetes is an autoimmune disease that is usually diagnosed in childhood that causes the body to destroy insulin-making cells in the pancreas, whereas Type 2 diabetes is marked by insulin resistance and is associated with obesity⁴⁵.

Diabetes can shorten a person's lifespan by an average of 15 years if left untreated and the average annual medical cost for a person with diabetes is \$13,243 compared with \$2,560 for a person without diabetes⁴⁶. Nationwide, 16.3% of Native Americans and Alaska Native adults are burdened with this disease compared with 8.7% of non-Hispanic whites⁴⁶. There has been a 68% increase in the diagnosed cases of diabetes among American Indians and Alaska Natives between the years of 1994 to 2004⁴⁶. Approximately 95% of Native Americans and Alaska Natives with diabetes have Type 2 diabetes as opposed to Type 1⁴⁶.

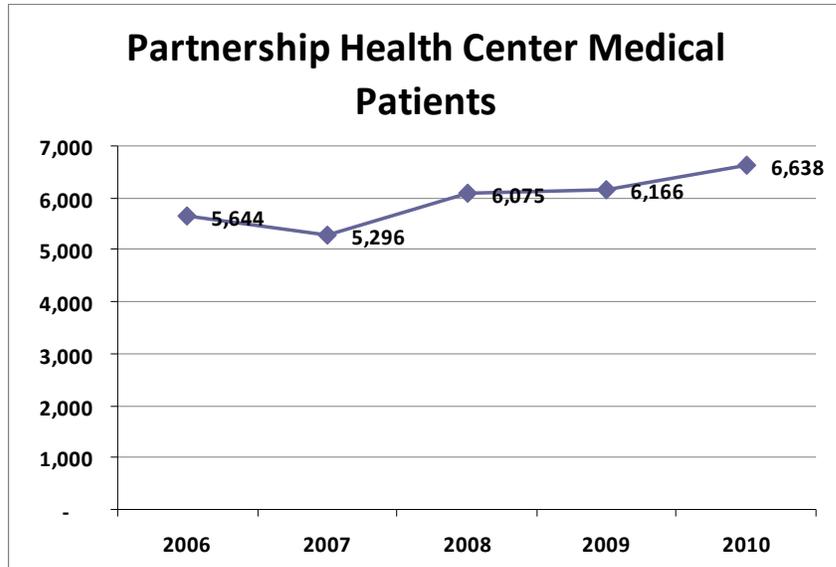
In Montana in 2006, approximately 6.4 percent of Montana adults reported having been diagnosed with diabetes⁴⁵. In 2005, 18.7% of Montana Native American adults had been

diagnosed with diabetes⁴⁵. Data is not currently available regarding the number of Native Americans and Alaska Native that have been diagnosed with diabetes in Missoula County.

Healthy People 2020's related goal is to reduce the annual number of new cases of diabetes diagnosed in a population²⁴. As reported 2006-2008, 8.0 new cases of diabetes per 1,000 population aged 18 to 84 had occurred in the past 12 months²⁴. The goal is to reduce this number to 7.2 new cases per 1,000 population aged 18 to 84²⁴. Missoula County's goal is to track and then reduce the number of Missoula County Native Americans and Alaska Natives diagnosed with diabetes²⁴.

Medical Services

Assessing the community's need for easier access to health care is particularly difficult. Partnership Health Center has been able to track this number indirectly, by tracking the number of patient's seen at the PHC clinic³⁶. The percentage of individuals accessing care at Partnership Health Center has increased by 31% from 2005 to 2009³⁶. Healthy People 2020's correlating goal is to reduce to proportion of individuals who are unable to obtain or delay obtaining necessary medical care, dental care, or prescription medications²⁴. Nationwide, 4.7% of the population was unable to obtain necessary medical care in 2007²⁴. Healthy People 2020's target is to reduce this proportion to 4.2%²⁴.

