HEALTHY LIVES
VIBRANT FUTURES

COMMUNITY HEALTH
NEEDS ASSESSMENT

Cascade County, Montana

2019

Prepared by the Cascade City-County Health Department

Welcome

This project was sponsored by:

ALLUVION HEALTH

Benefis HEALTH SYSTEM

United Way

United Way of Cascade County

CCHD

CITY-COUNTY HEALTH DEPARTMENT

But many more people helped!

See the end of this report for a list of contributors, committee members, and January 2019 symposium participants

Table of contents

In cases where community health promotion activities are initiated by a health department or organization, organizers have a responsibility to engage the community. Realizing the vision of healthy people in healthy communities is possible only if the community, in its full cultural, social, and economic diversity, is an authentic partner in changing the conditions for health.

Source: Healthy People 2020

I. Introduction

A note on community health

What images come to mind when you think of the word “health”? Some people might think about eating lots of fruit and vegetables, riding a bike along the river’s edge, or taking a run with their dogs; others might think of seeing a doctor regularly or avoiding excessive alcohol intake. Still others may envision feeling calm and happy or sleeping well at night, without the burden of anxiety or depression.

Every day, things you can and cannot control impact your own health. Whether you floss or go for a walk, for instance, may be up to you. However, you may not be able to control the air quality in your city, whether it feels safe to exercise outdoors in your neighborhood, or whether you’re able to afford health insurance. But all of these things, big and small, impact the health of individuals and communities.

This Community Health Needs Assessment, as well as the Healthy Lives, Vibrant Futures (HLVF) Coalition responsible for creating it, is the result of many people and partners in Cascade County, Montana, uniting to paint a clear, current picture of community health in Cascade County. We'll assess our area's strengths, weaknesses, and the priorities community members like you have put forward.

Here in Cascade County, we don’t just want to help people who have already been diagnosed with disease, obesity, substance use disorders, and behavioral health issues; we don't just want to help children already experiencing abuse and neglect. We want to help them *and* prevent others from having to face the same challenges. And even beyond that, we eventually want to use the health assessment process to take a closer look at the structural and historical conditions in our area—everything from a lack of bike lanes to gender-, ethnicity-, and age-based inequalities in health outcomes—so that we can effectively address any local barriers to health at the root.

Obviously, measuring the health of Cascade County is a huge undertaking, and it’s only by working collaboratively and getting feedback from residents that we're able to do it. We learn more and get better every time we complete this assessment.

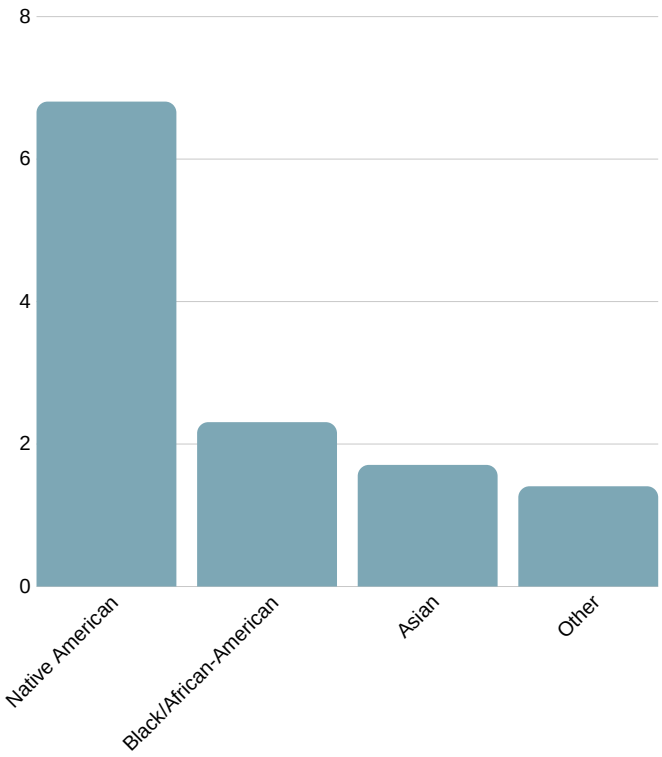
So please read on for more details about the background and process of the Healthy Lives, Vibrant Futures Coalition and Cascade County’s Community Health Needs Assessment. We’re grateful for everything you’ve already done to impact the health of the County we love to call home, and want to thank you in advance for taking the time to read this report and offer constructive feedback to direct the work of our community partners. We look forward to working together toward a healthier, more vibrant Cascade County.

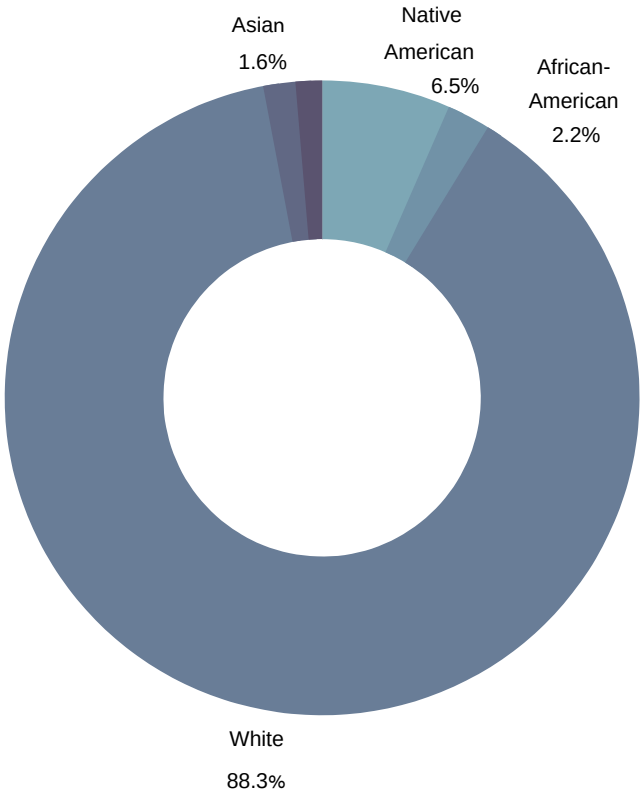
I.1 The people we serve

Cascade County is located in north central Montana and has an estimated population of 81,816 (according to the US Census Bureau 2017 estimate), 99% of whom are US citizens. Great Falls — population 58,505 (according to the City of Great Falls)—is the largest city in Cascade County, contains roughly 72% of the county's population and serves as the county seat. It is also the fifth largest city in Montana. Other incorporated cities in Cascade County include Belt, Cascade, and Neihart. Cascade County has eight additional Census Designated Places including Malmstrom Air Force Base and four Hutterite colonies, as well as several small communities not officially estimated.

Based on 2017 census estimate data from the US Census Bureau, individuals age 65 and over comprise 17.4% of the population, while individuals under the age of 18 make up 22.5% of the population. The median age of the population is 38.4 years old. Males make up 50.4% of the population in Cascade County, and females 49.6% (according to the US Census's 2017 American Community Survey). Cascade County residents include 88.5 percent Caucasians, 4.7 percent American Indians and Alaska Natives, and the remaining 6.5 percent includes all other races. The primary language spoken in households is English; however, a small percentage (less than 5%) of individuals still speak Spanish, German and various Native American languages as their primary language.

Cascade County: race alone or in combination with one or more races



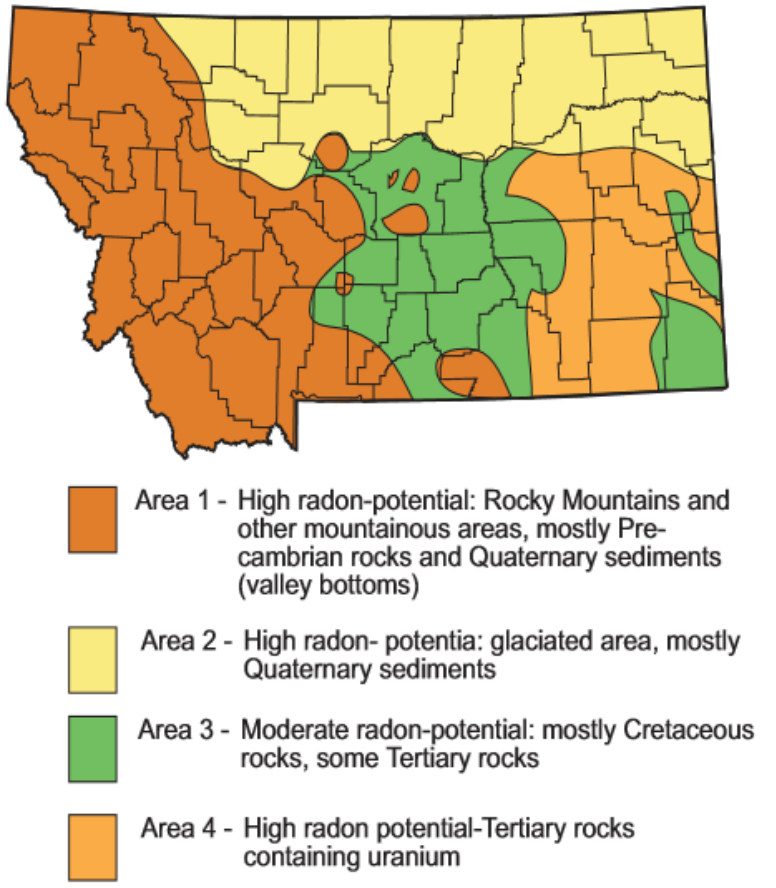


Humans interact with the environment constantly. These interactions affect quality of life, years of healthy life lived, and health disparities. The World Health Organization (WHO) defines environment, as it relates to health, as 'all the physical, chemical, and biological factors external to a person, and all the related behaviors.' Environmental health consists of preventing or controlling disease, injury, and disability related to the interactions between people and their environment.

[..] Poor environmental quality has its greatest impact on people whose health status is already at risk. Therefore, environmental health must address the societal and environmental factors that increase the likelihood of exposure and disease.

Source: Healthy People 2020

I.2 The environment we live in



Map showing radon in air potential, *modified from: USGS (1993).*

According to Healthy People 2020, maintaining a healthy environment is central to increasing quality of life and years of healthy life. Environmental factors are diverse and far reaching, and include exposure to hazardous substances in the air, water, soil, and food; natural and technological disasters; climate change; occupational hazards; and the built environment.

The environment also interacts with health behaviors and other factors to influence public health. A perfect example of this interaction is radon gas in Cascade County. According to the Montana Department of Environmental Quality, average indoor radon levels in Cascade County are significantly higher than the national average (1.3 picocuries/liter), with results at 3.8 pCi/L as of March 2019.

The National Cancer Institute (NCI) describes radon as a radioactive gas released from the normal decay of the elements uranium, thorium, and radium. It is invisible, odorless, and tasteless, seeping up from the ground and diffusing into the air. Though radon is present in nearly all air at low levels, people who inhale high levels of radon are at an increased risk of developing lung cancer—radon exposure is the second leading cause of lung cancer in the US. Cigarette smoking is, of course, the leading cause.

However, cigarette smokers exposed to radon gas in the concentrations present in Cascade County (about 4 pCi/L) have a 5-times higher chance of developing lung cancer than people exposed to radon alone (Environmental Protection Agency).

Because of interactions like that of radon (environmental factor) and smoking (behavioral factor), assessing and managing environmental quality is a very important part of assessing community health.

Cascade County consists of about 2,712 square miles of land and water, of which dry land comprises 2,699 square miles and water 13 square miles. The Missouri River and Sun River meander through the County before meeting in the city of Great Falls. The Rocky Mountains skirt the western border of Cascade, while the Little Belt and Highwood Mountains range along the southeast.

In addition to the natural beauty present throughout the County, the City of Great Falls has a robust Parks & Recreation Department that services 57 developed and 9 undeveloped parks, as well as 58 miles of recreation trails in the city. Throughout the county there are several other—both public and privately owned—golf courses, outdoor and indoor pools, fitness facilities, and even a skate park. The County also maintains several parks and public land use areas, and two national protected areas fall within Cascade County: Benton Lake National Wildlife Refuge and part of Lewis and Clark National Forest.

Cascade County is characterized by powerful predictable Class 4 winds. Due in part to those powerful winds, Cascade County enjoys good outdoor air quality. The EPA monitors six common air pollutants that can harm individual health & the environment and cause property damage. Available sampling for Cascade County in 2015 and 2016 show that the air quality falls within the good range over 90% of the time. Even when the air quality wasn't categorized as good, it only went into or above the moderate range less than 10% of the time.

In addition to monitoring air quality, the EPA assesses the quality of water throughout the US. Montana, including Cascade County, has several bodies of water that are assessed every two years. In 2014, almost all of the 13 square miles of water in Cascade County were classified as impaired, meaning those water quality conditions do not support at least one use (aquatic life, agricultural, drinking water, and primary contact recreation) of the water.

Because the water sources are considered to be impaired, there is a reliance on ensuring that our water is safe for household and drinking use. The Montana Department of Environmental Quality monitors our public drinking water and our wastewater systems and regularly reports on those conditions. Consumer confidence reports are released annually summarizing information regarding source, any detected contaminants, compliance, and educational information for every water system in Montana.

There are three Superfund sites located in Cascade County: the Barker Hughesville Mining District in Monarch, the Carpenter Snow Creek Mining District in Neihart, and the ACM Smelter and Refinery in Black Eagle. Investigation and cleanup of all three sites are ongoing.

I.3 Social determinants of health in our county

According to Healthy People 2020, social determinants of health are conditions in the environments in which people are born, live, learn, work, age, play, and worship that affect a wide range of health, functioning, and quality-of-life outcomes and risks. Conditions (e.g., **social, economic, and physical**) in these various environments and settings (e.g., school, church, workplace, and neighborhood) have been referred to as "place."

In addition to the more material attributes of "place," the patterns of social engagement and sense of security and well-being are also affected by where people live. Resources that enhance quality of life can have a significant influence on population health outcomes. Examples of these resources include safe and affordable housing, access to education, public safety, availability of healthy foods, local emergency/health services, and environments free of life-threatening toxins.

Socioeconomic characteristics of Cascade County (County Health Rankings)

Socioeconomic measure	*Cascade County*	*Montana*	*Definitions*
High school graduation	**86%**	85%	Percentage of ninth-grade cohort that graduated in four years
Some college	68% (66-74)	68%	Percentage of adults ages 25-44 with some post-secondary education
Unemployment	**4.0%**	4.1%	Percentage of population ages 16 and older unemployed but seeking work
Children in poverty	**17%**	16%	Percentage of children under age 18 in poverty
Income inequality	4.4	4.5	Ratio of household income at the 80th percentile to income at the 20th percentile
Children in single-parent households	**32%**	28%	Percentage of children that live in a household headed by single parent
Social associations	**14.5**	13.9	Number of membership associations (civic, sports, religious, political, labor, business and professional organizations and fitness and bowling centers and golf clubs) per 10,000 population
Violent crime	**247**	283	Number of reported violent crime offenses per 100,000 population
Injury deaths	93	91	Number of deaths due to injury per 100,000 population

Health starts in our homes, schools, workplaces, neighborhoods, and communities. We know that taking care of ourselves by eating well and staying active, not smoking, getting the recommended immunizations and screening tests, and seeing a doctor when we are sick all influence our health.

Our health is also determined in part by access to social and economic opportunities; the resources and supports available in our homes, neighborhoods, and communities; the quality of our schooling; the safety of our workplaces; the cleanliness of our water, food, and air; and the nature of our social interactions and relationships. The conditions in which we live explain in part why some Americans are healthier than others and why Americans more generally are not as healthy as they could be.

Source: Healthy People 2020

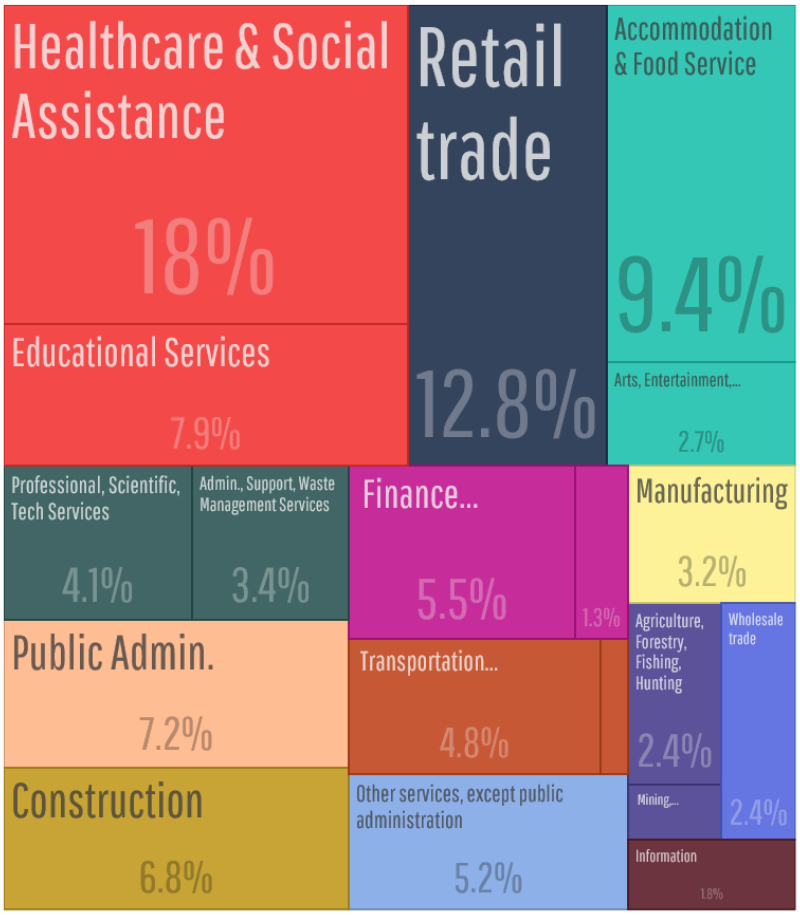
The financial state of Cascade County

Cascade County's cultural landscape is rich in arts and humanities, Native American heritage, agriculture, traditional Western/ranch lifestyle, sports, and outdoor sportsman activities and events. Many describe it as an ideal "basecamp" for all the natural beauty and fascinating places throughout Montana, proudly called the "last best place" in the United States.

However, despite the wealth of recreation, leisure, and cultural activities available to residents, financial barriers make participation unrealistic for many. According to the US Bureau of Labor Statistics, the average (mean) hourly wage in Great Falls was $19.15 as of May 2016, about 20% lower than the US-wide average of $23.86. It is estimated that 13.1% of the individuals in Cascade County live below the poverty level (US Census's 2013-2017 American Community Survey 5-Year Estimates—hereafter ACS), and young women are the group most likely to live in poverty. 8.3% of impoverished residents are women age 18-24 and 10.6% are women age 25-34. 8.5% of residents over the age of 16 have a disability.

Top employment categories in Cascade County include healthcare & social assistance, retail trade, accommodation & food service, educational services, and public administration. The highest paying industries are utilities, transportation & warehousing, and mining/quarrying/oil/gas extraction.

The American Community Survey projects a 4.6% unemployment rate in Cascade County. Among the unemployed, minority populations are disproportionately affected: 14.4% of unemployed persons are American Indian/Alaska Native, 7% Black/African American, and 8.3% are persons of two or more races.



I.4 Resources in Cascade County

image source: www.thetrail.org

Cascade County has numerous public and private entities that contribute to the health of our community. The following list highlights some of the Agencies that have collaborated in the Community Health Needs Assessment/Community Health Improvement Planning efforts, and which offer services to residents of Cascade County. This list is by no means all-inclusive, and numerous providers offer necessary services that are not described here.

The Cascade City-County Health Department (CCHD), based in Great Falls, serves the entire county. The mission of the Health Department is "to prevent disease and illness, ensure a healthy environment, promote healthy choices, and deliver quality services." Services are provided in four program areas: environmental health, prevention services, family health services, and administration. Environmental Health focuses on providing a healthy environment for the residents of Cascade County by providing education, monitoring, and enforcement of state laws and regulations. Prevention Services works to prevent disease and injury in our community, promote healthier choices and behaviors, prepare and respond to public health emergencies, investigate disease outbreaks, and provide quality health information. Family Health Services' goal is to enhance the health and safety of children and families in Cascade County. Through a variety of programs, Family Health Services works toward that goal with education efforts, screening, and direct client services.