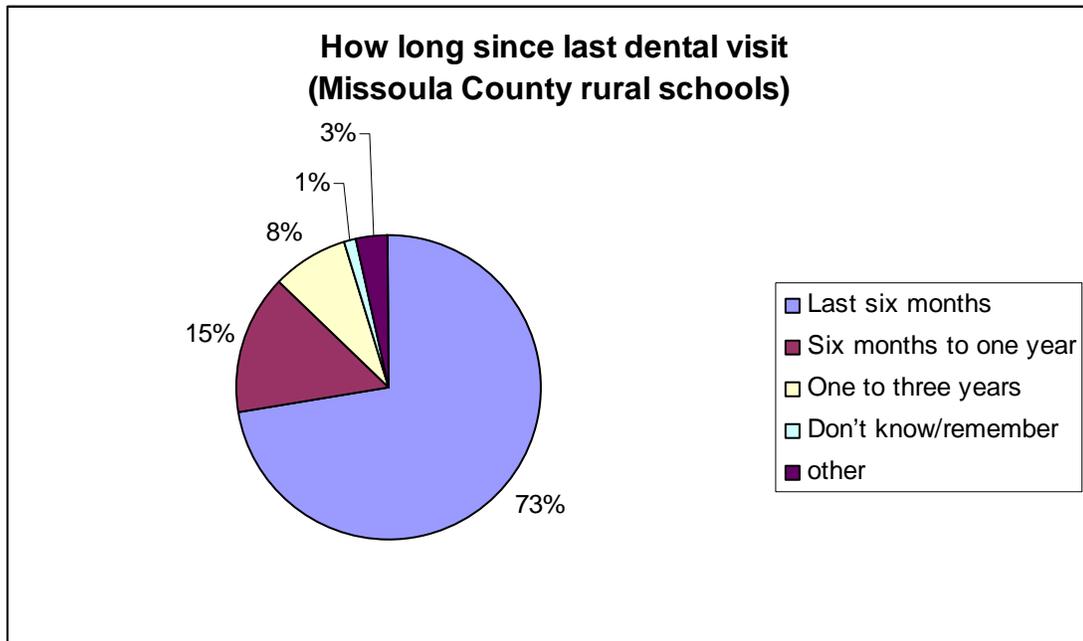


Dental Services

Dental disease rates are not tracked for Missoula County as a whole; however, we know that the oral health status and treatment needs of the Missoula County population are disturbing in their magnitude. According to the CDC's Behavioral Risk Factor Surveillance System, only 68% of Montanans visited a dentist in 2007. Montana received the lowest grade in the nation, and the only 'D,' for the overall status of oral health by Keep America Smiling-Oral Health in America National Grading Project 2003. According to Missoula Measures, 19% of residents in Missoula County lack health insurance and 56% lack dental insurance. There are many barriers to accessing oral health care for our target population. The most pressing barriers include a lack of access stemming from dental providers unwilling to accept Medicaid, and a lack of dental providers who do not require payment in full at the time of services.

The American Academy of Pediatric Dentistry recommends that children receive preventative dental care, including visual examination and cleaning, every six months. According to a recent survey of dental care in rural school children in Missoula County, only 72% of respondents report receiving dental care in the six months prior to the survey³².

Approximately 8% of respondents had not received any dental care in the past year³². Almost 9% of respondents stated that there had been occurrences in the past 12 months that the child had needed dental care but did not receive it³². The most frequently cited reasons for the lack of needed dental care were “No Insurance” (35.61%) and “Dentist did not take insurance/Medicaid” (9.97%)³².

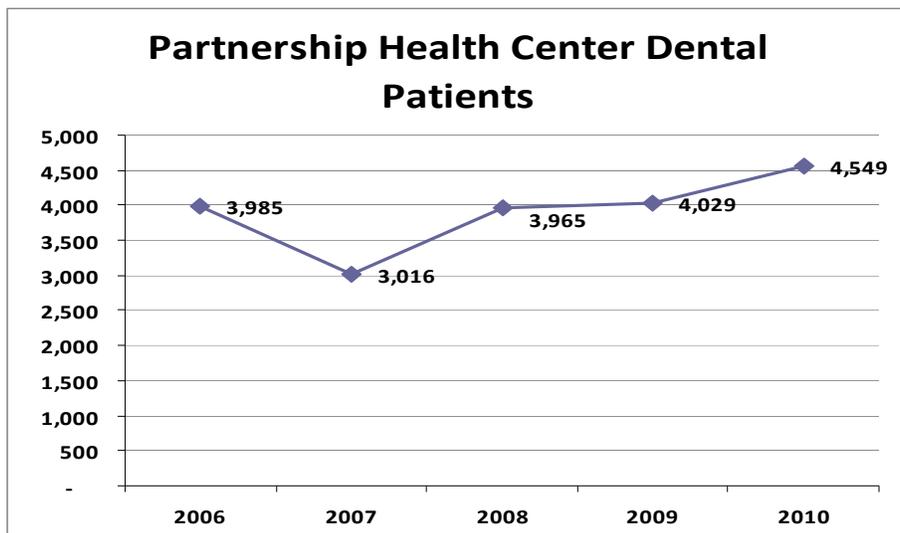


Overall data appears good. However, if we examine access to dental care in specific school districts in Missoula County’s rural areas, up to 50% of students in some school districts did not receive preventative care in the six months prior to the survey³². In the 12 months prior to the survey, as many as 37% of students in some areas did not receive any dental care³².

Partnership Health Center provides necessary dental care to low-income patients and continually monitors the number of patients served in order to focus on increasing dental access. In addition, Partnership Health Center, the Seeley Lake Medical Center, and the Missoula County Commissioners have been working to bring affordable dental care to the residents in the northern end of the valley. Partnership Health Center also has the “Miles for Healthy Smiles”

program, in which dentists set up mobile equipment at the rural schools in the county to provide free dental screening and referral services. Another resource for low-income families is Missoula’s annual “Give Kids a Smile Day” in which local dentists from the Montana Dental Society provide free dental services to children who do not have dental insurance.

Healthy People 2020’s corresponding indicator is to increase the proportion of patients who receive oral health services at Federally Qualified Health Centers each year. Nationally 17.5% of patients at Federally Qualified Health Centers received oral health services in 2007²⁴. Healthy People 2020’s goal is to increase this proportion by 90% to 33.3% of patients receiving oral health services each year. In Missoula County, Partnership Health Center is the only Federally Qualified Health Center. Since 2007, the number of patients seen for oral health services at Partnership Health Center has increased by nearly 34%.



Hospital Readmission Rates

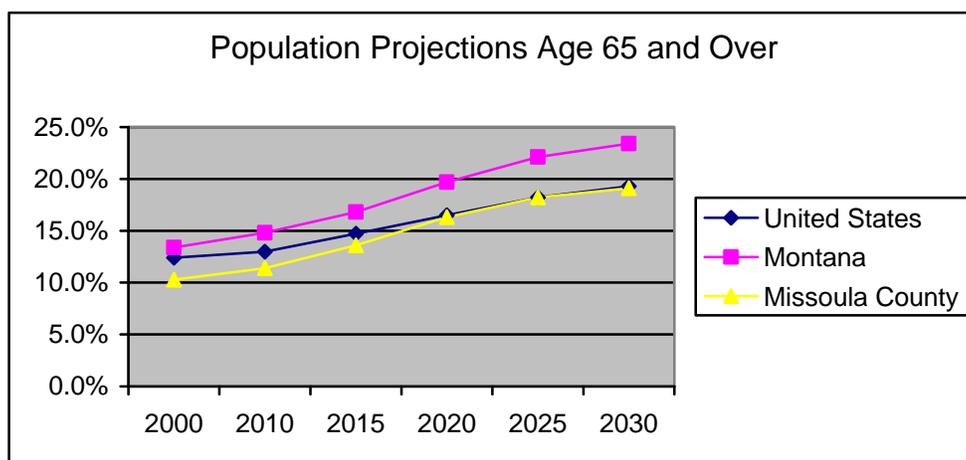
Providing quality health care is an important part of the overall health of a community. According to The Center for Medicare and Medicaid Services, hospital readmission rates can be a useful indicator of quality care³⁷. Missoula County has two hospitals that provide inpatient

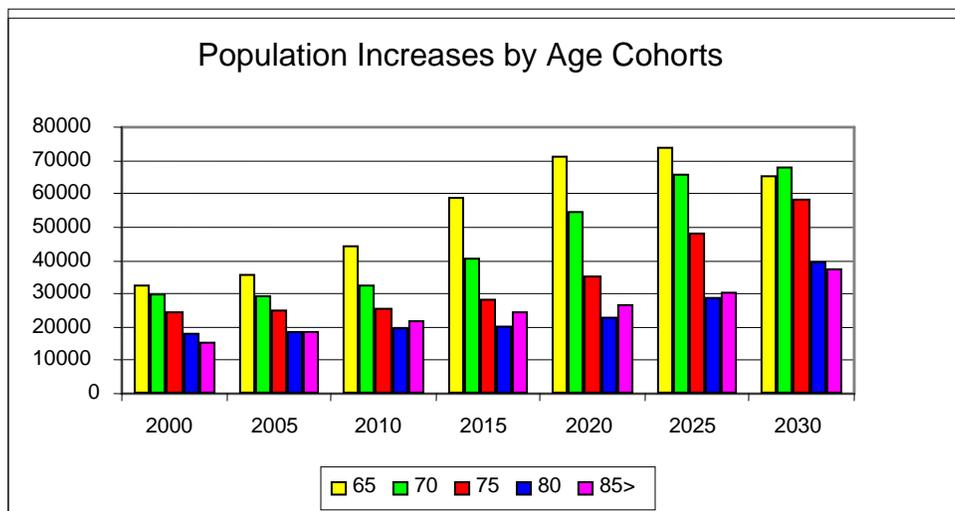
care. Thirty day readmission rate is defined as percent of patients who are admitted into the hospital within thirty days of a previous hospitalization. It is important to note that not all readmissions are related to the patient's previous hospitalization and some readmissions may not be preventable.

The total acute readmission rate for all ages combined at Saint Patrick Hospital for fiscal year 2010 was 8.99%. The total acute readmission rates for all ages at Community Medical Center for fiscal year 2010 were 4.86%. Community Medical Center's goal is to reduce the 30-day acute readmission rate by 20%, which would bring the rate down to 3.96%.

Aging Population

Population projections by the United States Census and the Montana Department of Health and Human Services shows Montana aging at a faster rate than most other states, with the 85 and older age group the fastest growing segment of the population⁴⁷. As our aging population grows, so does the focus on improving quality of life and health for this segment of the population. Older adults are at high risk of developing chronic illness and disabilities³⁷.



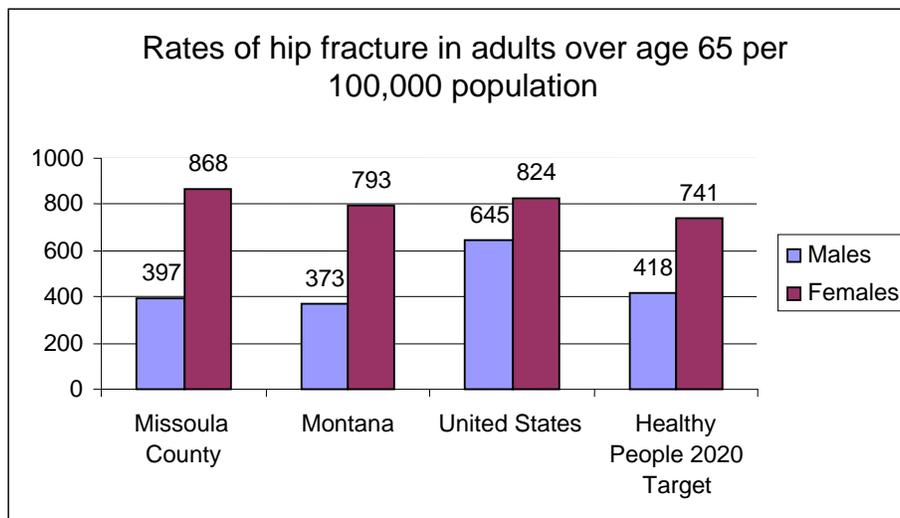


Falls in Older Adults

Approximately 1/3 of people over 65 fall each year, although accurate statistics are elusive²³. Approximately 90% of hip fractures are related to falls²³. About a quarter of those who suffer from a hip fracture survive for less than a year because of the fracture or its complications and most of those who survive have substantial reductions in their ability to walk and their ability to function in daily life²³.