Alluvion Health (formerly the Community Health Care Center) is a not-for-profit Federally Qualified Health Center located in Great Falls. Alluvion has numerous locations across Cascade County, including a clinic that is co-located with the Cascade City-County Health Department, but is a separate, independent entity. Oversight for the clinic is provided by a community board. Alluvion provides comprehensive primary and preventative medical, dental, and behavioral health care for all residents of Cascade County, with a focus on serving patients who are low-income, uninsured, under-insured, or who otherwise cannot afford medical and dental care. Alluvion is partially funded through a grant from the U.S. Department of Health and Human Services, Bureau of Primary Health Care.

Resources in Cascade County

Benefis Health System is a not-for-profit community health system serving 164,000 residents across a vast 13-county region in Montana. Benefis is the largest non-governmental employer in Cascade County, and includes the following:

- 220 inpatient hospital beds
- An employed provider group of more than 280 physicians and advanced practice clinicians
- Outpatient clinical services in more than 40 specialties, ranging from oncology and cardiology to orthopedics, psychiatry, and internal medicine
- Urgent care services on both the main campus and in northwest Great Falls
- An air ambulance program offering fixed-wing and helicopter transports
- A Level 2 Trauma Center, offering the highest level of emergency care available in the state
- A Level 3 Neonatal Intensive Care Unit (NICU) and specially-trained NICU flight team
- Inpatient and outpatient surgical suites, where 10,000 surgeries are performed per year
- Extensive senior services ranging from assisted living to long-term care, memory care, and transitional care
- A 20-bed inpatient hospice facility
- Regional home health services, with staff completing 30,000 visits per year
- A home medical equipment store offering valuable supplies such as CPAP machines & more

The Benefis Health System Foundation supports programs aimed at improving and enhancing healthcare services across North Central Montana. The Foundation operates two Gift of Life Housing facilities, which provide free accommodations for rural patients undergoing cancer treatment and for rural families with babies in the Neonatal Intensive Care Unit.

Benefis Native American Programs were established in 2006 to serve Native American patients and their families in a culturally sensitive manner. The programs include a Native American Welcoming Center, Native American patient rounding, and smudging. The Benefis Native American Board has representation from tribal leaders of the four Reservations in North Central Montana—Blackfeet, Fort Belknap, Rocky Boy's and Fort Peck—as well as the Little Shell Tribe, Indian Health Service hospitals and clinics, and tribal colleges.

United Way of Cascade County is a community impact organization that coordinates the effective use of public and private resources to positively impact human services needs in Cascade County. The organization focuses on three main goals: education, financial stability, and health. Numerous non-profit agencies that provide direct or preventive services receive funding from the United Way. To advance the education initiative, *Graduation Matters*, United Way works collaboratively with local agencies, including the school district, and focuses on kindergarten readiness, third grade reading, attendance, and high school graduation. The goals of *Prosperity Matters*, United Way's income initiative, include helping families toward achieving self-sufficient income, establishing assets, and maintaining manageable expenses. Together with other local organizations, United Way is building a network of professional and peer mentors as well as looking at developing an emergency fund for individuals or families in need. *Health Matters* is the third initiative that United Way supports by bolstering current efforts and initiating their own efforts to reduce obesity, encourage healthy lifestyles, increase access to health care, and protect the community's most vulnerable populations. By increasing awareness of health risks and working to change policies and practices, United Way—and the agencies they work with—will enable more people to live healthier lives.

Resources in Cascade County

Center for Mental Health is a private non-profit organization providing mental health services to a 10-county service area in North Central Montana. Over 4,000 clients are served, with over 2,400 of those clients accessing services in Great Falls. Based in Great Falls, the Center provides services that include outpatient, day treatment, transitional living, crisis stabilization, and group homes. The Center is staffed by more than 350 psychiatrists, psychologists, clinical social workers, professional counselors, addiction counselors, nurses, trained paraprofessionals, and certified peer specialists. Some of the services the Center offers are adult case management, adult foster care homes, adult therapeutic group home care, daily living and social skills, domestic violence intervention, in-home family services, homeless outreach, individual therapy, family therapy, group therapy, jail diversion, medication management, program for assertive community treatment, peer support, school-based services, substance abuse/addictions counseling, supported employment, veteran's services, and youth case management.

Rocky Mountain Treatment Center is a 26 bed residential facility located in Great Falls. It provides treatment options for individuals dealing with chemical dependency and other addictions. Treatment options include medically monitored intensive inpatient services (detox), clinically managed high-intensity residential services (inpatient treatment), partial hospitalization services (day treatment), intervention services, and continuing care (aftercare). Treatment is individualized to treat the entire person including physical, emotional, behavioral, family, social, and spiritual needs.

Indian Family Health Clinic (IFHC) offers comprehensive health care services for patients, offering women's, men's, and children's care as well as a walk-in clinic and patient-centered diabetes care. In addition to the health clinic, IFHC offers behavioral health, addictions counseling and support services, plus a fully operational fitness & wellness center.

Great Falls Public Schools (GFPS) is the 2nd largest school district in Montana. The district offers comprehensive pre-kindergarden through 12th-grade programming in addition to extensive extra- and co-curricular offerings. Approximately 1300 individuals are employed by the District to help serve the 10,000+ students that attend the schools. The District offers nutrition services for their students, including free and reduced lunches, a breakfast program, a backpack program, and food pantries. Student wellness programs also address the nutritional needs of students by ensuring that the district only offers approved foods in the schools. School nursing services are available to help assess, and can develop individualized health care plans or emergency care plans for students with medical issues.

Resources in Cascade County

Malmstrom Air Force Base (MAFB) is located on the edge of Great Falls and is home to the 341st Missile Wing and a population of 3,472 based on the 2010 census. MAFB has a Airman and Family Readiness Center, an Equal Opportunity Program, a Family Advocacy Program, a Sexual Assault Response Office, a Health Clinic, a Mental Health Clinic, and a Legal Office. In addition to these services, the base has the 341st Force Support Squadron which is dedicated to providing worldwide combat support and community services for the 341st Missile Wing. Some of the services provided by the squadron include an outdoor recreation center, a child development center, a fitness & sports center, a bowling center, an arts & crafts center, youth programs, arts & crafts classes, and outdoor recreation classes.

Alcoholics Anonymous and Narcotics Anonymous meetings are provided at several locations throughout Great Falls and Cascade County. Both utilize the Twelve Step Program in their treatment of addiction by focusing on coming to terms with the pain addicted individuals have caused themselves and others in their lives in order to overcome their addictions.

Opportunities, Inc. is a non-profit social service agency that focuses on helping low-income people become self-sufficient. Numerous different programs are offered, including a community resource center, HUD housing program, Head Start program, low income energy assistance program, home weatherization program, Energy Share of Montana, and WIA youth. Anyone in need will receive information and referrals as necessary for each program. The various programs cover everything from emergency assistance and housing needs to education and job training.

Dandelion Foundation is a non-profit organization that educates and supports individuals at risk for, experiencing, or surviving abuse. The organization advocates for prevention efforts and organizes various professional education and community awareness events.

Voice of Hope runs the Crisis Line and maintains a comprehensive Community Resource Directory of the services available throughout Cascade County. In this way, Voices of Hope helps people in need in the community connect to to the resources they need.

Child and Family Services Division of DPHHS (the Montana Department of Health and Human Services) protects children who have been or are at substantial risk of abuse, neglect, or abandonment. The division provides state and federally mandated services for these children, including receiving and investigating reports of abuse and neglect. The ultimate goal is to prevent future violence, help families stay together or reunite, and find appropriate temporary or permanent housing for the children.

Resources in Cascade County

Planned Parenthood is an education and health center offering safe, reliable health care for women and men. The majority of care provided is preventive, primary care, which helps prevent unintended pregnancies through the use of contraception, reduce the spread of sexually transmitted infections through testing and treatment, and screen for cervical and other cancers. Care is based on respect for the individual's right to make informed, independent decisions about health, sex, and family planning. In addition to offering care, Planned Parenthood plays a vital role in providing comprehensive sex education.

Great Falls Clinic, located in Great Falls, is the largest independent group of physicians in Montana. Their team is dedicated to "providing high quality care, comprehensive coordinated services, convenient timely access, and exceptional service with compassion." Great Falls clinic includes:

- Great Falls Clinic Immediate Care Center is a walk-in center that provides care to patients without the need for an appointment, including medical care, chronic conditions, occupational medicine, X-rays, labs, vaccines, and physicals.
- Great Falls Clinic Northwest provides comprehensive care for a full range of illness and minor injuries on a walk-in basis. Patients can be seen immediately at this location instead of waiting to see their primary provider or go to the emergency room.
- The Great Falls Clinic Specialty Center houses specialty departments and services, ranging from chemotherapy to sleep medicine.
- The Foot & Ankle Clinic of Montana addresses the unique needs of foot care and is devoted to the health, comfort and optimum functioning of feet ankles.
- The Great Falls Clinic Hospital, formally the Great Falls Clinic Medical Center, is a state-of-the-art facility offering 24-7 emergency services and around the clock medical and surgical care. The Emergency Department is equipped with 7 beds and 4 special care unit beds. The Hospital has 19 hospital rooms, three operating rooms, and a procedure room.
- Great Falls Clinic Surgery Center offers ambulatory surgical services ranging from ophthalmology to gynecology. It is available for outpatient procedures that do not require a hospital stay.

Gateway Community Services is a "critical care access center" for alcohol and drug abuse. Gateway provides progressive care programs to meet the appropriate clinical needs of their clients; including early intervention services, evaluation and outpatient services, intensive outpatient treatment, referrals to inpatient treatment providers, coordination with detoxification and medical stabilization needs, and co-occurring treatment services. Based in Great Falls, the non-profit agency serves Cascade, Liberty, Toole, Pondera, Glacier, and Teton Counties. Prevention classes provide information on the physical and psychological effects of alcohol and drugs related to driving behavior and the development of chemical dependency. Minor in Possession programs for teens and ACT classes for adults convicted of Driving under the Influence are also offered.

Resources in Cascade County

Children's Receiving Home provides temporary foster care shelter for children, up to age 18, who have been removed from their homes of origin due to child abuse, neglect, abandonment, parental drug use, domestic violence, and parental incarceration. The home ensures that each child has clothing, meals, transportation, recreation, and toys during their stay, and that their rights are protected. The home's location is undisclosed in order to protect the children that stay there.

The Rescue Mission focuses on men, women and children by providing food, shelter, and a caring environment with a Christian emphasis. They offer a men's shelter, women and children's shelter, a new family center, food services, hygiene assistance, programs specific to men and women to help with substance abuse, and youth programs.

The YWCA of Great Falls promotes peace and justice, freedom and dignity for people, especially women and girls. The YWCA offers basic classes in computer, business and financial management for youth and adults; support groups for women dealing with domestic violence, sexual assault and/or rape; quality used clothing at no cost; and an emergency confidential shelter for women and children who are victims of domestic violence.

Extension Office provides research based education and information to individuals, families, and communities through their various programs. Programs available to the community include 4-H & Youth Development, Agriculture, Yard & Garden, Home & Family, and Health & Wellness.

Family Connections provides training, resources, education, counseling, and helps advocate for parents, providers, and the community about early childhood issues. They are available to help connect families to childcare providers and help find ways for families to pay for childcare. They strive to create a community where children have the necessary resources and opportunities to have a successful future.

Family Promise strives to help homeless children and their families find stable, sustainable housing and achieve independence. The interfaith program provides shelter, meals and comprehensive support services through their network of volunteer congregations and dedicated case management staff.

II. Approach & methodology

II.1 Community Health Needs Assessment background and process

Source: Rural Health Information Hub (www.ruralhealthinfo.org)

The passage of the Patient Protection and Affordable Care Act (ACA) in 2010 established requirements for not-for-profit hospitals to conduct a Community Health Needs Assessment and Community Health Improvement Plan every three years. Similarly, the Public Health Accreditation Board has an accreditation process for local, state, and tribal health departments which requires completion of a Community Health Needs Assessment and a Community Health Improvement Plan every five years.

The first Community Health Needs Assessment was completed in 2011 for Cascade County. In 2012 Cascade County partnered with the North Central Healthy Communities Coalition to gather data for the entire region, which contributed to the 2013 Cascade County Community Health Needs Assessment. The 2016 Cascade County Community Health Needs Assessment was a joint effort on the part of Cascade City-County Health Department (CCHD), United Way of Cascade County (United Way), and Benefis Health System. The 2019 Community Health Needs Assessment is the result of a partnership between Alluvion Health (formerly the Community Health Care Center), Benefis Health System, CCHD, United Way of Cascade County, and the Healthy Lives Vibrant Futures Coalition.

Operating on the three-year cycle required for hospital accreditation, Cascade County performs a Community Health Needs Assessment (CHNA) every three years. The CHNA kicks off with a Community Health Survey, which is sent to a random sample of households in our community and measures respondents' sense of community health in Cascade County, areas of greatest concern, access to healthcare, and other issues. The results from the health survey are then used to produce a Community Health Improvement Plan (CHIP) which will be implemented in 2020 and guided by the Healthy Lives Vibrant Futures (HLVF) Coalition Steering Committee. Each improvement plan is active for three years, until the next CHNA process is finished. The first improvement plan for Cascade County was created in 2011; a second edition was published in 2014, and a third in 2017.

This document, the 2019 Community Health Needs Assessment, will sketch an overall picture of community health in Cascade County and will outline the findings of the new 2018 Community Health Survey. This CHNA indicates Cascade County's alignment with state priority areas, and includes a description of local resources/assets for community health.

The 2019 CHNA also includes feedback from the January 17, 2019 Healthy Lives Vibrant Futures Symposium, in which local stakeholders from a variety of agencies convened to review the results of the survey and offer feedback on the next CHIP. Furthermore, the 2019 CHNA incorporates updated data on the status of residents' health in ten other areas: mortality, disease incidence and prevalence, hospitalizations, health risk behaviors, mental health and mental disorders, public health issues, access to care, dental services, child abuse and neglect, and special populations.

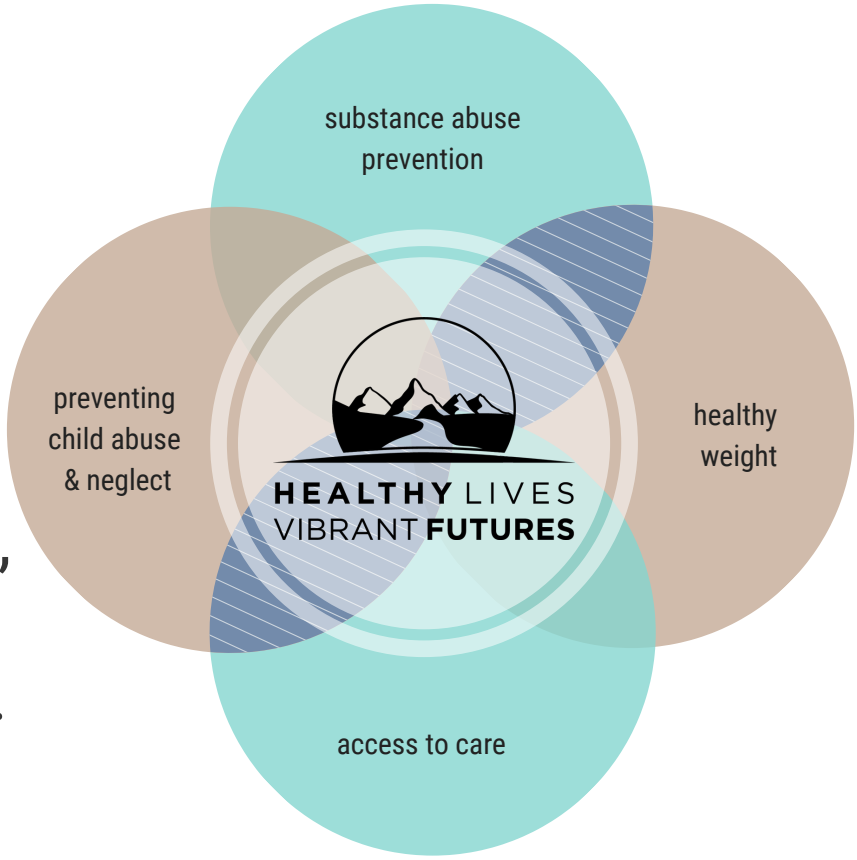
The four priority areas in Cascade County—substance abuse prevention, healthy weight, access to care, and preventing child abuse & neglect—were initially set by attendees at previous symposiums. The first three priorities were set at the 2011 Community Health Symposium, while child abuse & neglect was added as a priority area by attendees at the January 21, 2016 Community Health Symposium. The findings of the 2018 Community Health Survey, as well as feedback from the January 2019 Health Symposium—both detailed in the coming pages—reaffirm these four priority areas.

The new Healthy Lives, Vibrant Futures Coalition exists in order to track and improve conditions in these four priority areas going forward! We are an alliance of people from diverse fields, backgrounds, and agencies who are committed to taking action by addressing these issues as well as the economic & social conditions surrounding them. We are always looking to diversify our stakeholders even further. If you'd like to join us, please reach out! Contact information is listed on the back of this report.

II.2 What is Healthy Lives, Vibrant Futures?

WHAT WE DO

The purpose of Healthy Lives, Vibrant Futures is to collectively encourage and foster a productive, healthy, and vibrant community.



WHY WE DO IT

As members of the Healthy Lives, Vibrant Futures Coalition, we believe that:

- By working together we can provide unique solutions and achieve more
- Substance abuse negatively impacts everyone in our community
- Everyone in our community should have access to healthcare
- All of our children deserve to be safe
- A community that embraces health prospers

OUR PRIORITIES

- Reduce the number of youth and adults using and abusing alcohol, tobacco, and other substances
- Increase the number of people achieving and maintaining a healthy weight
- Improve Cascade County residents' ability to access timely, appropriate medical, dental, and behavioral health care
- Reduce the number of child abuse and neglect cases in Cascade County

II.3 2018 Community Health Survey

Cascade County's Community Health Survey was designed in 2012 based on model community health surveys, identified health indicators, and the specific interests of Cascade County partners. The survey used in 2018 is the same survey that was used in 2015 and 2012, which allows for comparability and an examination of temporal changes. The survey design and analysis, for all three assessment years, was done by Dr. Greg Madson. Ph.D., Academic Dean & Professor of Sociology at the University of Providence.

The purpose of the survey was to determine the public perception of community health in Cascade County. It targeted a range of community issues—from chronic diseases and health risk behaviors to health care access.

A mail survey was utilized and the survey was sent to enough randomized households (1500 total, as in previous years) to achieve a 5% confidence interval. The survey instrument, with a cover letter describing the study and its purpose (see Appendix A), was sent to a total of 1500 randomly selected homes throughout Cascade County. A 25% response rate (384 houses) was expected; however, only 223 mail-in responses were received.

In 2018, the survey was also disseminated through social media (which it had never been before), garnering an additional 337 responses via Survey Monkey. Please see Appendix B for Dr. Madson's analysis, as well as more details on survey administration and responses.

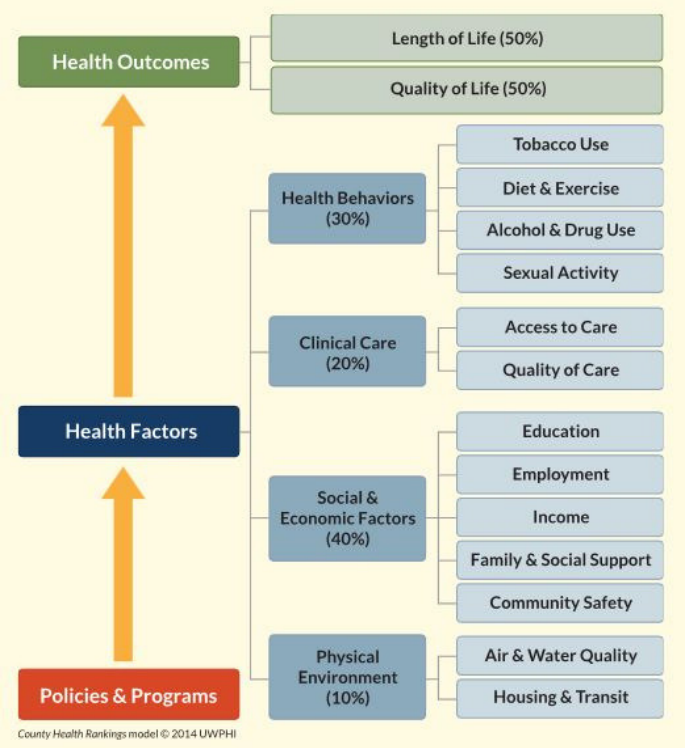
II.4 2019 Community Health Symposium

In January of 2019, results from the Community Health Survey were shared with the public at the Healthy Lives Vibrant Futures Community Health Symposium. Ninety-six people from around Cascade County—including rural areas like Belt, Fort Shaw, Cascade, and Sun River—with an interest in community health convened for presentations on the Survey and on the work that has been done over the last several years. A full list of attendees' organizations is available at the end of this report, and the comments and suggestions gathered at the Symposium will be detailed in Section III.

II.5 RWJ County Health Rankings

The University of Wisconsin's Population Health Institute, in collaboration with the Robert Wood Johnson Foundation (RWJ), developed the County Health Rankings and Roadmaps system. These rankings help counties understand what influences the health and life-expectancy of residents and can help guide local health improvement initiatives and strategies.

Cascade County was ranked 31st for health outcomes (length and quality of life) and 26th for health factors out of 48 ranked counties in Montana.



Health factors include behaviors (tobacco use, diet & exercise, alcohol & drug use, sexual activity), clinical care (access to care, quality of care), social & economic factors (education, employment, income, family & social support, community safety), and the physical environment (air & water quality, housing & transit). The full 2019 County Health Rankings report on the State of Montana is included in Appendix C.

It is worth mentioning that in Montana, health outcomes (which is evaluated by weighting length of life and quality of life equally) are significantly affected by the race/ethnicity of the individual, particularly for members of American Indian and Alaska Native tribes.

Differences in Health Outcome Measures among Counties and for Racial/Ethnic Groups in Montana

	Healthiest MT County	Least Healthy MT County	AI/AN	Asian/PI	Black	Hispanic	White
Premature Death (years lost/100,000)	4,900	21,000	19,400	2,900	10,000	6,800	6,600
Poor or Fair Health (%)	11%	26%	25%	N/A	N/A	18%	13%
Poor Physical Health Days (avg)	3.0	5.4	5.1	N/A	N/A	3.4	3.3
Poor Mental Health Days (avg)	2.9	4.5	5.3	N/A	N/A	4.6	3.4
Low Birthweight (%)	5%	7%	9%	10%	12%	8%	7%

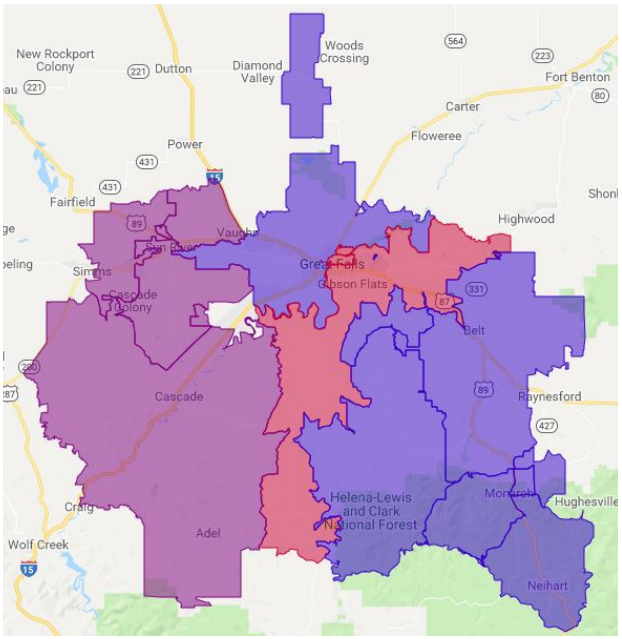
American Indian/Alaskan Native (AI/AN), Asian/Pacific Islander (Asian/PI)

N/A = Not available. Data for all racial/ethnic groups may not be available due to small numbers

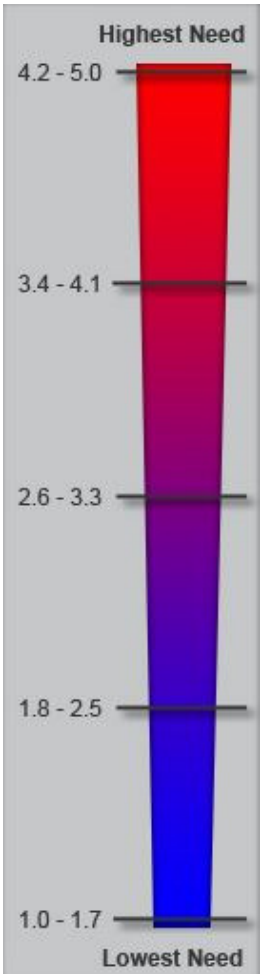
II.6 Community Needs Index

These health disparities increase the burden of disease, injury, violence or opportunities to achieve optimal health. Some social factors are protective, while others are detrimental to health. For example, an individual living with a very low income may lack resources and access to things like adequate housing, nutritious food, and safe recreational and work areas. They may also face stress because of finances and have less control over their circumstances. Over time, increased stress and lack of access to resources can contribute to unhealthy coping skills & health behaviors, like smoking or less healthy eating habits.

On the other hand, an improvement in any of these areas for an individual can improve both health behaviors and health outcomes. Even just one positive health factor—like a good social support network—can protect against the negative health effects of other social factors.



Zip Code	CNI Score	Population	City
59401	3.8	13467	Great Falls
59402	2.4	568	Malmstrom Afb
59404	2.4	27372	Great Falls
59405	3.4	31319	Great Falls
59412	2.2	1626	Belt
59414	4	1020	Black Eagle
59421	2.8	2476	Cascade
59443	2.8	750	Fort Shaw
59463	2.4	155	Monarch
59465	2.4	106	Neihart
59472	2.2	567	Sand Coulee
59480	2.4	328	Stockett
59483	3.2	770	Sun River
59487	2.8	1152	Vaughn



The Community Needs Index (CNI) identifies the severity of health disparities for every zip code in the United States, and the Cascade County CNI is provided above. More information about the CNI can be found in Appendix D.

III. Findings

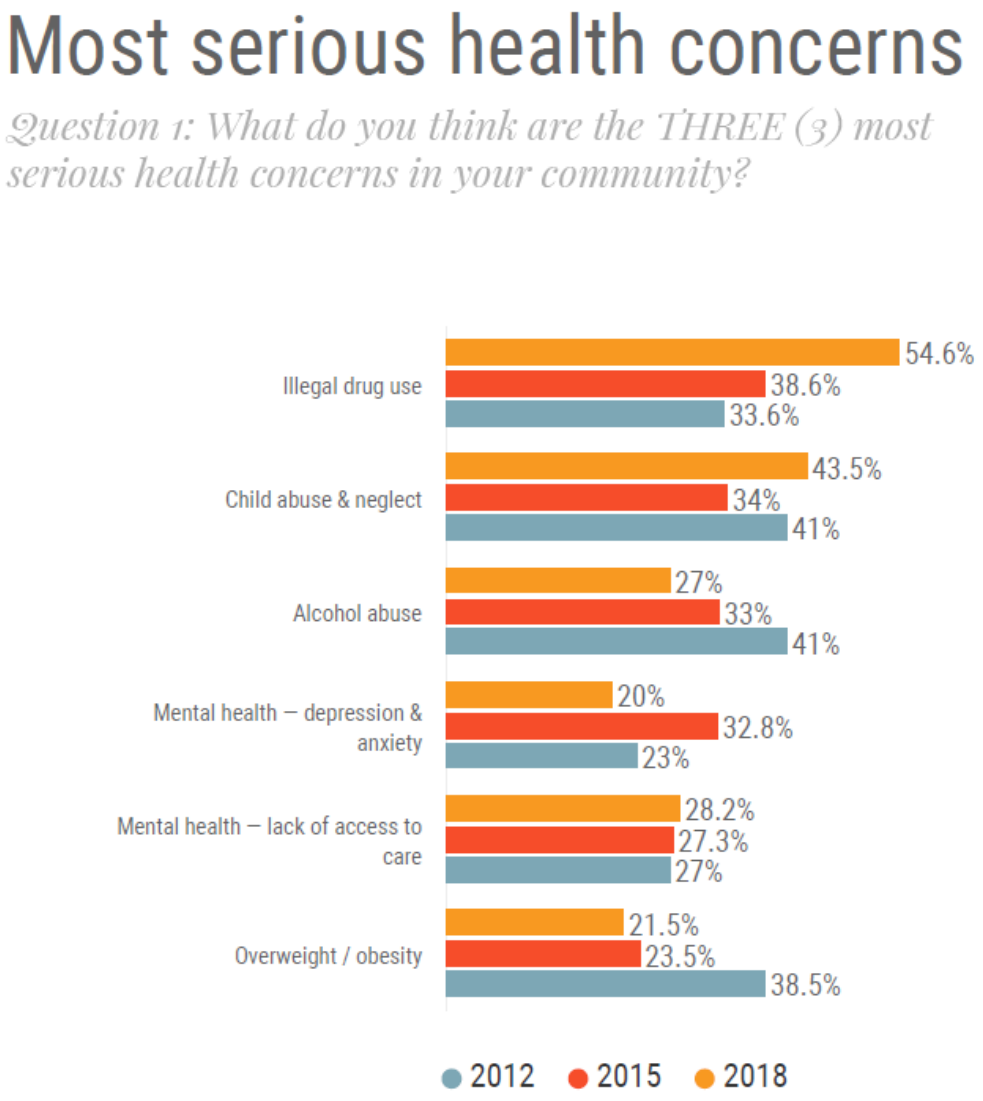
Public health data must be accurate, relevant, and timely to inform public health action. National surveys, such as those sent to epidemiologists, laboratories, and health departments, play an important role in understanding the public health infrastructure. National surveillance and reporting systems also play a vital role. Efforts are underway to improve the content of surveys, data collection for major population groups, and timely access to data through public reports and data files. These national surveys and monitoring systems should be sustained, strengthened, and harmonized.

Continuing to strengthen the evidence base for effective community interventions and for the effective organization, administration, and financing of public health services is critical to the future development of public health infrastructure. Public health services and systems research plays an important role in the development of this evidence base; support should be expanded over the decade, with a strong focus on translating research into practice.

Source: Healthy People 2020

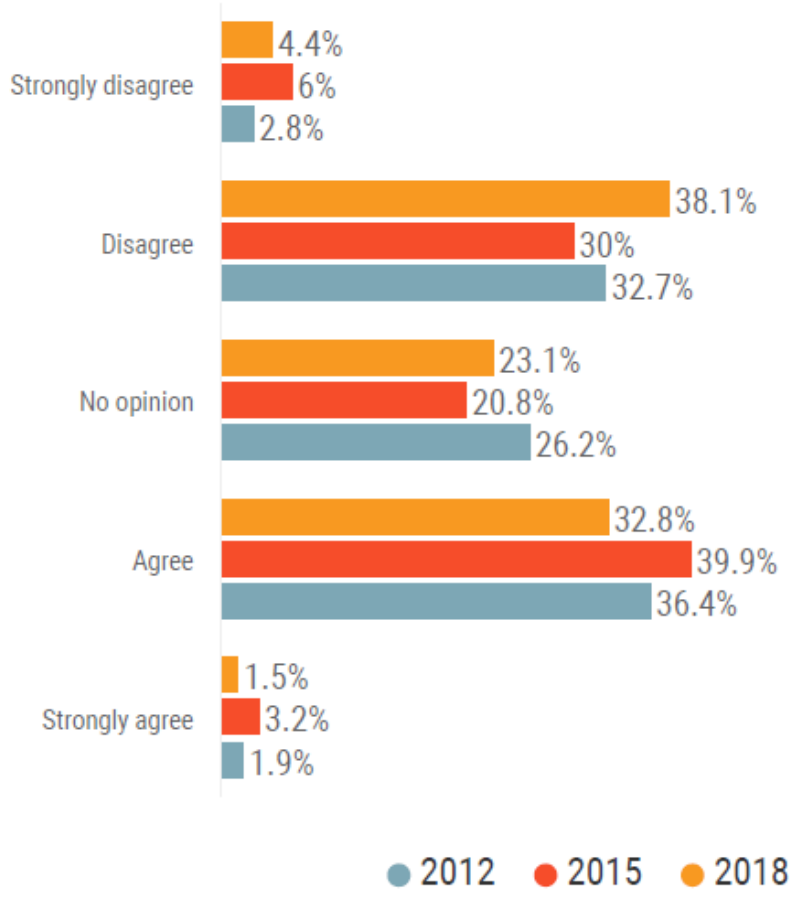
III.1 Community Health Survey results

Cascade County Community Health Survey respondents were asked to select the three most serious health concerns in their community. In 2018, the top three concerns were (1) illegal drug use, (2) child abuse & neglect, and (3) lack of access to mental healthcare. Fourth and fifth concerns were alcohol abuse and overweight/obesity; the sixth major concern was behavioral/mental health issues like depression and anxiety. If the concerns over drug and alcohol abuse are combined into substance abuse, and if mental health and *access* to mental health are joined under access to care, then the concerns expressed by survey respondents correspond precisely to the four priority areas identified in previous CHNAs: child abuse and neglect, substance abuse, access to care, and healthy weight.



Is your community healthy?

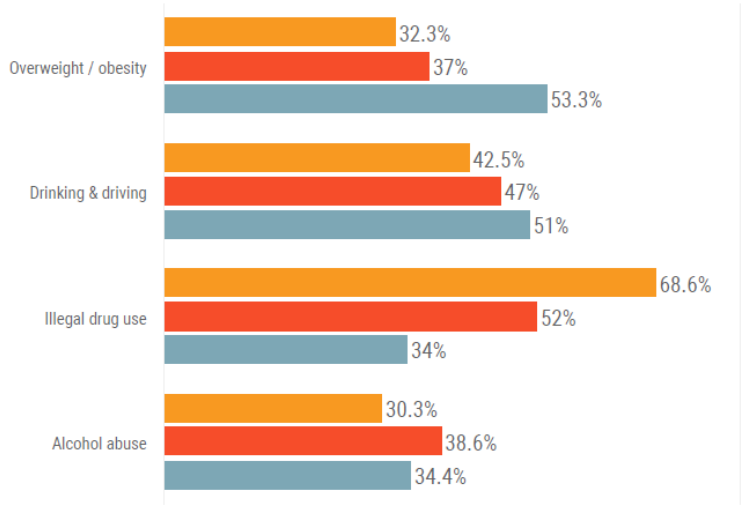
Question 2: Would you agree that your community is a healthy community?



Survey respondents were also asked if they think their county is healthy. 34.3% agreed or strongly agreed that Cascade County is healthy, while 42.5% disagreed or strongly disagreed. In 2015, a higher proportion of people agreed that Cascade County is a healthy community: 43.1%.

Top 3 lifestyle choices of most concern

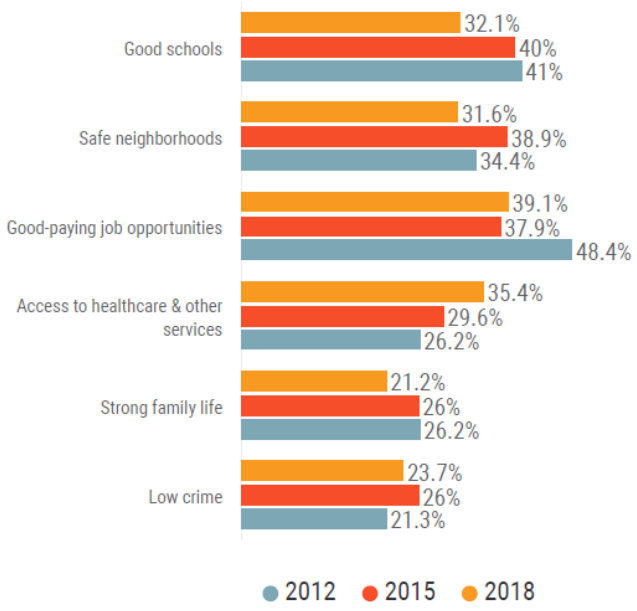
Question 3: Please check up to THREE (3) lifestyle choices in your community that concern you the most.



Respondents were also asked to select the top three most serious health risk behaviors—or lifestyle choices of most concern—in their community. In 2018, respondents' top concerns were illegal drug use, drinking & driving, overweight & obesity, and alcohol abuse.

Most important for a healthy community

Question 4: Please select THREE (3) of the items below that you believe are most important for a healthy community.



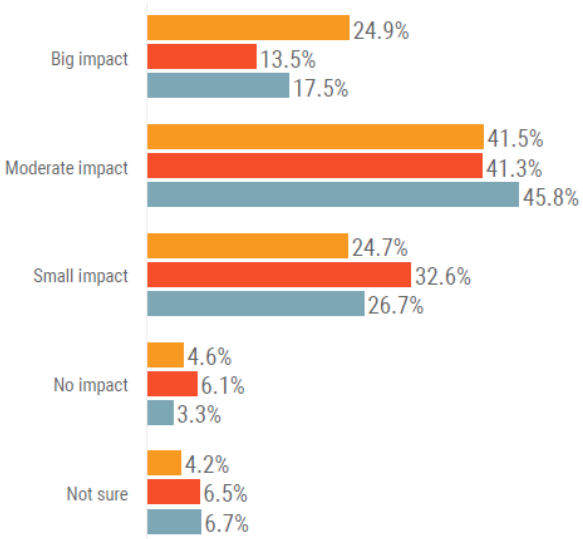
When asked to select items that are most important for a "healthy community," the top six included: good-paying job opportunities, access to healthcare and other services, good schools, safe neighborhoods, low crime, and strong family life.

Collective efficacy, an aspect of social capital and social cohesion, is grounded on mutual trust and describes a community's ability to create change and exercise informal social control (i.e., influence behavior through social norms). Collective efficacy is associated with better self-rated health, lower rates of neighborhood violence, and better access to health-enhancing resources like medical care, healthy food options, and places to exercise. Social institutions like religion and the family are common sources of social capital and social control, as well as social networks and social support.

Source: Healthy People 2020

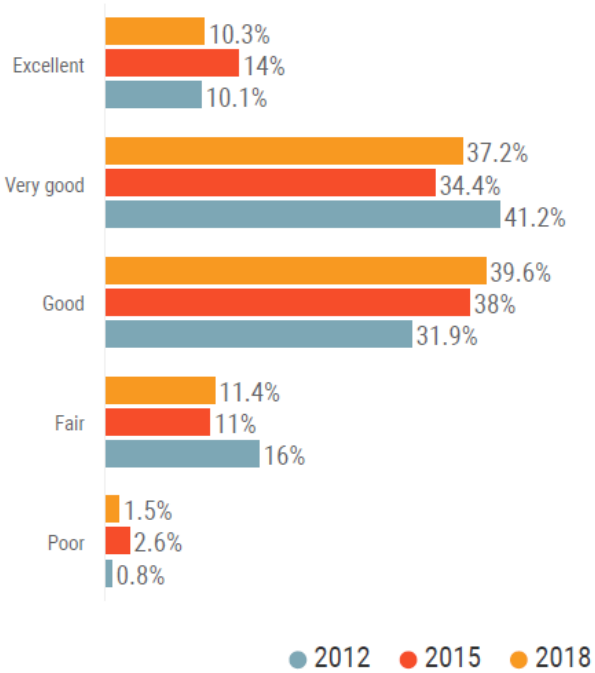
Your ability to impact community

Question 6: How much impact do you think people like you can have in making your community a better place to live?



Your health

Question 7: In general, would you say your health is . . .