Missoula County’s rate of hip fracture for men over 65 is 397/100,000. In Montana, the rate was 373/100,000. Nationally, the rate in 2007 for men over age 65 was 464.7/100,000²⁴. The Healthy People 2020 goal for hip fracture rates in men is 418.4/100,000²⁴.

For women over age 65, the rates of hip fracture are significantly higher. Missoula County’s rate of hip fracture for females over age 65 is 868/100,000. Montana is slightly lower at 793/100,000. Nationally the rate in 2007 was 823.5/100,000²⁴. Healthy People 2020 goal for hip fracture rates in females over age 65 is 741.2/100,000²⁴.



Environment

Outdoor Air Quality

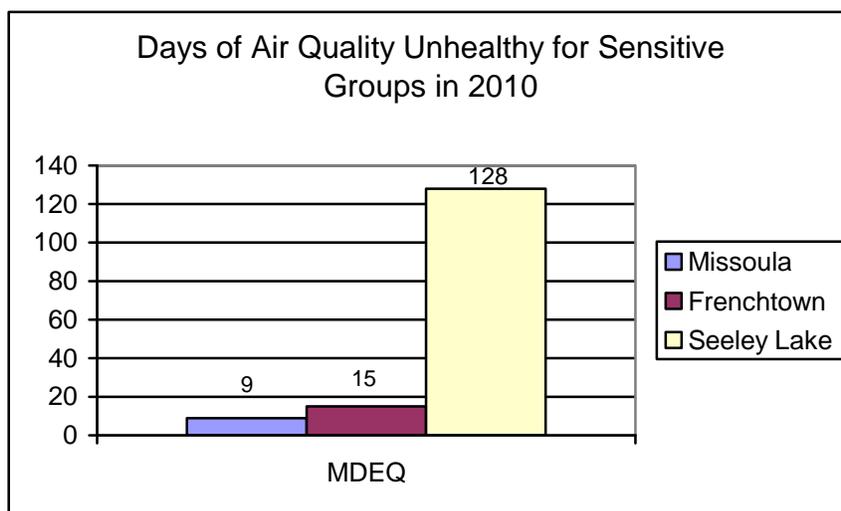
Outdoor air quality is monitored by measuring the concentration of particulate matter 2.5 micrometers in diameter (PM_{2.5}). These particles can remain suspended in the air for long periods of time and pose the greatest health risk. Due to their small size, PM_{2.5} can lodge deep in the lungs and exacerbate chronic conditions such as heart disease and asthma³⁹. The Montana Department of Environmental Quality (MDEQ) considers PM_{2.5} concentrations greater than 21 µg/m³ as unhealthy for sensitive groups⁴⁰. “Unhealthy for sensitive groups” is defined as “Increasing likelihood of symptoms in sensitive individuals, aggravation of heart or lung disease and premature death in persons with cardiopulmonary disease, smokers and the elderly.”

The primary contributor to this pollutant is wood smoke produced both by naturally occurring wildfires and by intentional human action including wood heating and outdoor burning. Much of the county sits within mountain valleys, prone to winter time inversions resulting in the need for more stringent standards.

Missoula County has three PM_{2.5} continuous monitors³². These monitors are located in Missoula, Frenchtown and Seeley Lake³². The Missoula monitor operated 338 days in 2010, and recorded 9 days with a 24-hour average PM_{2.5} concentration greater than MDEQ standards³². The Frenchtown monitor operated 358 days in 2010, and recorded 15 days with a 24-hour average PM_{2.5} concentration greater than MDEQ standards³². The Seeley Lake monitor operated 357 days in 2010, and recorded 128 days with a 24-hour average PM_{2.5} concentration greater than MDEQ standards³².

Missoula County has a long history of successfully managing the particulate pollution caused by human activity. There is required permitting for outdoor burning, and all new solid fuel burning heater installations. Only certified clean burning heaters or heaters specifically approved by the Missoula City-County Health Department are allowed to be installed. The Health Department monitors air quality and calls alerts suspending activity before the standard is exceeded to protect the standard.

Missoula County's goal is to remain in attainment for all national ambient air quality standards. Healthy People 2020's proposed goal includes reducing the number of days that air quality is unhealthy for sensitive groups to 10 days per year²⁴.