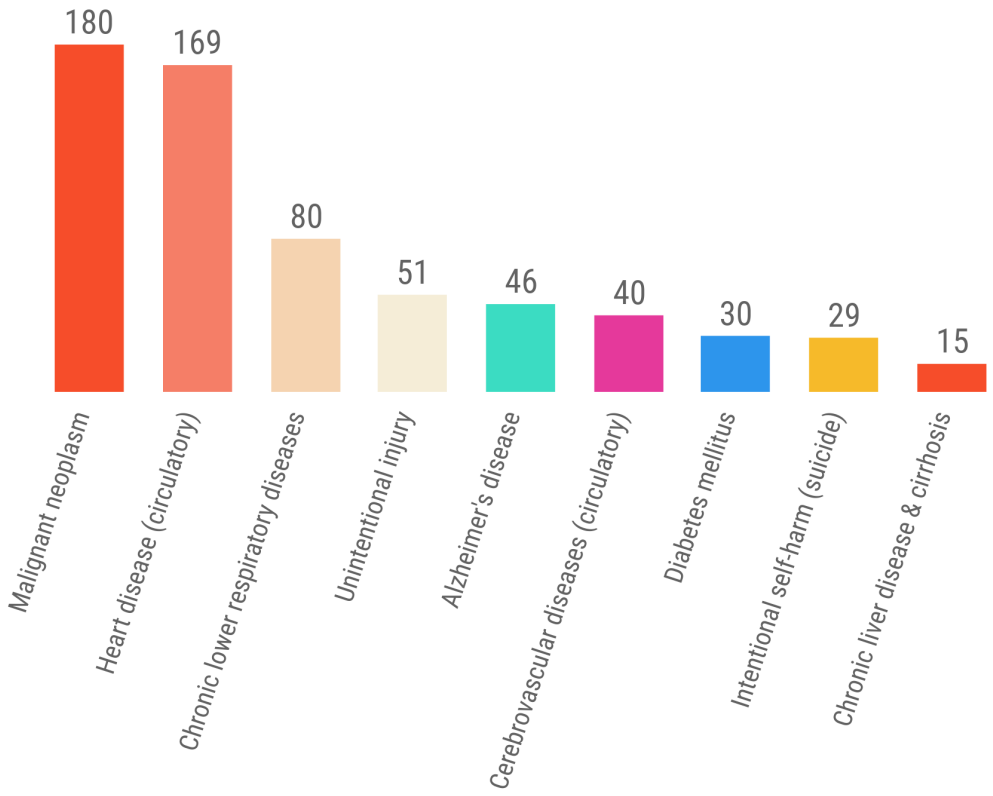


III.2 Mortality in Cascade County

Mortality rate and associated causes of death are significant factors when assessing the health of a community. Deaths that occurred in Cascade County accounted for 9.2% of all of deaths occurring in Montana in 2017, despite the County only composing 7.7% of the total population in Montana. According to the County Health Rankings, Cascade County is ranked 31 out of 48 for health outcomes—which include premature death rate and quality of life—with over 7800 years of potential life lost in 2017 (dying before age 75 is considered premature death).

Leading causes of death

Total number of deaths per cause in Cascade County, MT



III.3 Disease incidence and prevalence

III.3.1 Heart disease and cerebrovascular disease

According to the 2017 Montana Vital Statistics, heart disease is the second-leading cause of death in Montana, comprising eighteen percent of all deaths in 2017. Cerebrovascular disease is the fourth-leading cause, comprising four percent. In Cascade County, heart disease is also the second most common cause of death and cerebrovascular disease fifth. Risk factors for the development of heart disease include family history, older age, smoking, high cholesterol, uncontrolled high blood pressure, physical inactivity, obesity, uncontrolled diabetes, and uncontrolled stress.

III.3.2 Cancer

Cancer is the leading cause of death in Montana, with one in two men and one in three women being diagnosed in their lifetime. One of the most important factors in preventing death caused by cancer is regular screening. By detecting certain cancers at an early stage, the chance of successful treatment goes up. Below is 2016 data regarding screening from the Behavioral Risk Factor Surveillance System. Numbers in green indicate areas where the North Central Montana rates are better than rates for Montana overall (and numbers in red, as you'll see in later data tables, indicate areas where Cascade County or the North Central Region rates are worse than rates for Montana overall). Cervical, breast, and various colon cancer screening test rates are marginally higher for our region than for Montana overall.

BRFSS			North Central Montana Region*	Montana	Data Source/Definition
Screening	Cervical Cancer	Pap Smear in Past 3 Years (95% CI)	72.30%	71.50%	Among women age 18 or older, percent of women reporting having a Pap Smear within the past 3 years. (2016 weighted data)
			(66.3-77.7)	(68.7-74.1)	
	Breast Cancer	Mammogram in Past 2 Years (95% CI)	64.80%	62.40%	Among women age 40 or older, percent who reported having a mammogram in the past 2 years. (2016 weighted data)
			(57.5-71.6)	(59.2-65.6)	
	Colon Cancer: Blood Stool Test, Sigmoidoscopy, or Colonoscopy (95% CI)	Sigmoidoscopy or Colonoscopy (95% CI)	57.70%	56.50%	Among adults age 50 to 75, percent who reported having a FOBT/FIT blood stool test in the past year, colonoscopy in the last 10 years, or sigmoidoscopy every five years with FOBT every 3 years.** (2016 weighted data)
			(51.5-63.6)	(53.5-59.5)	

*BRFSS data not available by county until late 2019, so the data cited here is age-adjusted 2016 regional data.

**This measure uses the U.S. Preventive Services Task Force (USPSTF) Guidelines definition for colorectal cancer screening. The USPSTF recommends several tests for the prevention or early detection of CRC among adults aged 50-75 years: (1) high-sensitivity FOBT (guaiac-based FOBT or fecal immunochemical test [FIT]) annually, (2) colonoscopy every 10 years, or (3) sigmoidoscopy every 5 years with FOBT every 3 years. The BRFSS does not differentiate between the guaiac-based FOBT and the FIT. BRFSS query includes persons age 50-75, in even-numbered years only.

Efforts to change diet and weight should address individual behaviors, as well as the policies and environments that support these behaviors in settings such as schools, worksites, health care organizations, and communities. The goal of promoting healthful diets and healthy weight encompasses increasing household food security and eliminating hunger.

[...] Individuals at a healthy weight are less likely to:

- Develop chronic disease risk factors, such as high blood pressure and dyslipidemia
- Develop chronic diseases, such as type 2 diabetes, heart disease, osteoarthritis, and some cancers
- Experience complications during pregnancy
- Die at an earlier age

Source: Healthy People 2020

III.3.3 Obesity

Obesity is a nationwide issue, with 39.8% of US adults considered obese (Center for Disease Control and Prevention 2015-2016). Being overweight or obese has consistently been one of the top four lifestyle concerns for Cascade County survey respondents. Based on Body Mass Index (BMI), 37.8% of North Central Montana residents are overweight (BMI 25-29.9) and 28.5% are obese (BMI 30+). The number of North Central region residents that are obese is significantly higher than the Montana rate of 25.5%. Being overweight/obese risks many other health conditions, including heart disease and diabetes, and is greatly affected by behavioral factors like inadequate fruit and vegetable consumption and lack of physical activity.

BRFSS		North Central Montana Region*	Montana	Data Source/Definition
Lifestyle	Adequate Fruit and Vegetable	87.90%	86.50%	Percent of all adults who reported usually eating 5+ servings of fruits and vegetables per day. (weighted 2015 data)*
		(84.8-90.5)	(85.1-87.9)	
	No Leisure Time Physical Activity (95% CI)	22.60%	20.50%	Percent of all adults in Cascade County (not North Central Montana region) who reported NOT participating in any physical activity or exercise outside of their regular job. (2016 county-level data)
		(18.7-25.2)		
	Obesity (95% CI)	28.50%	25.50%	Based on a Body Mass Index of 30 or greater, calculate from self-reported weight and height. (2015 data, not age-adjusted)
		(24.9-32.3)	(23.9-27.2)	
	Overweight (95% CI)	37.80%	37.30%	Based on a Body Mass Index of 25 or greater but less than 30, calculate from self-reported weight and height. (2015 data, not age-adjusted)
		(33.9-41.8)	(35.4-39.1)	

*BRFSS data not available by county until late 2019, so the data cited here is age-adjusted 2015 regional data.

III.3.4 Diabetes

According to the CDC's 2016 data, approximately one in every eleven adults living in the US have diabetes, a rate of 8.5%. The number of US adults aged 18 or older with diagnosed diabetes has almost quadrupled over the last few decades, from 5.5 million in 1980 to 23.1 million in 2016. Montana, fortunately, has a significantly lower rate than the national rate, coming in at 6.9%, but as of 2015 Cascade County's rate is higher than Montana's at 7.7%.

Although Cascade County residents did not consider diabetes to be an important health concern, it is one of the top ten leading causes of death in Montana and Cascade County. Diabetes is, furthermore, an extremely expensive disease because of its chronic complications—which include diabetic blindness, lower extremity amputation, heart disease, and end-stage renal disease.

III.4 Hospitalizations

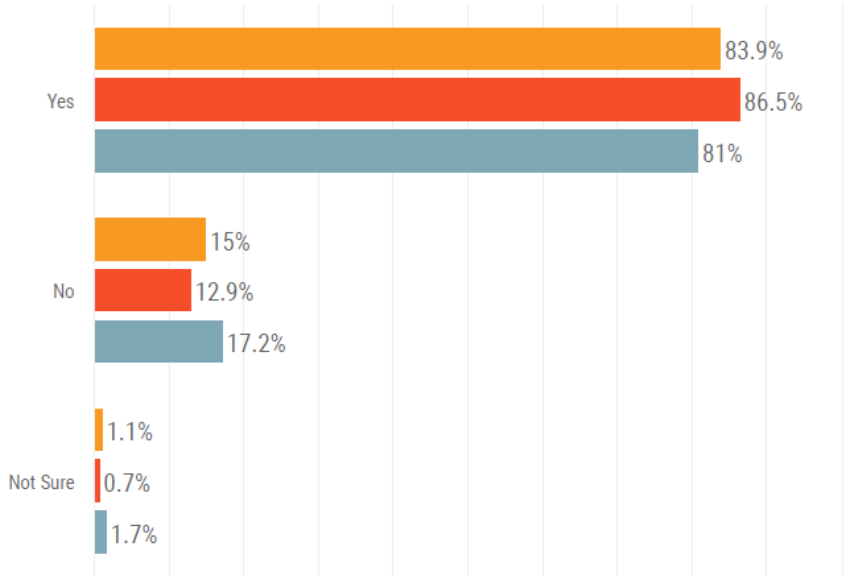
Inpatient Admissions (not Emergency Department data)—all data from 2016-2017 unless otherwise indicated			
	Cascade County		Montana
Health Indicator	**Number**	**Rate per 100,000** (95% CI)	**Rate per 100,000** (95% CI)
Asthma (2012-2014)	167	64.4 (54.4-74.4)	47.5
Chronic Obstructive Pulmonary Disease (COPD, 2012-2014)	479	433.3 (394.2-472.5)	278.1
Cardiovascular Disease - Stroke Hospitalization Rate (2012-2014)	634	202.2 (186.2-218.1)	152
Diabetes (type 1 and 2, 2012-2014)	3778	1288.4 (1246-1330.8)	1058.9
All Unintentional Injuries	689	346 (319-373)	296.4
Falls	451	207.4 (187.6-227.2)	164.3
Assault Injury	31	20.3 (13.1-27.6)	12.1
Motor Vehicle	58	35.4 (25.9-44.8)	38.8
Unintentional Poisoning	58	33.3 24.3-42.2	36.2
Intentional Self Harm Drug Poisoning	135	90.8 (75-106.5)	84.3
Intentional Self-Harm Injury	129	86.1 (70.8-101.4)	66.6
Traumatic Brain Injury	168	88 (74.2-101.8)	86
Source: Community Snapshot for Cascade County — Community Health Profile, MT Department of Health and Human Services			

Hospital admission and discharge information is available through the Montana Hospital Discharge Database for most acute care hospitals and is accessible via Montana's IBIS databases. Additionally, the Robert Wood Johnson Foundation's 2016 health ranking reports that 3368 hospital stays in Cascade County were preventable. Above are the main occasions for inpatient admission in Cascade County and Montana overall from 2016-2017. The numbers in red indicate an area where Cascade County rates are higher than Montana, while numbers in green indicate an area where Cascade County rates are lower than Montana overall.

As you'll see on the following page, at least 15% of Cascade County residents reported in the community health survey that they did not have a regular primary care provider. These same residents with no primary care provider, when they have a health issue, go to an urgent care center (8.6%), just don't get the health care they need (3.6%), or go to an emergency room (2.9%).

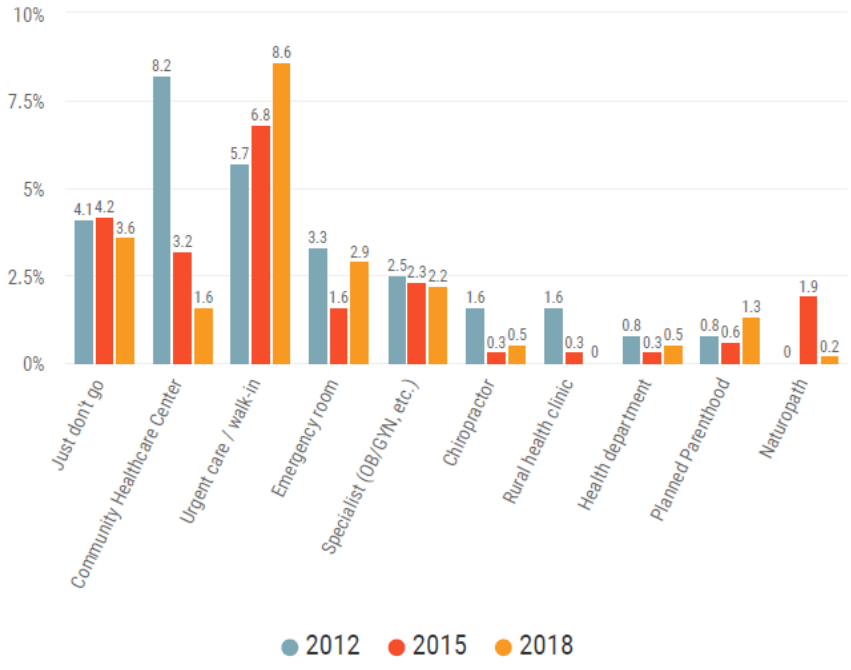
Your health care provider

Question 11: Do you have someone who you consider to be "your" doctor or healthcare provider?



Healthcare without a primary care provider

Question 12: If you do not have someone you consider to be "your" doctor, where do you get healthcare?



III.5 Health risk behaviors

Personal behavior can have a huge impact on individual health. The risk of getting injured or developing many chronic or communicable diseases can be reduced by changing personal behavior. Below are risk behaviors associated with health outcomes from the Behavioral Risk Factor Surveillance System (BRFSS), a self-reported survey conducted by the CDC.

BRFSS	Protective Factors		BRFSS	Substance Use	
	Always/Nearly Always Wears Seatbelt (95%CI)			Tobacco Use - Current Smoking (95% CI)	Binge Drinking (95% CI)
Total North Central Montana Region	68.30% (34.2-72.0)		Total Cascade County Adults 18+ (2014-2016)	20.60%	17.90%
Total Montana	73.90% (72.1-75.7)				
Region Adults 18-44	63.90% (57.1-70.3)				
Montana Adults 18-44	71.10% (68.0-74.0)			(17.6-23.6)	(15.1-20.7)
Region Adults 45-64	70.20% (64.4-75.5)		Total Montana Adults 18+ (2014-2016)	19.20%	19.20%
Montana Adults 45-64	74.90% (72.4-77.3)				
Region 65+	76.80% (70.8-81.8)				
Montana 65+	80.10% (77.9-82.2)			(18.3-20.1)	(18.3-20.1)
Definition	Percent of all adults who reported "always" or "nearly always" using a seat belt when they drive or ride in a car. Source: 2016 BRFSS data for region (no Cascade County data available).			Percent of all adults who reported having smoked at least 100 cigarettes in their entire lifetime and currently smoking either every day or some days. 2012 data	Percent of all adults who reported at 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 days.
Source: Montana Behavioral Risk Factor Surveillance System, Montana Department of Public Health and Human Services, 2017.					

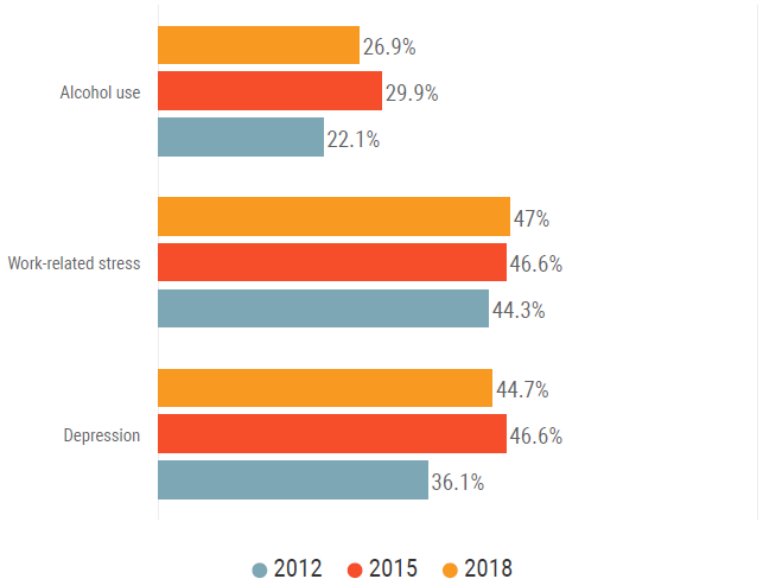
In section III.1, community health survey question #3, we saw that the top lifestyle behaviors that caused concern to respondents in 2018 were illegal drug use (68.6%), alcohol (drinking & driving, 42.5%; alcohol abuse, 30.3%), and overweight/obesity (32.3%). We can see above that these are indeed risks. Even though Cascade County outperforms Montana as a whole, 17.9% of adults engaging in binge/heavy drinking is still significantly higher than the US top performers, who have an average of 13% (County Health Rankings).

III.6 Behavioral & mental health

Evidence suggests that depression and other mental health conditions are associated with increased prevalence of chronic disease. Healthy People 2020 notes that the goal of any community should be to "improve mental health through prevention and by ensuring access to appropriate, quality mental health services. [...] Mental health and physical health are closely connected. Mental health plays a major role in people's ability to maintain good physical health. Mental illnesses, such as depression and anxiety, affect people's ability to participate in health-promoting behaviors. In turn, problems with physical health, such as chronic diseases, can have a serious impact on mental health and decrease a person's ability to participate in treatment and recovery."

Mental health issues with most impact

Question 5: Please check up to THREE (3) mental health issues that impact you and your family the most.



Mental health (depression & anxiety) and access to mental health services were two of the top six most serious health concerns for Cascade County survey respondents. When asked to pick the three mental health issues most impacting themselves and their families, community health survey respondent chose work-related stress (47%), depression (44.7%), and alcohol use (26.9%).

2016 BRFSS data states that 19.4% of North Central Montana region residents have been diagnosed with a depressive disorder. Additionally, 2019 County Health Rankings reported that 11% of Cascade County residents experience "frequent mental distress," which means 14 or more days of poor mental health per month—and, on average, residents experience 3.6 poor mental health days per month (BRFSS data, 2016).

III.7 Public health: communicable disease

Communicable diseases spread from one person to another person through blood, bodily fluids, or airborne means. Many of these infections are preventable via immunizations or other protective measures. Montana tracks vaccination rates, particularly in vulnerable populations like children and adults aged 65+, and requires children attending school to receive certain vaccinations. These requirements are intended to protect the health of not only the student receiving the immunization, but also the health of students who, due to medical reasons, cannot be immunized.