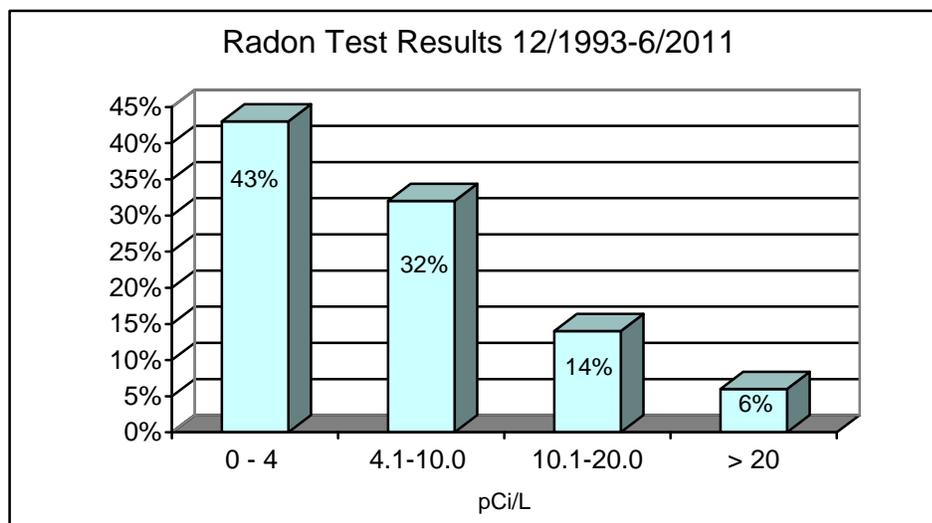
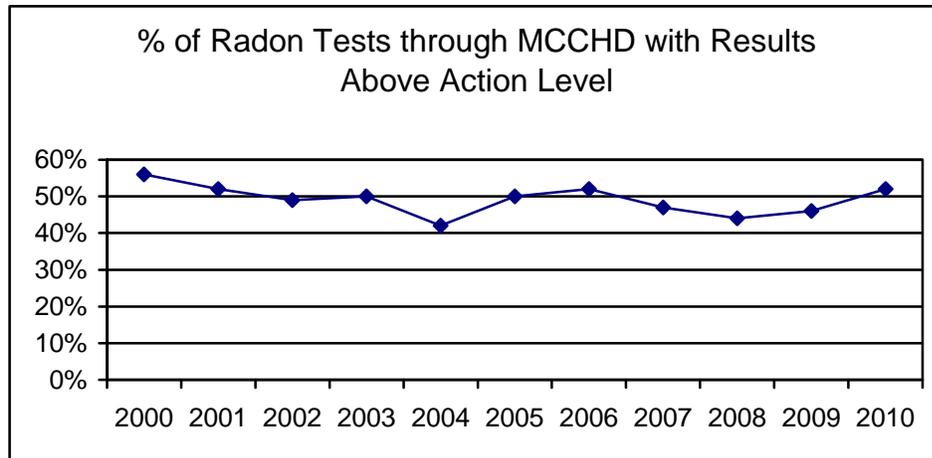
Indoor Air Quality

Radon is an odorless, colorless, radioactive gas. The EPA and the Surgeon General's office estimate radon is responsible for more than 20,000 lung cancer deaths each year making it the second leading cause of lung cancer in the United States²². Since it is difficult to identify any immediate symptoms related to radon exposure, it may take years before health problems appear²². Having your home tested for radon is the only effective way to determine whether you or your family is at risk of radon exposure²².

Healthy People 2020 do not include an objective for proportion of houses which have been tested for radon. The objectives related to radon include increasing the number of homes with an operating radon mitigation system for persons living in homes at high risk of radon exposure and increasing the percentage of new single family homes constructed with radon reducing features, especially in high-radon-potential areas²⁴.

Missoula City-County Health Department provides home radon test kits to Missoula County residents at a low cost³². There are Radon test kits currently available through many private vendors; therefore the following data is not complete. This data is based only on the test kits distributed through MCCHD.

In 2010, 242 total test kits were distributed by MCCHD and returned to Air Check Inc. for processing³². Of those tests that were processed, 124 were above the EPA action level of 4 pCi/L; 14 of the tests were invalid due to incorrect sampling method³². This means that roughly 51% of homes tested in Missoula County through Air Check Inc were above the EPA's recommended action level for radon³².



Water Quality

Clean drinking water is essential for the health of any community and in Missoula County this is monitored by MCCHD. The Safe Drinking Water Act (SDWA) is the primary federal law that ensures clean and safe drinking water in public and community water supplies. Under the SDWA, the EPA sets standards for drinking water quality²².

According to MCCHD, the 84 community public water supplies reported a total resident population of 71,601 or 65.5 % of Missoula County's population³². Mountain Water Company supplies water to over 56,000 County residents, 51.5% of County residents³². These systems are

required to meet federal drinking water standards and are required to test for chemical and microbial contaminants³². All public systems in Missoula County meet health based drinking water standards³².

The EPA rules protecting drinking water do not apply to privately owned wells²². Individuals served by private wells are at risk of waterborne diseases such as Hepatitis A, Giardiasis, Shigellosis, and E-Coli contamination²². Many other chemicals and pathogens that result in illness may also inhabit private wells³². Individual well owners in Missoula County are encouraged but not required to test their drinking water for the same potential contaminants for which public water systems are monitored³².

In 2009, of 4286 samples analyzed by the MCCHD water lab, 6 (0.14%) were fecal coliform positive. 57 (5.4%) were coliform positive, but fecal coliform negative³². No nitrate samples submitted as part of subdivision review were over the standard in 2009, but areas of high nitrate, including the Wye and Blue Mountain, exist in Missoula County³². In 2010, 16 Missoula County community water systems were issued health advisories, out of 242 Missoula total community water systems. This means that approximately 6.6% of the community water systems in Missoula County were issued health advisories.

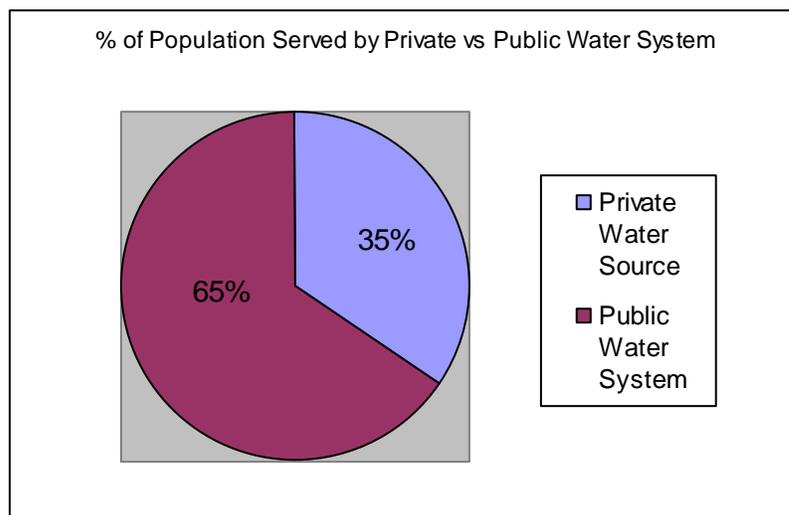
Montana DEQ Public Water Supply System database was queried for bacteriologic and nitrate-nitrite test results for all public water supply systems in Missoula County from 2006-2010. Maximum contaminant level (MCL) violations for all supplies within a given year are shown in the table below. MCL violations are described in DEQ's Total Coliform Rule (ARM 17.38.207 and 17.38.215). The 2006 to 2010 test results do not suggest upward or downward trends in annual occurrence of supplies with MCL exceedences; although 2008 did experience an increased number of supplies experiencing violation of both total coliform and E. Coli MCLs.