According to the Montana State DPHHS School Immunization Report for 2017-2018, the statewide percentage of Montana students enrolled in prekindergarten through 12th grade between 2011 and 2017 who had medical exemptions to one or more vaccine(s) has remained at or below 0.5% among public school students. Among private school students, the number remained at or below 0.7%.

However, over the same period, the statewide percentage of Montana public school students from pre-K to 12th grade with a *religious* exemption to one or more vaccines increased from 1.8% during the 2011-2012 school year to 3.1% during 2017-2018. Among private school students for the same period, the number increased from 3.4% to a high of 8.7% in 2016-2017, though by 2017-2018 that number had fortunately decreased to 6.5%.

In Cascade County for the 2017-2018 school year, 0.34% of students (public and private) enrolled with a medical exemption, and 1.6% with a religious exemption.

Adults aged 65+ in Cascade County have immunization rates for influenza and pneumococcal pneumonia about equal to those of Montana residents overall.

Core Indicator	Cascade County	Montana	Data Source/Definition
Adults aged 65+ immunized for influenza in the past 12 months	56.00% (49.1-62.6)	57.30% (54.4-60.1)	2016 Montana and National Behavioral Risk Factor Surveillance System / Rate per 100,000 with 95% CI
Adults aged 65+ ever immunized for pneumococcal pneumonia	74.60% (68.4-79.9)	73.30% (70.6-75.8)	2016 Montana and National Behavioral Risk Factor Surveillance System / Rate per 100,000 with 95% CI

In addition to tracking and encouraging immunizations, more than 60 communicable diseases are reported to local health departments, which investigate and provide education to prevent further spread of the illness. Health departments also contact exposed individuals if treatment and/or monitoring of symptoms is necessary. As can be seen in the table below, numerous communicable diseases are reported every year in Cascade County.

The number of Hepatitis C cases reported annually is significant. An estimated 3 million people are living with Hepatitis C in the US, and many do not feel ill or know they are infected. 1687 cases of Hepatitis C were reported in 2017 to DPHHS more than 1400 confirmed and probable cases were reported in Montana in 2014 (Communicable Disease in Montana: 2017 Annual Report). Fortunately, in Cascade County the number is decreasing, from 153 in 2016 to 141 in 2018.

Disease	2016	2017	2018
Amebiasis	0	0	0
Campylobacter	16	19	29
Chikungunya	0	0	0
Chlamydia	415	445	507
Coccidioidomycosis	1	0	5
Cryptosporidiosis	3	4	5
Diarrheal Outbreak	5	1	1
E. coli non-0157 (STEC)	14	10	5
Giardia	8	8	8
Gonorrhea	81	60	63
Haemophilus influenza, invasive	1	1	1
Hantavirus	1	0	1
Hepatitis B	2	2	4
Hepatitis C	153	162	141
Histoplasmosis	0	0	0
HIV	3	1	3
Influenza	324	444	1088
Legionella	1	1	1
Lyme Disease	1	0	0
Malaria	0	0	1
Norovirus	60	56	72
Pertussis	1	0	1
Q Fever	0	1	0
Respiratory Syncytial Virus (RSV)	140	50	165
Rocky Mountain Spotted Fever	1	0	2
Salmonella	11	7	11
Shigella	0	1	0
Strep Pneumonia (invasive)	19	11	12
Syphilis	0	2	8
Transmissible Spongiform Encepholopathy	0	0	0
Tuberculosis (TB)	0	1	0
Varicella	2	0	1
West Nile Fever	0	0	11
Totals	**1263**	**1286**	**2146**

Also of note is the decreasing number of Gonorrhea cases in Cascade County. Although the incidence rate for Montana is lower than the national rate to begin with, the incidence of Gonorrhea in Montana was steadily rising over the past few years, reaching an all-time high in 2016.

Chlamydia is the most commonly reported disease in Montana and in Cascade County. Despite being the fifth most populous county in the state, Cascade County has the fourth highest number of Chlamydia cases reported for 2017, trailing Yellowstone (745 cases), Missoula (557), and Gallatin (542).

Last, but not least, is a rise in the number of influenza cases in 2018 in Cascade County, over double the number reported in 2017. However, public health nurses at CCHD commented that influenza reporting has dramatically improved in the past year, so it is likely that the difference between 2018 and 2017 is less dramatic than it appears, with influenza being under-reported in previous years. Furthermore, the number of hospitalizations due to influenza actually decreased, going from 117 in the 2016/2017 season to 113 in 2017/2018.

Access to comprehensive, quality health care services is important for promoting and maintaining health, preventing and managing disease, reducing unnecessary disability and premature death, and achieving health equity for all Americans. This topic area focuses on 3 components of access to care: insurance coverage, health services, and timeliness of care. When considering access to health care, it is important to also include oral health care and obtaining necessary prescription drugs. Access to health services means "the timely use of personal health services to achieve the best health outcomes" and has 3 distinct steps:

- Gaining entry into the health care system (usually through insurance coverage)
- Accessing a location where needed health care services are provided (geographic availability)
- Finding a health care provider whom the patient trusts and can communicate with (personal relationship

Source: Healthy People 2020

III.8 Access to care

III.8.1 Medical manpower needs

Benefis Health System has developed a Health Provider Manpower Projection Model to determine manpower needs for our region. The projection model is based on patient visits per physician specialty (capacity) and patient visit utilization per 1,000 population in a rural setting. The manpower needs are then compared with the community's current physician availability, with the assumption that physicians run efficient practices. This model was applied to the Cascade County population for 2015, and the results will be applied to our region through the end of 2020.

At the time of modeling, need was projected for approximately 21 new physicians, particularly in the areas of Behavioral Health (Psychiatry), Internal Medicine, Pediatrics, General Surgery, OB/GYN, and Dermatology.

III.8.2 Identifying gaps in treatment options

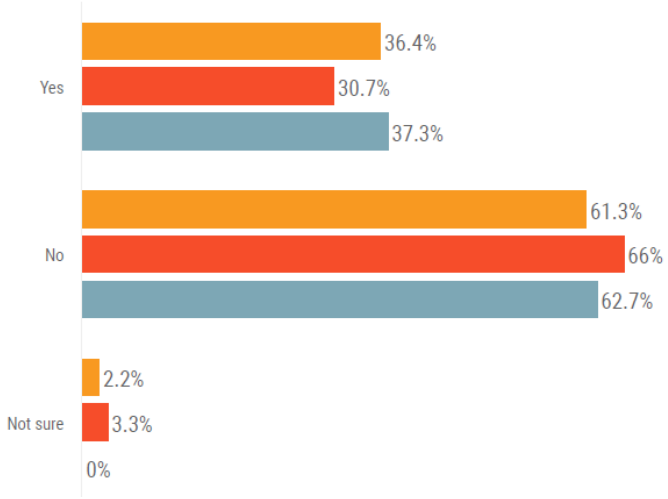
Alluvion Health, another healthcare partner, uses the "Uniform Data System" Mapper to track population characteristics based on zip codes, and has used that information to track geographically-based needs for healthcare in low-income populations (identified using distance from hospitals & rural health clinics). This analysis model led to the institution, in early 2019, of a one-day-per-week clinic in Belt, Montana. Alluvion has also used SAMHSA and HRSA data to identify a need for opioid sensor inhibitor treatments like suboxone in Cascade County; as a result, they began offering these in late 2018.

Image source: Alex Piazza, University of Michigan

III.8.3 Community Health Survey results

Delayed or did not receive healthcare

Question 13: In the past three years, was there a time you or a household member needed, but did not get, healthcare services?



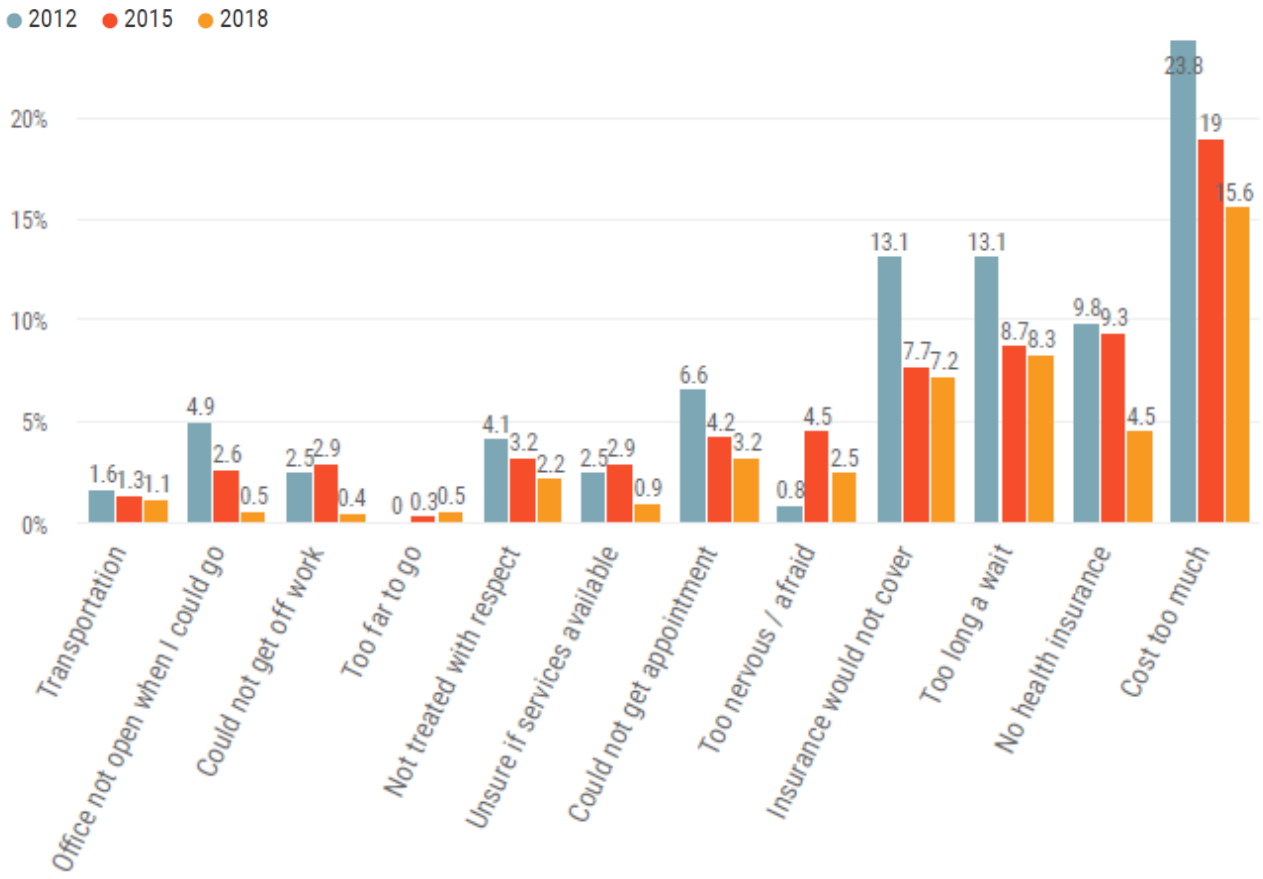
Access to health care is essential for individuals to stay healthy. In Cascade County, 36.4% of respondents to the community health survey said they did not get, or delayed getting, health care services at some point in the past three years. This number increased from 30.7% in 2015.

The number one reason (15.6% of responses) that Cascade County residents did not access care was because the cost was too high. Too long a wait for services was the second most common reason (8.3%), and insurance failing to cover services was third (7.2%).

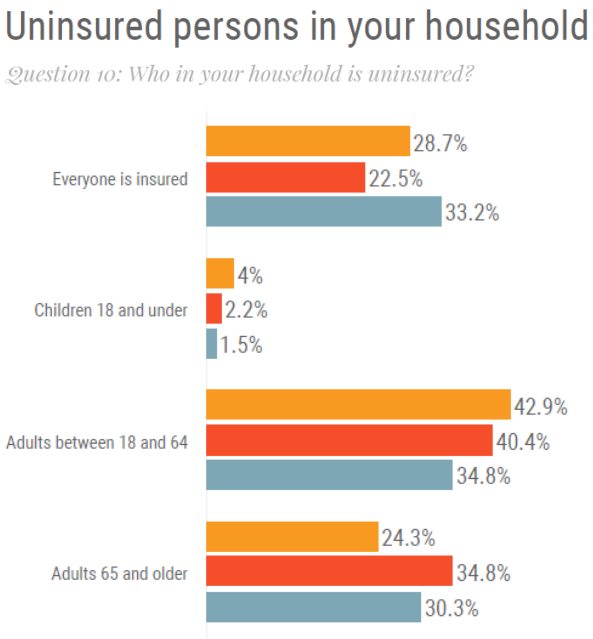
Fortunately, lack of health insurance being cited as a reason to delay or avoid care has decreased by more than half since 2015 (9.3% to 4.5%).

Reasons for not getting healthcare

Question 14: What were the THREE (3) most important reasons you or a family member did not get the care you needed?

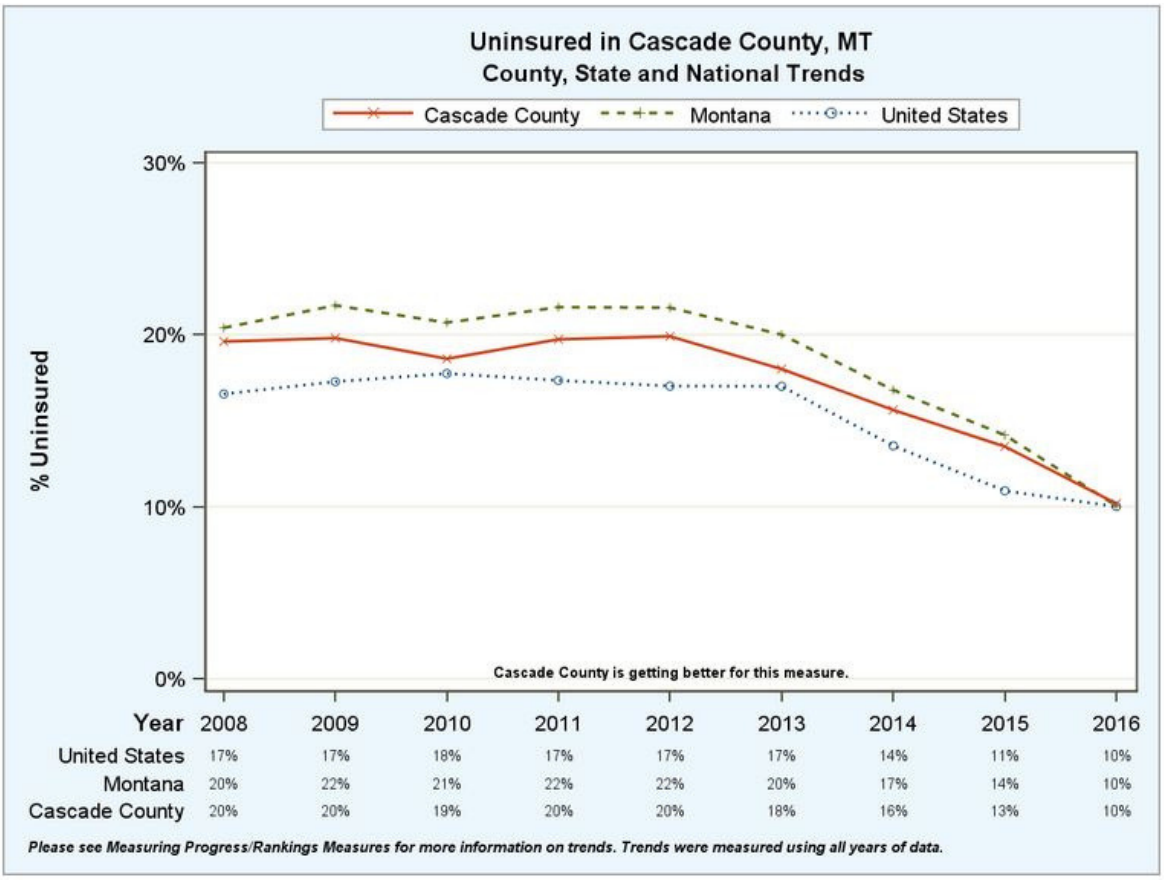


III.8.4 Health insurance



In Montana it was estimated by the Robert Wood Johnson Foundation (County Health Rankings, or CHR) that, in 2012, 22% of Montanans—and 20% of Cascade County residents—were uninsured. However, the number of people without insurance in Cascade County has gone down steadily since then. County Health Rankings in 2016 show a 10% uninsured rate, and the 2018 Cascade County community health survey now measures uninsurance at 7.2%. The CHR chart below shows a history of uninsured rate in our county, Montana, and the US.

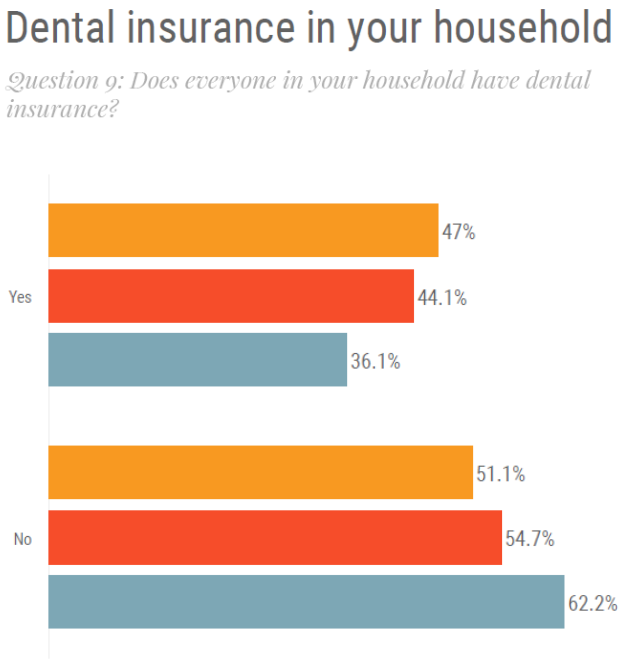
The group least likely to be insured, according to the county health survey (above left), are adults age 18-64 (42.9%) and adults 65+ (24.3%, though this number is down over 10% since 2015). Children 18 & under have had a growing uninsured rate (1.5% in 2012 to 4% in 2018).



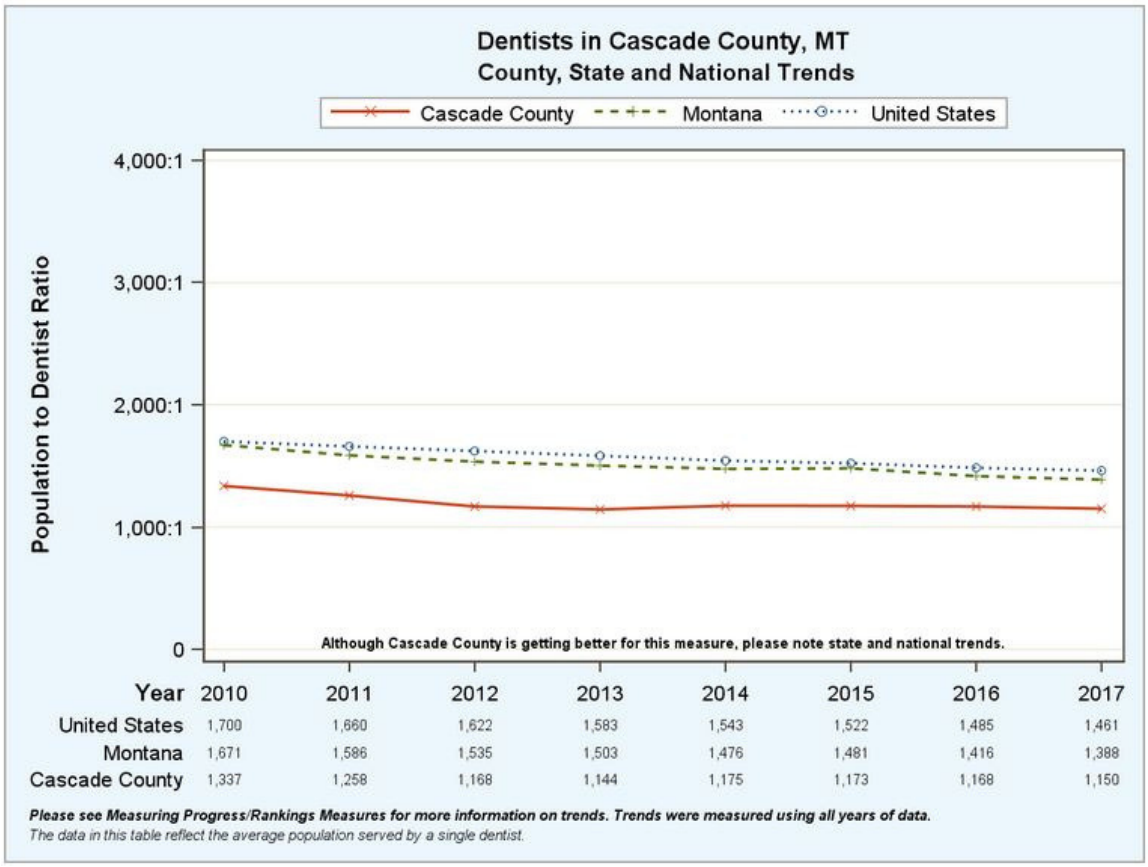
III.8.5 Dental health

According to the CDC, 31.6% of adults age 20-44 have untreated dental caries (decay), as do 18.6% of children aged 5-19. Cascade County is no exception, unfortunately, and has been designated a dental health professional shortage area by the U.S. Department of Health and Human Services, Human Resources and Services Administration (HRSA).