The population served and number of affected supplies experiencing violation of E. Coli MCLs is low in all years, indicating the number of people exposed to these potentially more pathogenic microorganisms is relatively low.

Table. DEQ Public Water System bacteriologic and nitrate-nitrate MCL exceedences in Missoula County

Analyte	2006		2007		2008		2009		2010	
	# Public water supplies with MCL exceedence	Total population served	# Public water supplies with MCL exceedence	Total population served	# Public water supplies with MCL exceedence	Total population served	# Public water supplies with MCL exceedence	Total population served	# Public water supplies with MCL exceedence	Total population served
Nitrate-nitrite	0		0		0		0		1	50
E. Coli	2	67	3	366	6	420	1	25	0	
Total coliform	39	5547	50	67105	61	68006	54	69201	22	2924

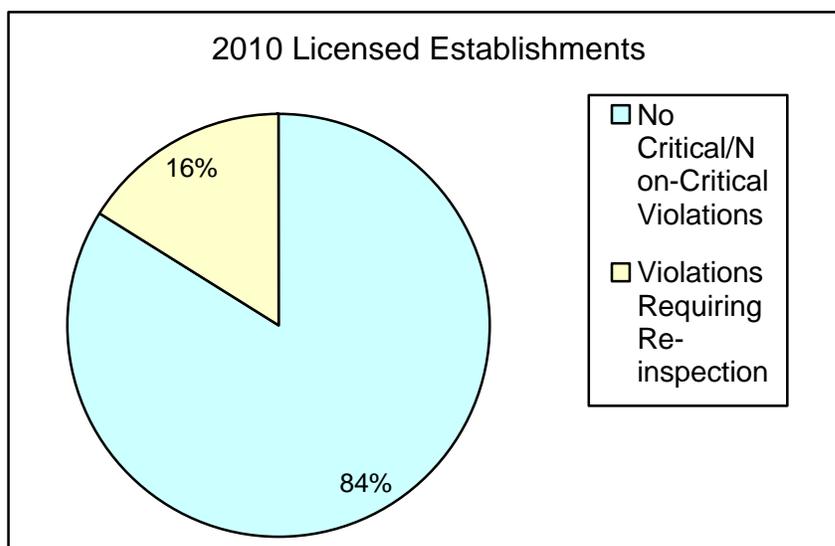
Healthy People 2020’s proposed goal is to increase the proportion of persons served by community water systems who receive a supply of drinking water that meets the regulations of the Safe Drinking Water Act to 91%²⁴. In 2005, 89% of persons served by community water systems received a supply of drinking water that meets regulations of the Safe Drinking Water Act²⁴.



Food Safety in Licensed Establishments

Consumers have an expectation and a right to clean and healthy food. In Missoula County, food safety is important and monitored in licensed establishments. In 2010, there were 527 routine inspections completed of licensed facilities by MCCHD³². Of the 527 routine inspections, 84 (16%) required follow-up re-inspections due to critical or non-critical violations³².

Food safety in licensed establishments is not currently monitored at the state or national level. Healthy People 2020's related objective is developmental and is to improve food-employee food preparation practices that directly relate to foodborne illnesses in retail food establishments²⁴.



Healthy Built Environment

Regular physical activity is crucial to quality of life, regardless of your age. Buying a health club membership, or setting aside "exercise" time can be challenging.

One significant environmental factor that can lead to increased physical activity is access to public recreation areas such as parks and trails. In the greater Missoula area, the goal at this

time is to maintain 2.5 acres of neighborhood parks for every 1,000 residents and that those neighborhood parks are within a 10-12 minute walk, without a major barrier such as a river, railroad, or arterial⁴⁸. In some Missoula neighborhoods this standard is met or even exceeded (e.g. Rattlesnake, Linda Vista, Target Range, Lewis & Clark), but other neighborhoods fall below the standard (e.g. River Road, Franklin to the Fort, Southgate Triangle, South 39th Street)⁴⁸. The City has used Open Space Bond funds to purchase a neighborhood park in the River Road area and is pursuing options to secure more parkland for the Franklin to the Fort Neighborhood since this is the most underserved neighborhood in the city⁴⁸. Purchasing more parkland is major challenge in already developed areas and thus the City is also pursuing installing trails in underserved neighborhoods that will safely link residents to adjacent neighborhoods that have great parks⁴⁸.

Another dynamic to increase physical activity is community support of alternative forms of transportation. There are many forms of alternative transportation that are utilized in Missoula County including bicycling, walking, carpooling or vanpooling, and utilizing public transit systems. Currently, Missoula's non-motorized transportation system now includes over 16 miles of paved bike/pedestrian trails within the City, 38 miles of bike lanes and bike routes, and 394 miles of sidewalks. The trail system is one of Missoula's most valued community assets, attracting residents and visitors alike⁴⁸. The health and economic benefits to Missoula is substantial.