51.1% of respondents to the Cascade County community health survey said that at least one person in their household does not have dental insurance. 2016 BRFSS data states that, for the North Central region of Montana, 39.8% of residents have not gotten an annual dental exam.



However, Cascade County's access to dental care is slowly improving. In 2010, there was a ratio of one dentist to 1337 patients; as of 2017, the ratio is 1:1150—an improvement that will make accessing timely dental care much more likely for our community.



III.9 Child abuse & neglect

Child abuse and neglect has been a prominent topic in Cascade County in recent years. In April of 2015, the Great Falls Tribune reported that Cascade County had the dubious ranking of number one in the state of Montana for child abuse and neglect cases. Respondents of the 2015 Cascade County community health survey ranked child abuse & neglect as the second most serious health concern in their community. The quickly rising number of abuse and neglect cases with the Department of Family Services has affirmed this priority area as a vital one for the health and safety of our community's children.

Abuse, neglect, and family dysfunction are forms of Adverse Childhood Experiences (ACEs), according to the Montana State Health Assessment (2017) are associated with risky behaviors (tobacco use, alcohol abuse, or risky sexual activity), chronic health conditions—like behavioral/mental health problems, sexually transmitted infections, heart disease, and diabetes—and even premature death. Knowing the future health outcomes of those with multiple ACEs is enough to make this a public health concern, even if we of HLVF weren't committed to safe, healthy lives for the children of our community. In this way, as well as in other priority areas, our child abuse & neglect priority area is well-aligned with the State's Health Assessment.

According to the Montana Department of Health and Human Services, Child and Family Services, there has been a steady increase in removals in Cascade County since 2011. Montana is above the national average with nearly 4000 children placed in out of home care as of December 2018, over 640 of which (as of July 2018) are in Cascade County. The reasons for removal are varied; however, in 2016 89% of children were removed due to neglect. In 2018, 73.1% of children removed from their homes were removed because of drug use—and of those, 81.3% were removed because of methamphetamine.

Cascade County is one of six counties in Montana that is considered to be high risk for child abuse and neglect.

You'll find detailed charts of allegations and substantiated claims, as well as the numbers/percentages of children removed from their homes, on the next page.

Image source: CASA of Missoula, MT

Goal: decrease total substantiated child abuse & neglect cases						
DFS						
Updated: annually (April)						
	2013	**2014**	**2015**	**2016**	**2017**	**2018**
Substantiated	91	107	129	150	213	201
Founded				139	168	181
Indicated				3	1	4
Total	91	107	129	292	382	386

Count of maltreatment allegations by maltreatment type						
DFS - may be more than 1 child/report						
Updated: annually (April)						
	2013	**2014**	**2015**	**2016**	**2017**	**2018**
Substantiated Allegations	191	296	300	476	771	643
Allegations by type:						
Physical Abuse	35	17	15	16	24	18
Neglect	135	259	255	426	719	600
Medical Neglect	8	7	6	11	12	3
Sexual Abuse	6	7	12	13	11	19
Psych/Emot Maltreatment	6	5	5	10	5	3
Other	1	1	8	0	0	0

Children in care in Cascade County				
DFS				
Updated: annually (July)				
As of:	# of children in foster care	# of removals where drug use was indicated	% of removals where drug use was indicated	Of removals where drug use was indicated, % that was meth-amphetamine
7/10/2015	372	230	61.80%	74.70%
7/11/2016	413	284	68.70%	76.40%
7/10/2017	509	383	75.20%	80.90%
7/10/2018	644	471	73.10%	81.30%

III.10 Special populations

In the US, higher rates of disease and health conditions are seen in minority populations. Much of this is thought to be due to social or economic factors that affect health, or social determinants of health. This is true in Montana and Cascade County just as in other parts of the US. There is one minority group in particular that must be kept in mind any time health issues are going to be addressed in our community, and that is American Indians.

Montana has one of the highest Native American populations in the US and Great Falls has the largest concentration of urban Native Americans in Montana. Based on 2014 data from the Montana Department of Health and Human Services Office of Epidemiology and Scientific Support, the American Indian population have lifespans 19 years shorter than whites. Causes of death that affect American Indians in this way include accidents (difference of 28.5 years), artherosclerosis (23.5 years), suicide (22 years), influenza and pneumonia (14 years), congenital malformations and chromosomal anomalies (15 years), heart disease (14 years), nephritis (14 years), cerebrovascular disease (13.5 years), and diabetes (11 years).

Image source: MT DPHHS Tobacco Use and Prevention Program

According to a recent report by the Substance Abuse and Mental Health Services Administration (SAMHSA) entitled "Substance Use and Mental Health Issues among US-Born American Indians or Alaska Natives Residing on and off Tribal Lands," published July 2018, research has consistently found that American Indians/Alaska Natives (AI/ANs) is "linked with social determinants of health, including poverty, lack of opportunity, violence and victimization, chronic stress, and barriers to culturally competent behavioral healthcare. Disparities in the prevalence of substance use and mental health issues among AI/ANs may also be viewed as a legacy of historical trauma—that is, the intergenerational impact of massacres; forced relocation; involuntary removal of children to boarding schools; and bans on native, language, traditions, and cultural practices."

IV. Next steps

IV.1 The community health symposium

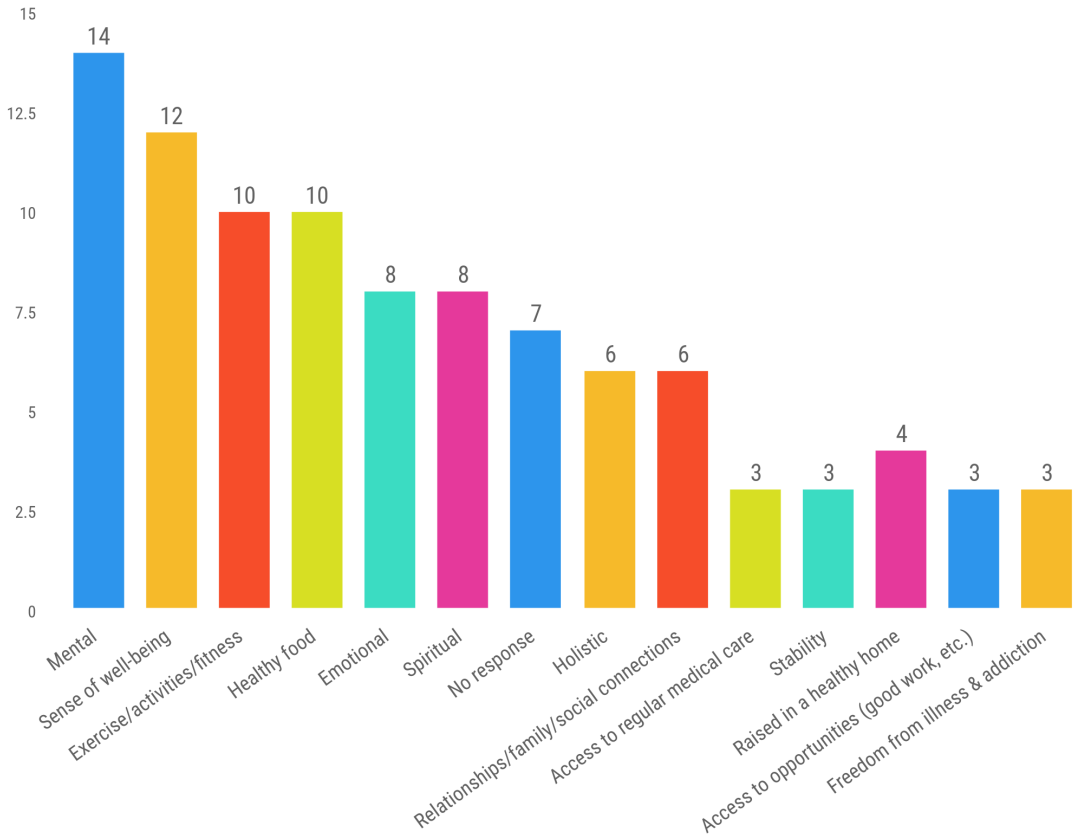
Part of the accreditation process for CCHD, as well as for local not-for-profit hospitals and health centers like Benefis and Alluvion, is ensuring that the community has an opportunity to learn about what their Community Health Assessment committees have learned via surveying, as well as the strategies they've employed in the past. This is a required next step after the initial elements of the community health assessment process have been completed.

On January 17, 2019, the Healthy Lives, Vibrant Futures (HLVF) Coalition hosted a community health symposium in which the results of the 2018 Community Health Survey were shared with attendees in a presentation; afterward, attendees were free to go from table to table to learn about different programs offered by the priority area committees. Each attendee was given a bingo card, and those who visited each table and answered the survey questions on the back of the bingo card were entered in a drawing for prizes from a local outdoor gear supplier. Each Priority Area committee had as many tables as they wished. Ninety-six people attended the symposium from all over Cascade County, and 51 of them—just over 50%—responded to the survey questions.

The responses to the symposium's five survey questions are depicted on this and the following several pages. Please note that on questions one, three, four, and five, there was no limit to the number of answers that respondents could give, so total numbers will not necessarily add up to the sample size of 51. Responses similar in nature (e.g., insurance & access to care, or spirituality & religion) have been grouped together for the sake of simplicity.

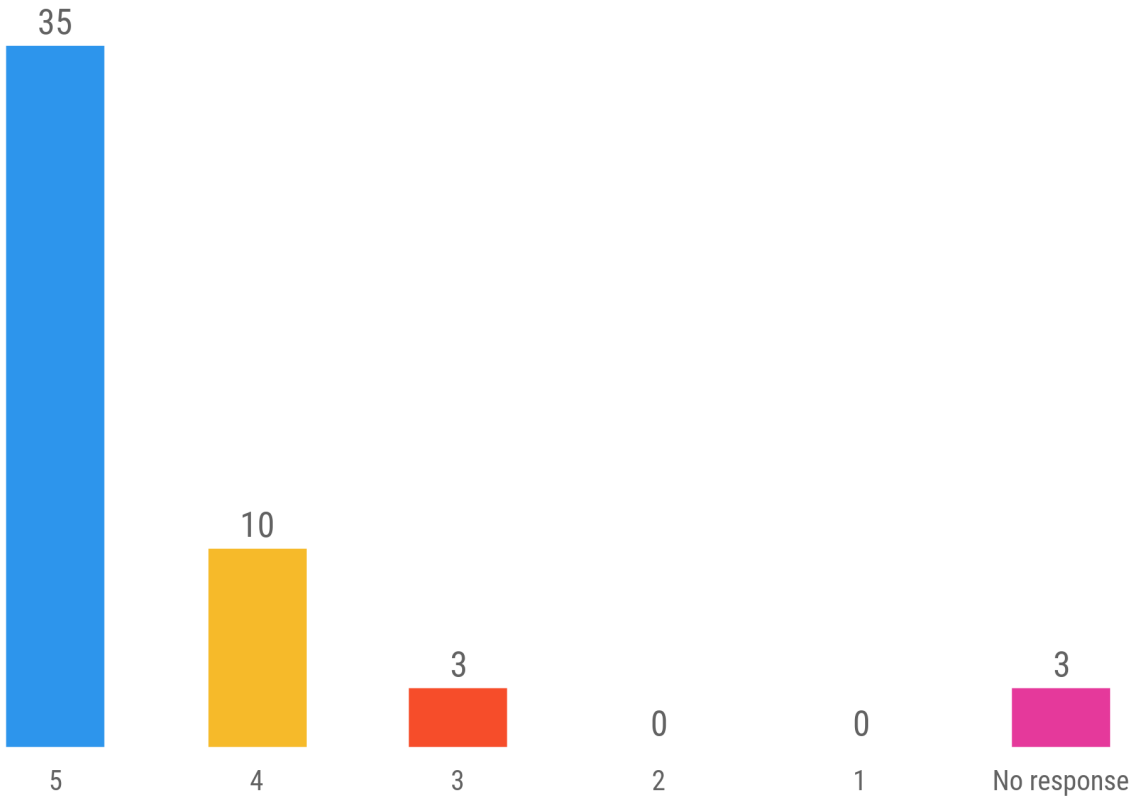
Health is...

Question 1: How do you define health, and how do you think that relates to your background? (Respondents were free to list as many keywords as they wished.)



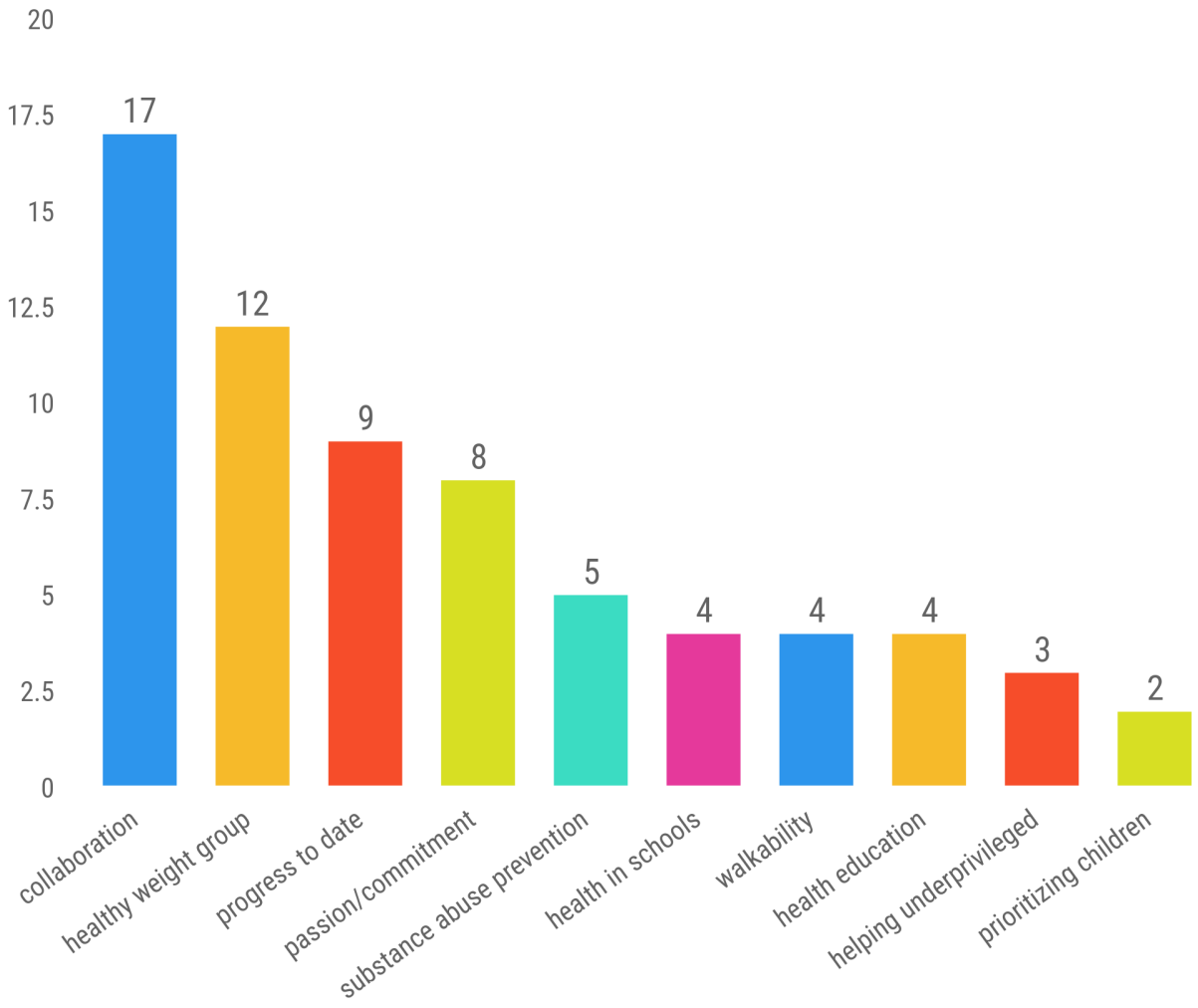
Where we're headed

Question 2: On a scale of 1 to 5, how do you feel about the direction HLVF is going with its priority areas for a healthier Cascade County? (with 1 being low/not feeling good about it and 5 being high/feeling very positive)



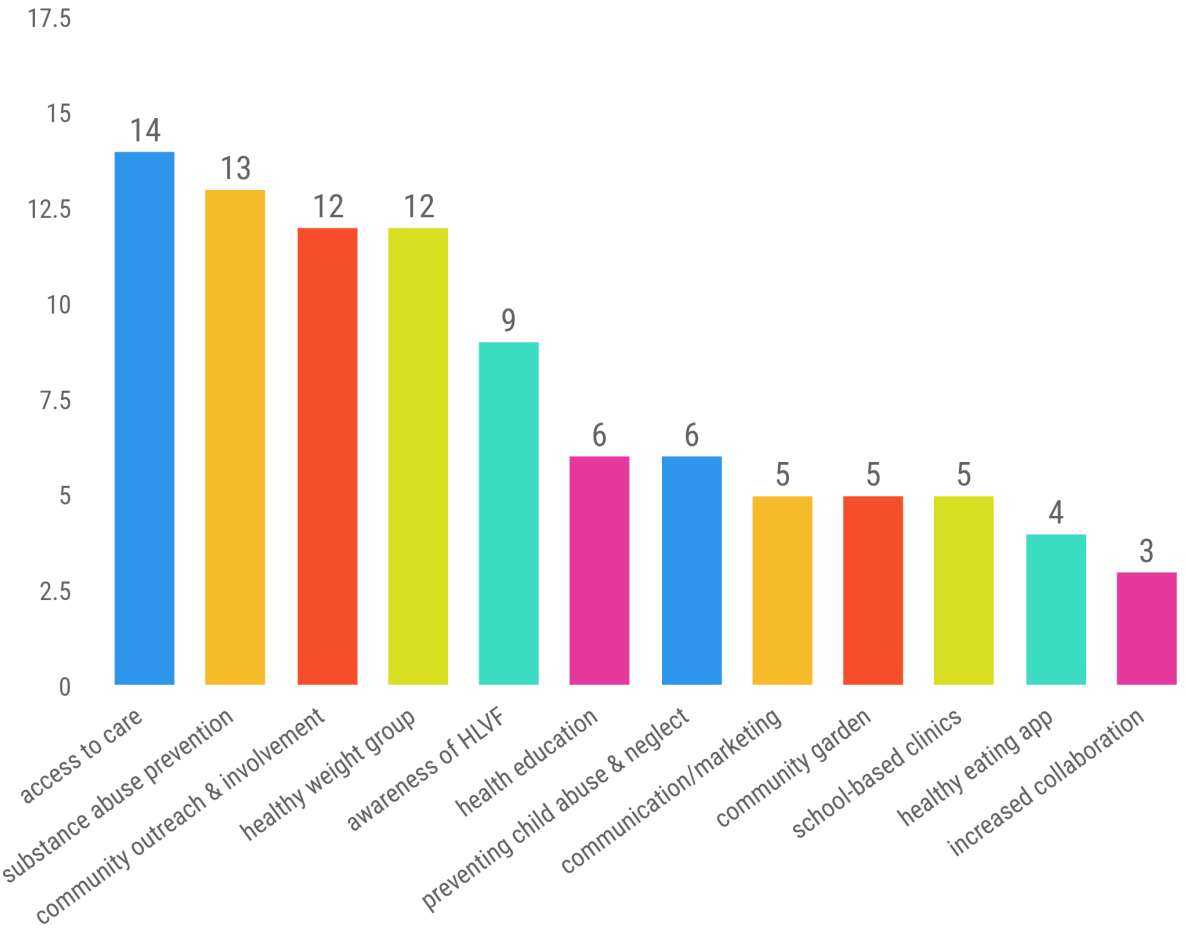
Positive feedback

Question 3: What did you hear today that makes you feel positive about the direction of HLVF for Cascade County? (Respondents were free to list as many items as they wished; similar responses have been grouped together.)



Discussing strategies

Question 4: What strategies discussed here today do you think will most impact the health of Cascade County community members? (Respondents were free to list as many ideas or strategies as they wished; similar responses have been grouped together.)



Additional strategies

Question 5: Are there any additional strategies that you could see helping people from underserved populations?

- Attempt to keep kids in the child welfare system in their homes as much as possible
- Expand crime victim services for those who have suffered child abuse or sexual abuse
- Expand marketing efforts for HLVF
- Focus on young kids and helping GFPS
- Get more churches involved
- Help people fill out the forms/register for services & programs
- Host more symposium-type events in the summer or as part of large existing events
- Implement systems like the "Connect" referral system for connecting people to services
- Improve accessibility of fitness activities
- Improve affordable transportation & child care
- Improve health education on child abuse & neglect
- Improve access to health care still further
- Increase awareness of HLVF, both to people who need services and to people who may want to help
- Increase funding for mental health services
- Increase mentorship programs for youth, especially youth with history of neglect/abuse
- Increase volunteering opportunities
- Keep battling substance abuse
- Keep college students involved in HLVF efforts (GFCMSU)
- Keep working on access to dental care
- Keep working on substance abuse prevention efforts
- Mitigate housing insecurity
- Promote outdoor exercise, particularly considering that we live in Montana!
- Start activities for local young adults
- Support caregivers
- Support more great organizations like NeighborWorks and the Rescue Mission
- Teach alternate diets (like giving up sugar & flour) to people for whom low-fat, whole-grain-based diet has not helped with weight loss or disease management
- Teach cooking classes

The four identified priority areas—substance abuse, child abuse & neglect, access to care, and healthy weight—will be addressed as the Healthy Lives Vibrant Futures coalition comes together to write the 2020 Community Health Improvement Plan, which will be in place until 2023.

The four priority areas are well-established and have groups that are already working to implement positive changes. They will take into consideration the data presented in this report, as well as the suggestions posed in responses to the symposium survey above. The structure of some of these groups may change slightly to improve their effectiveness and respond to new data and new challenges or assets, but they will continue their work.

Get Fit Great Falls takes lead on Achieving and Maintaining a Healthy Weight. The Substance Abuse Prevention Alliance has been working toward change on substance abuse and prevention, and a committee made up of medical administrators and professionals throughout Great Falls has been addressing the issue of Access to Care. The fourth priority area, Child Abuse and Neglect, is currently headed by United Way and committee members are a diverse group of committed Cascade County residents.

The next three years will be an exciting time in Cascade County as work continues and begins on implementing the four identified priority areas. If you have questions, want additional information, or would like to get involved, please reach out to Healthy Lives Vibrant Futures via the contact information on the back cover of this report.

V. Appendices

- A: Community health survey instrument
- B: Community health survey analysis
- C: RWJ County Health Rankings – Montana State report
- D: About the Community Needs Index

Appendix A:
Community health survey instrument

UNIVERSITY OF PROVIDENCE

April 3, 2018

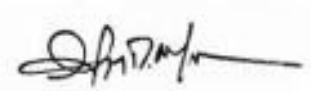
Dear Cascade County Resident:

The Cascade City-County Health Department, United Way of Cascade County, and Benefis Health Systems are conducting a study to determine the public perception of community health in Cascade County.

Please take 10-15 minutes to complete the following survey and return in the enclosed envelope by April 27th. Also, please include (with your complete survey) your name, address, and phone number on a separate sheet of paper for a prize drawing. There will be two drawings each for a $200 Visa gift card.

Your responses will be anonymous and strictly confidential. If you have any questions, please contact me at 791-5359. Again, please respond by April 27th with a complete survey to be eligible for the drawing. Thank you for your participation.

Sincerely,



Gregory D. Madson, Ph.D.
Professor of Sociology
Director, Center for Survey Research

UNIVERSITY OF PROVIDENCE | 1301 20th STREET SOUTH, GREAT FALLS, MONTANA 59405
406.761.8210 | 800.856.9544 | UPROVIDENCE.EDU

Your Health, Your Community, Your Future!

Please complete and return your complete survey by April 27th to be entered into the drawing for a $200 Visa gift card. Your responses will be anonymous and strictly confidential.

Please tell us about the health of your community.

1. In the following list, what do you think are the **THREE (3)** most serious **health concerns** in your community where you live? Please select three (3).

Lack of Access to Care

- ☐ Dental care
- ☐ Medical care
- ☐ Mental health care
- ☐ Reproductive health care

Chronic Disease

- ☐ Asthma
- ☐ Cancer
- ☐ Dental problems
- ☐ Diabetes
- ☐ Heart disease
- ☐ High blood pressure
- ☐ Stroke

Communicable Disease

- ☐ HIV / AIDS
- ☐ Other infectious diseases
- ☐ Sexually transmitted diseases

Environmental Health

- ☐ Foodborne illness
- ☐ Indoor air quality
- ☐ Outdoor air quality
- ☐ Water quality

Health Risk Behavior

- ☐ Alcohol abuse
- ☐ Child abuse and/or neglect
- ☐ Domestic violence
- ☐ Drug abuse (illegal)
- ☐ Drug abuse (prescription)
- ☐ Overweight and obesity
- ☐ Physical inactivity
- ☐ Low immunization rate
- ☐ Rape/sexual assault
- ☐ Sexual activities
- ☐ Teenage pregnancies
- ☐ Tobacco use
- ☐ Mental Health
- ☐ Depression/Anxiety
- ☐ Suicide
- ☐ Unintentional Injury
- ☐ Farm related injuries
- ☐ Gun related injuries
- ☐ Motor vehicle injuries
- ☐ Recreation related crashes/injuries
- ☐ Work related accidents/injuries
- ☐ Other: _____

2. Would you agree that your community is a "healthy community?"
   ◻ Strongly agree ◻ Agree ◻ No opinion ◻ Disagree ◻ Strongly disagree

3. Please check up to **THREE (3) lifestyle choices** in your community that concern you the most.
   - ◻ Smoking
   - ◻ Drinking and driving
   - ◻ Lack of exercise
   - ◻ Dropping out of school
   - ◻ Illegal drug abuse
   - ◻ Prescription drug abuse
   - ◻ Not using seat belts/child safety seats
   - ◻ Other, please describe:
   - ◻ Overweight and obesity
   - ◻ Alcohol abuse
   - ◻ Poor nutrition
   - ◻ Not getting vaccinations
   - ◻ Unsafe sex
   - ◻ Gambling

   _____

4. Please select **THREE (3)** of the items below that you believe are most important for a **"healthy community."**
   - ◻ Safe neighborhoods
   - ◻ Access to healthcare and other services
   - ◻ Parks and recreational opportunities
   - ◻ Religious or spiritual values
   - ◻ Lifelong educational opportunities
   - ◻ Support for good parenting
   - ◻ Support for healthy families
   - ◻ Low crime
   - ◻ Opportunities for community involvement
   - ◻ Other, please describe:
   - ◻ Good schools
   - ◻ Arts and cultural events
   - ◻ Clean environment
   - ◻ Tolerance for diversity
   - ◻ Affordable housing
   - ◻ Good paying job opportunities
   - ◻ Healthy lifestyle choices
   - ◻ Strong family life
   - ◻ Low death and disease rates

   _____

5. Please check up to **THREE (3) mental health issues** that impact YOU AND YOUR FAMILY the most.
   - ◻ Alcohol use
   - ◻ Access to mental health services
   - ◻ Lack of family stability
   - ◻ Broken families
   - ◻ Other, please describe:
   - ◻ Depression
   - ◻ Drug use
   - ◻ Lack of social support
   - ◻ Work-related stress

   _____

6. Overall, how much impact do you think people like you can have in making your neighborhood or community a better place to live?
   ◻ Big impact ◻ Moderate impact ◻ Small impact ◻ No impact ◻ Not sure

7. In general, would you say **your health** is…?
   ◻ Excellent ◻ Very good ◻ Good ◻ Fair ◻ Poor

8. Does everyone in your household have **health insurance**?
   ◻ Yes ◻ No ◻ Not sure

9. Does everyone in your household have **dental insurance**?
   ◻ Yes ◻ No ◻ Not sure

10. If you answered "No" to questions 8 or 9, who in your household is uninsured?
   ◻ No one in the household is insured
   ◻ The children 18 and under
   ◻ The adults between 18 and 64
   ◻ The adults who are 65 and older

11. Do you have someone who you consider to be "your" doctor or health care provider?
   ◻ Yes (skip to 13) ◻ No ◻ Not sure

12. If you marked "No" to question 11, then where do you get health care?
   ◻ Community Health Care Center
   ◻ Rural Health Clinic
   ◻ Health Department
   ◻ Specialist (OB/GYN, Heart, etc.)
   ◻ Emergency Room/Hospital
   ◻ Chiropractor
   ◻ Planned Parenthood
   ◻ Urgent Care/Walk-In Clinic
   ◻ Naturopath
   ◻ Just don't go
   ◻ Other, please describe:

_____

13. During the past three years, was there a time when you or a member of your household felt you needed health care services but did NOT get, or delayed getting service?
   ◻ Yes ◻ No ◻ Not sure

14. If you answered "Yes" to question 13, what were the **THREE (3)** most important reasons why you or a family member did not receive the care you needed?

- ☐ Could not get an appointment
- ☐ Too long of a wait for an appointment
- ☐ Too nervous or afraid
- ☐ My insurance wouldn't cover it
- ☐ Don't like doctors
- ☐ Unsure if services were available
- ☐ Not treated with respect
- ☐ It cost too much
- ☐ Other, please describe:

- ☐ It was too far to go
- ☐ Could not get off work
- ☐ Didn't know where to go
- ☐ Transportation problems
- ☐ No health insurance
- ☐ Had no one to care for the children
- ☐ Language barrier
- ☐ Office wasn't open when I could go

---

15. How do you learn about health services in your community?

- ☐ Friends/Family
- ☐ Health care provider
- ☐ Mailings/Newsletters
- ☐ Newspaper
- ☐ Other, please describe:

- ☐ Presentations
- ☐ Public Health Department
- ☐ Radio
- ☐ Website/internet
- ☐ Word of mouth/reputation

Appendix B:
Community health survey analysis

Greg Madson, Ph.D.
University of Providence
Professor of Sociology
Director, Center for Survey Research

PURPOSE

In recent years, the Cascade City–County Health Department (CCHD), United Way of Cascade County (United Way), and Benefis Health System (Benefis) have joined efforts to conduct a community health assessment of Cascade County. The CCHD, United Way, and Benefis want to assess the perception of residents with regard to community health and the health of families and households in Cascade County. As a longitudinal study, this study has been conducted in 2012, 2015, and now 2018. The United Way and Benefis have contracted with the University of Providence (UP) to conduct the study.

The purpose of the study is to determine the public perception of community health in Cascade County. Ultimately, the results of the study will aid the CCHD, United Way, and Benefis in evaluating current health programs, developing new health programs, and creating public education programs. The study will target a range of community issues from chronic diseases and health risk behaviors to health care and access. The objectives are to:

(1) identify specific community health concerns
(2) ascertain the lifestyle choices that affect community health
(3) determine the level of health care access
(4) examine changes over time be comparing survey findings from 2012, 2015, and 2018

METHODS

Sampling and sample size

The universe of interest consists of all residents in Cascade County, Montana. Based on the findings of the US Census Bureau there are approximately 32,547 households in the county.

The unit of analysis for the study is a household unit in Cascade County, Montana. With a population size of 32,547 households, the necessary sample size to achieve a 5% confidence interval at a 95% confidence level would be 384 households. However, due to an estimated response rate of 25%, 1,500 households were sampled.

The sample frame of residential addresses is maintained by the United Way of Cascade County. Nonresidential addresses were eliminated and apartment unit addresses were compiled from multi-family dwellings to insure all households have equal probability of selection. A randomization technique was used by the University to extract 1,500 households from the population. This technique was designed to provide a probability sample of households for Cascade County, MT.

In addition, the CCHD, United Way, and Benefis conducted a social media campaign to generate additional responses with the survey available in SurveyMonkey.

Survey administration

A mail survey was utilized versus other survey modes for the following reasons: 1) numerous households do not have hard-wire telephones due to the proliferation of cell phones; 2) households with more than one hard-wire would be over-sampled; 3) the survey instrument is too long for telephone administration; and 4) the geographic area is too large for face-to-face interviews.

The survey instrument was mailed to each of the selected households in the sample with a cover letter describing the study (see Appendix B) and its purpose, the first week of April 2018. The head of the household was instructed to complete the survey and return in the self-addressed, stamped envelope as provided. Two drawings each for a $200 Visa gift card were used as a response incentive. Respondents were asked to submit their name and contact information on a separate piece of paper with their complete survey to be eligible for the drawings.

Survey responses were also solicited through social media (e.g., Facebook) and email through the CCHD, United Way, and Benefis with the SurveyMonkey link provided.

Survey instrument

In 2012 the principal investigator worked directly with CCHD, United Way, and Benefis staff in the development of the survey instrument. The principal investigator assured proper measurement of variables and overall flow, readability, and coherency of the instrument. Instrument structure entailed the measurement of environmental health concerns, environmental health information sources, general environmental health statements, and a set of socio-demographic and household variables (see Appendix B). Respondents were also given the opportunity to express any other environmental health concerns in an open-ended format (see Appendix B). The same survey instrument used in 2012 and 2015 was administered in 2018. This allows for comparability and an examination of temporal changes.

RESULTS

Sample

By the end of April 2018, 223 mail surveys were received. The goal of the sampling design was to achieve a representative sample of households for Cascade County. According to the US Census Bureau, there are approximately 32,547 households in the county. One assumption is that the population of households tends to be fairly homogeneous. Secondly, no population subgroups were to be targeted in the study (e.g., urban, elderly, etc.). Based on these assumptions and the following formula it is possible determine the confidence level and confidence interval for the obtained sample size of 223. With the confidence level set at 95% and a sample size (n) of 223, it is found that the confidence interval is 0.055. In conclusion, the accuracy level for a probability sample size of 223, is the situation in which one is 95% certain that no estimated percentage or proportion is off by more than +/- 6.5%. Three hundred and thirty-seven (337) responses were received on SurveyMonkey.

The demographic characteristics of the 2018 probability sample are comparable to the samples in 2012 and 2015. No differences were found for race, marital status, income, education, and employment.

There were slightly more female respondents in 2018 compared to the prior years. Respondents tend to be employed, married, white females with a high school education (23%) or a 4-year degree (24%). The average age of respondent in 2018 is 60 with the average age in 2015 slightly less at 56 years compared to age 60 in 2012. The households in 2015 tend to have more people under age 18 than in 2012 and 2018, on average.

Households in 2018 are less likely to have a landline and are more likely to have internet access compared to 2012 and 2015 indicating technological trends. The most substantial difference between the sample years is with cigarette smoking. Only 5% of the respondents in 2018 smoke cigarettes compared to 10% and 25% in 2012 and 2015, respectively. The 2015 respondents are less aware of assistance to quit smoking than those in 2012 and 2018.

The social media respondents are significantly different than the mail survey respondents. These individuals tend to be younger females (77%) with 4-year degrees or higher, working full-time, and earning higher incomes on-average compared to the mail survey respondents. These individuals are less likely to smoke cigarettes.

Appendix C:
County Health Rankings Montana State Report

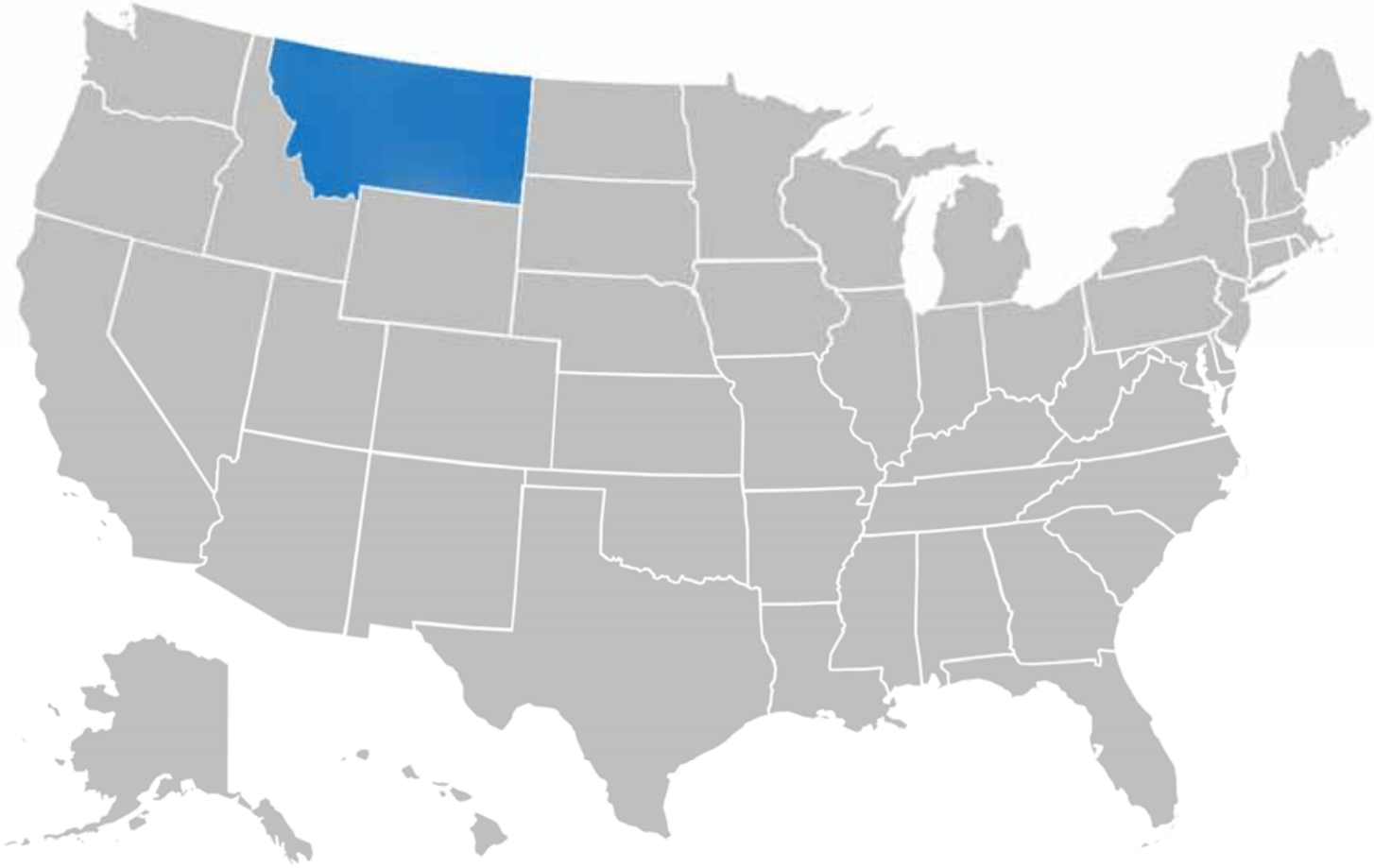
Robert Wood Johnson Foundation &
University of Wisconsin Population Health Institute
2019

County Health Rankings & Roadmaps

Building a Culture of Health, County by County

A Robert Wood Johnson Foundation program

Montana



2019 County Health Rankings Report

A collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute.