The National League of American Bicyclists awarded Missoula the Silver level designation as a bicycle friendly community (the only city in MT to achieve that level)⁴⁸. The City Council and County Commissioners adopted the Missoula Active Transportation Plan in June 2011⁴⁸. The Plan's goals include Missoula achieving the Gold level designation, which will

require increasing bike/pedestrian safety through education, improving intersections, bike lanes, sidewalks and other infrastructure through-out the city, and continuing to expand the trail system⁴⁸.

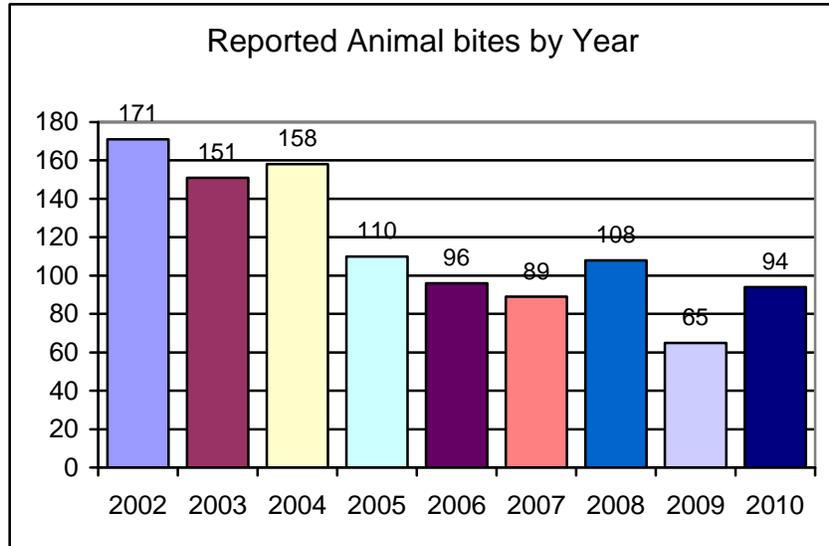
Healthy People 2020's correlating objectives are listed separately under physical activity and environmental health²⁴. Under the physical activity heading, the objectives are developmental. They include increasing the proportion of trips made by walking, increasing the proportion of trips made by bicycle, and increasing legislative policies for the built environment that enhance access to and availability of physical activity opportunities²⁴.

Under the environmental health heading, the objectives are to increase trips to work made by bicycling, walking, and using mass transit²⁴. In 2008, 0.5% of trips to work were made by bicycle²⁴. The proposed goal is to increase this to 0.6%. 2.8% of trips to work were made by walking in 2008²⁴. Healthy People 2020's proposed goal is to increase this to 3.1%. Also in 2008 5% of trips to work were by mass transit²⁴. Healthy People 2020's proposed goal is to increase this to 5.5%.

Animal Control

Injury from animal bites can be physically and emotionally damaging as well as a costly community problem. In the US each year, approximately 4.5 million people are bitten by dogs²². In 2008, there were 103.9 visits to the Emergency Department per 100,000 population involving a dog bite⁴¹.

In Missoula County animal bites are monitored by the Missoula City County Health Department. In 2010 there were 94 reported animal bites in Missoula County. This is a 40% decrease since 2004. Healthy People 2020 do not have a related goal for this indicator.



*Data based on animal bites reported to Missoula City-County Health Department, Animal Control Division.

Appendix I: Community Resources

<u>Crisis Hotlines:</u>	
Western Montana Mental Health Center 1-800-820-0083 or 532-9710	Suicide/Crisis Hotline 1-800-273-TALK
YWCA 24-Hour Crisis LINE 406-542-1944 or 1-800-483-7858	Missoula Police Department 911(or 24-hour non-emergency line 406-552-6300)
Missoula Sheriff's Dept 911 (or non-emergency line 406-258-4810)	
<u>Emergency Shelter and Public Housing:</u>	
Poverello Center 728-1809. 535 Ryman Street. Temporary housing for homeless adults, free clothing and food pantry, laundry and showers. Daily hot meals and sack lunches to go served. Call for hours. www.thepoverellocenter.org	Salvation Army 549-0710. 339 W. Broadway. Provides short-term emergency financial assistance. Clothing and food pantry. www.salvationarmynw.org
YWCA Shelter 543-6691. 1130 W. Broadway. Counseling, skill building, and transitional housing for women and families. www.ywcaofmissoula.org	Missoula Housing Authority 549-4113.1235 34 th Street. Public housing, Section 8 rental assistance and related housing services. www.missoulahousing.org
Human Resource Council 728-3710.1801 S. Higgins. Section 8 rental assistance, LIEAP utilities assistance program. www.hrcxi.org	
<u>Emergency Food and Nutrition:</u>	
Missoula Food Bank 549-0543. 219 S. 3 rd W. Food distribution: 10am-1pm Monday-Friday; Evening distribution 5-7pm Monday and Tuesday. Monthly senior commodity delivery program. missoulafoodbank.org	Christian Life Center 542-0353. 3801 Russell. Food distribution: 2nd and 3rd Mondays 4-5pm (except holidays). www.clc-missoula.org
Clark Fork City Church 721-7804. 2811 Latimor Street. Food distribution: Saturdays 10am - Noon. www.cfccmt.org/Ministries/CityFood	Missoula 3:16 549-4673. 506 B Toole Avenue. Continental Breakfast: Monday-Saturday 7-9am; Soup and sandwich lunches Monday-Saturday at Noon. www.missoula316.org
SNAP/Office of Public Assistance A division of the Montana Department of Health and Human Services 329-1200. Application Assistance Hotline: 1-800-332-2272. 2677 Palmer, Suite 100. Supplemental Nutrition Assistance (formerly known as Food Stamps). SNAP application assistance also offered at Missoula Food Bank during distribution hours. dphhs.mt.gov	Senior Nutrition/Meals on Wheels 728-7682. Meals for homebound elderly and disabled. www.missoulaagingservices.org

<p>WIC (Women, Infants and Children) 258-4740. 301 W. Alder. Nutrition and supplemental food program for low-income pregnant and nursing women, and children under age 5. www.co.missoula.mt.us</p>	<p>EFNEP (Expanded Food & Nutrition Educ. Program) 258-4207. Nutrition, meal planning and cooking instruction for low-income families. Garden City Harvest 523-3663. Lease garden plots to grow your own vegetables. www.gardencityharvest.org</p>
<p>Humane Society of Western Montana 549-4796. Pet Food Pantry, call for availability www.myhswm.org</p>	
<p><u>Health Care:</u></p>	
<p>Partnership Health Center 258-4789. 323 W. Alder. Primary care services to those with no or inadequate health coverage. www.co.missoula.mt.us/phc</p>	<p>Healthy Montana Kids Plan Call 1-877-KidsNow Free or low-cost health coverage for children and teenagers up to age 19. dphhs.mt.gov</p>
<p>Health Department 523-4750. 301 W. Alder. Neighborhood nursing, well-child clinic, WIC, health screening, immunizations. www.co.missoula.mt.us/health</p>	<p>1st Way Pregnancy Support 549-0406. 1515 Fairview, Suite 250. Referral, pregnancytesting, support services for pregnant women. Diapers, maternity clothes. www.1stway.org</p>
<p>Planned Parenthood 728-5490. 219 E. Main. Services include female and male annual exams, pregnancy testing, birth control info/supplies. www.plannedparenthood.org</p>	<p>Missoula Indian Center 829-9515 or 24-hour crisis line 721-2700. Fort Msla. Rd, Bldg. #33. Outpatient health svcs. Provides health, nutrition, diabetes info and chemical dependency counseling. www.missoulaindiancenter.org</p>
<p>Adult Mental Health Services 532-9700. 1335 Wyoming. Case management and day treatment for adults with mental illness. www.wmmhc.org</p>	<p>Turning Point 532-9800. 1325 Wyoming. Alcohol and substance abuse treatment. www.wmmhc.org</p>
<p>Children's Case Management 532-9770. Mental health services for children. wmmhc.net</p>	
<p><u>Employment and Continuing Education:</u></p>	
<p>Missoula Job Service 728-7060. 539 S. 3rd St. W. Job placement, training, employment counseling and resource center. wsd.dli.mt.gov/local/missoula</p>	<p>Vocational Rehabilitation and Blind Services 329-5400. 2675 Palmer, Suite A. Provides job training, placement, financial help for disabled workers. dphhs.mt.gov</p>
<p>Dickinson Lifelong Learning Center 542-4015 / 549-8765. 310 S. Curtis. Offers day and evening education classes for adults. thelifelonglearningcenter.com</p>	<p>Literacy Volunteers of America 542-4015. 310 S. Curtis. Offers reading tutoring.</p>

UM Continuing Education 243-2900. www.umt.edu/ce	
<u>Legal Aid and Advocacy; Civil and Human Rights:</u>	
Montana Legal Services 543-8343 / 543-8344. 304 N. Higgins. Legal help to low-income people regarding landlord-tenant, disability, and other legal issues. For UM Students: 243-6213. www.mtlsa.org	Human Rights Bureau, MT 1-800-542-0807. erd.dli.mt.gov/humanright/hrhome.asp
Montana Fair Housing 542-2611. Investigates allegations of housing discrimination. www.montanafairhousing.org	MontPIRG (MT Public Interest Research Group) 243-2907. Resource for landlord-tenant issues. www.montpirg.org
Senior Help Line/Resource Center 728-7588 or 1-800-551-3191. Info about housing, transportation, health care and legal issues. www.missoulaagingservices.org/helpline	Crime Victim Advocate 258-4630. County attorney's office. Helps with temporary order of protection, advocacy for crime victims. co.missoula.mt.us/opgweb/Grants/CVA
Child and Elder Abuse Help Line Call 24-hours 1-800-332-6100 / 406-444-9810.	
<u>Other Services:</u>	
Child Care Resources 728-6446. 127 E. Main, Suite 314. Child care assistance. www.childcareresources.org	Parenting Place 728-5437. 1644 S. 8 th W. Parenting programs and support. www.parentingplace.net
WORD (Women's Opportunity & Resource Devt.) 543-3550. 2525 Palmer St., Suite #1. Renter education. Teen parent program. School-based Family Resource Cntrs. Homeownership education/assistance (HomeWORD). wordinc.org	Social Security Office 1-800-772-1213. 542-1580. 700 SW Higgins, Suite 5. www.socialsecurity.gov
Veterans' Center 721-4918. 500 N. Higgins Avenue, Suite 202. Counseling/support for military veterans.	Refugee Assistance Corp. 721-5052. 715 Kensington #16. Support and referral for Hmong and Russian refugees.
Consumer Credit Counseling 543-1188. Debt management counseling. www.cccsmt.org	Summit Independent Living 728-1630. Advocacy for people with disabilities. www.summitilc.org
Community Dispute Resolution Center 543-1157. Mediation services.	Missoula Urban Demonstration Project 721-7513. 629 Phillips St. Promotes sustainable living through education and community projects; tool library. mudproject.ning.com

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