University of Wisconsin Population Health Institute
SCHOOL OF MEDICINE AND PUBLIC HEALTH

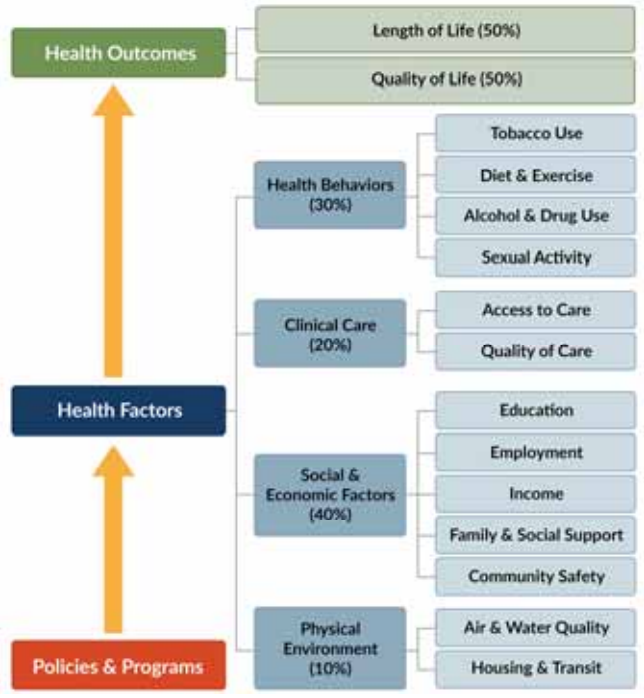
Support provided by
Robert Wood Johnson Foundation

The County Health Rankings & Roadmaps (CHR&R) brings actionable data, evidence, guidance, and stories to communities to make it easier for people to be healthy in their neighborhoods, schools, and workplaces. Ranking the health of nearly every county in the nation (based on the model below), CHR&R illustrates what we know when it comes to what is keeping people healthy or making them sick and shows what we can do to create healthier places to live, learn, work, and play.

What are the County Health Rankings?

Published online at countyhealthrankings.org, the Rankings help counties understand what influences how healthy residents are and how long they will live. The Rankings are unique in their ability to measure the current overall health of each county in all 50 states. They also look at a variety of measures that affect the future health of communities, such as high school graduation rates, access to healthy foods, rates of smoking, obesity, and teen births.

Communities use the Rankings to garner support for local health improvement initiatives among government agencies, health care providers, community organizations, business leaders, policymakers, and the public.



Moving with Data to Action

The Take Action to Improve Health section of our website, countyhealthrankings.org, helps communities join together to look at the many factors influencing health, select strategies that work, and make changes that will have a lasting impact. Take Action to Improve Health is a hub of information to help any community member or leader who wants to improve their community's health and equity. You will find:

- What Works for Health, a searchable menu of evidence-informed policies and programs that can make a difference locally;
- The Action Center, your home for step-by-step guidance and tools to help you move with data to action;
- Action Learning Guides, self-directed learning on specific topics with a blend of guidance, tools, and hands-on practice and reflection activities;
- The Partner Center, information to help you identify the right partners and explore tips to engage them;
- Peer Learning, a virtual, interactive place to learn with and from others about what works in communities; and
- Action Learning Coaches, located across the nation, who are available to provide real-time guidance to local communities interested in learning how to accelerate their efforts to improve health and advance equity.

The Robert Wood Johnson Foundation (RWJF) collaborates with the University of Wisconsin Population Health Institute (UWPHI) to bring this program to cities, counties, and states across the nation.

Opportunities for Health Vary by Place and Race

Our country has achieved significant health improvements over the past century. We have benefited from progress in automobile safety, better workplace standards, good schools and medical clinics, and reductions in smoking and infectious diseases. But when you look closer, there are significant differences in health outcomes according to where we live, how much money we make, or how we are treated. The data show that, in counties everywhere, not everyone has benefited in the same way from these health improvements. There are fewer opportunities and resources for better health among groups that have been historically marginalized, including people of color, people living in poverty, people with physical or mental disabilities, LGBTQ persons, and women.

Differences in Opportunity Have Been Created, and Can Be Undone

Differences in opportunity do not arise on their own or because of the actions of individuals alone. Often, they are the result of policies and practices at many levels that have created deep-rooted barriers to good health, such as unfair bank lending practices, school funding based on local property taxes, and discriminatory policing and prison sentencing. The collective effect is that a fair and just opportunity to live a long and healthy life does not exist for everyone. Now is the time to change how things are done.

Measure What Matters

Achieving health equity means reducing and ultimately eliminating unjust and avoidable differences in health and in the conditions and resources needed for optimal health. This report provides data on differences in health and opportunities in Montana that can help identify where action is needed to achieve greater equity and offers information on how to move with data to action.

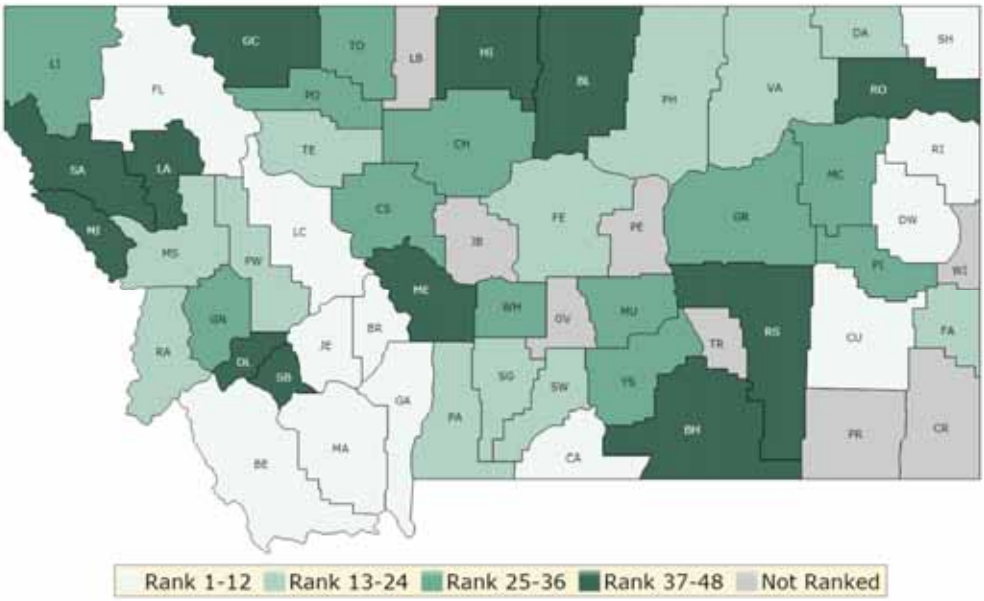
Specifically, this report will help illuminate:

1. Differences in health outcomes within the state by place and racial/ethnic groups
2. Differences in health factors within the state by place and racial/ethnic groups
3. What communities can do to create opportunity and health for all

Differences in Health Outcomes within States by Place and Racial/Ethnic Groups

How Do Counties Rank for Health Outcomes?

Health outcomes in the County Health Rankings represent measures of how long people live and how healthy people feel. Length of life is measured by premature death (years of potential life lost before age 75) and quality of life is measured by self-reported health status (percent of people reporting poor or fair health and the number of physically and mentally unhealthy days within the last 30 days) and the % of low birth weight newborns. Detailed information on the underlying measures is available at **countyhealthrankings.org**



The green map above shows the distribution of Montana's **health outcomes**, based on an equal weighting of length and quality of life. The map is divided into four quartiles with less color intensity indicating better performance in the respective summary rankings. Specific county ranks can be found in the table on page 10 at the end of this report.

How Do Health Outcomes Vary by Race/Ethnicity?

Length and quality of life vary not only based on where we live, but also by our racial/ethnic background. In Montana, there are differences by race/ethnicity in length and quality of life that are masked when we only look at differences by place. The table below presents the five underlying measures that make up the Health Outcomes rank. Explore the table to see how health differs between the healthiest and the least healthy counties in Montana, and among racial/ethnic groups.

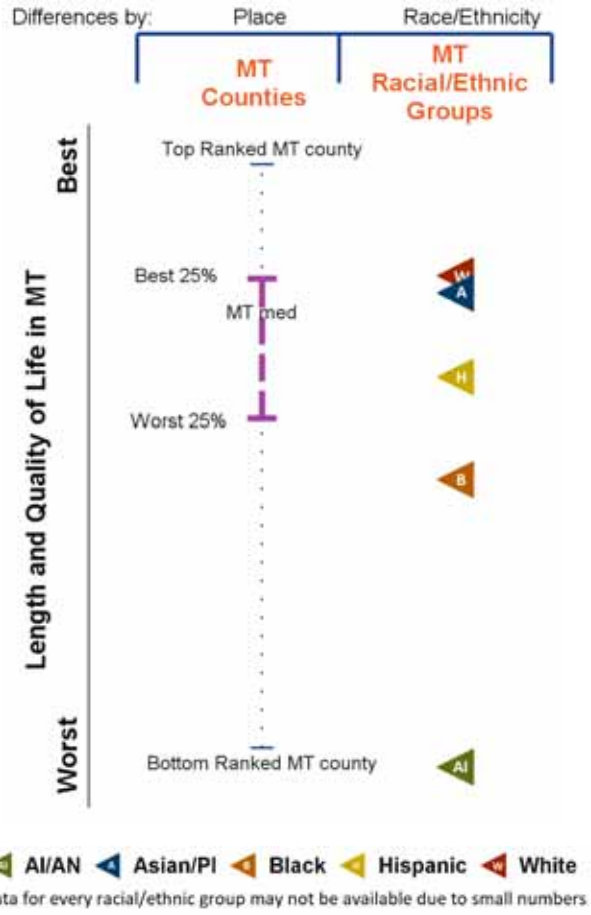
Differences in Health Outcome Measures among Counties and for Racial/Ethnic Groups in Montana

	Healthiest MT County	Least Healthy MT County	AI/AN	Asian/PI	Black	Hispanic	White
Premature Death (years lost/100,000)	4,900	21,000	19,400	2,900	10,000	6,800	6,600
Poor or Fair Health (%)	11%	26%	25%	N/A	N/A	18%	13%
Poor Physical Health Days (avg)	3.0	5.4	5.1	N/A	N/A	3.4	3.3
Poor Mental Health Days (avg)	2.9	4.5	5.3	N/A	N/A	4.6	3.4
Low Birthweight (%)	5%	7%	9%	10%	12%	8%	7%

American Indian/Alaskan Native (AI/AN), Asian/Pacific Islander (Asian/PI)

N/A = Not available. Data for all racial/ethnic groups may not be available due to small numbers

Health Outcomes in Montana



The graphic to the left compares measures of length and quality of life by place (Health Outcomes ranks) and by race/ethnicity. To learn more about this composite measure, see the technical notes on page 14.

Taken as a whole, measures of length and quality of life in Montana indicate:

- American Indians/Alaskan Natives are less healthy than those living in the bottom ranked county.
- Asians/Pacific Islanders are most similar in health to those living in the middle 50% of counties.
- Blacks are most similar in health to those living in the least healthy quartile of counties.
- Hispanics are most similar in health to those living in the middle 50% of counties.
- Whites are most similar in health to those living in the middle 50% of counties.

(Quartiles refer to the map on page 4.)

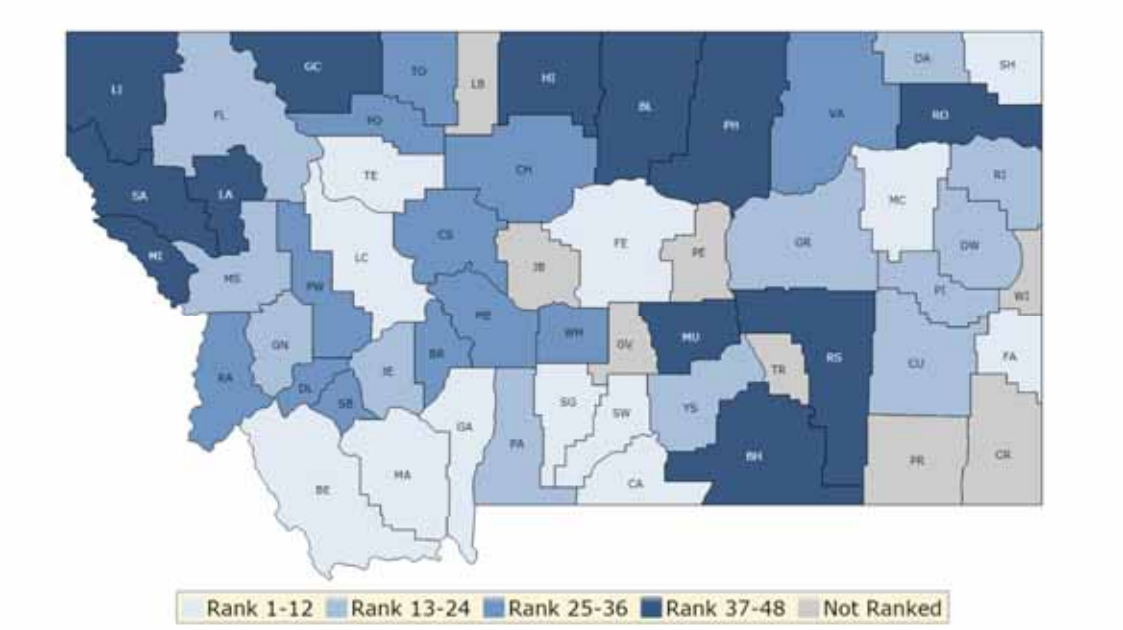
AI/AN -American Indian/Alaskan Native/Native American
Asian/PI - Asian/Pacific Islander

Across the US, values for measures of length and quality of life for Native American, Black, and Hispanic residents are regularly worse than for Whites and Asians. For example, even in the healthiest counties in the US, Black and American Indian premature death rates are about 1.4 times higher than White rates. Not only are these differences unjust and avoidable, they will also negatively impact our changing nation's future prosperity.

Differences in Health Factors within States by Place and Racial/Ethnic Groups

How Do Counties Rank for Health Factors?

Health factors in the County Health Rankings represent the focus areas that drive how long and how well we live, including health behaviors (tobacco use, diet & exercise, alcohol & drug use, sexual activity), clinical care (access to care, quality of care), social and economic factors (education, employment, income, family & social support, community safety), and the physical environment (air & water quality, housing & transit).



The blue map above shows the distribution of Montana's **health factors** based on weighted scores for health behaviors, clinical care, social and economic factors, and the physical environment. Detailed information on the underlying measures is available at **countyhealthrankings.org.** The map is divided into four quartiles with less color intensity indicating better performance in the respective summary rankings. Specific county ranks can be found in the table on page 10.

What are the Factors That Drive Health and Health Equity and How Does Housing Play a Role?

Health is influenced by a range of factors. Social and economic factors, like connected and supportive communities, good schools, stable jobs, and safe neighborhoods, are foundational to achieving long and healthy lives. These social and economic factors also interact with other important drivers of health and health equity. For example, housing that is unaffordable or unstable can either result from poverty or exacerbate it. When our homes are near high performing schools and good jobs, it's easier to get a quality education and earn a living wage. When people live near grocery stores where fresh food is available or close to green spaces and parks, eating healthy and being active is easier. When things like lead, mold, smoke, and other toxins are inside our homes, they can make us sick. And when so much of a paycheck goes toward the rent or mortgage, it makes it hard to afford to go to the doctor, cover the utility bills, or maintain reliable transportation to work or school.

How Do Opportunities for Stable and Affordable Housing Vary in Montana?

Housing is central to people's opportunities for living long and well. Nationwide, housing costs far exceed affordability given local incomes in many communities. As a result, people have no choice but to spend too much on housing, leaving little left for other necessities. Here, we focus on stable and affordable housing as an essential element of healthy communities. We also explore the connection between housing and children in poverty to illuminate the fact that these issues are made even more difficult when family budgets are the tightest.

What can work to create and preserve stable and affordable housing that can improve economic and social well-being and connect residents to opportunity?

A comprehensive, strategic approach that looks across a community and multiple sectors is needed to create and preserve stable, affordable housing in our communities. The way forward requires policies, programs, and systems changes that respond to the specific needs of each community, promote inclusive and connected neighborhoods, reduce displacement, and enable opportunity for better health for all people. This includes efforts to:

Make communities more inclusive and connected, such as:

- Inclusive zoning
- Civic engagement in public governance and in community development decisions
- Fair housing laws and enforcement
- Youth leadership programs
- Access to living wage jobs, quality health care, grocery stores, green spaces and parks, and public transportation systems

For more information about evidence-informed strategies that can address priorities in your community, visit What Works for Health at countyhealthrankings.org/whatworks

Facilitate access to resources needed to secure affordable housing, particularly for low- to middle-income families, such as:

- Housing choice vouchers for low- and very low-income households
- Housing trust funds

Address capital resources needed to create and preserve affordable housing, particularly for low- to middle-income families, such as:

- Acquisition, management, and financing of land for affordable housing, like land banks or land trusts
- Tax credits, block grants, and other government subsidies or revenues to advance affordable housing development
- Zoning changes that reduce the cost of housing production

This report explores statewide data. To dive deeper into your county data, visit Use the Data at countyhealthrankings.org

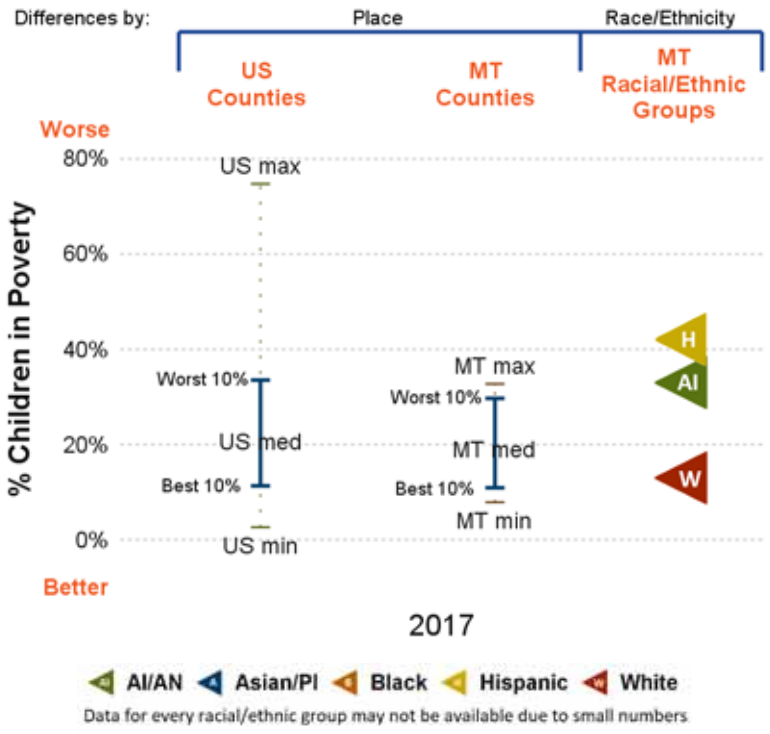
Consider these questions as you look at the data graphics throughout this report:

- What differences do you see among counties in your state?
- What differences do you see by racial/ethnic groups in your state?
- How do counties in your state compare to all U.S. counties?
- What patterns do you see? For example, do some racial/ethnic groups fare better or worse across measures?

Children in Poverty

Poverty limits opportunities for quality housing, safe neighborhoods, healthy food, living wage jobs, and quality education. As poverty and related stress increase, health worsens.

- In Montana, 16% of children are living in poverty.
- Children in poverty among Montana counties range from 8% to 33%.
- Child poverty rates among racial/ethnic groups in Montana range from 13% to 42%.

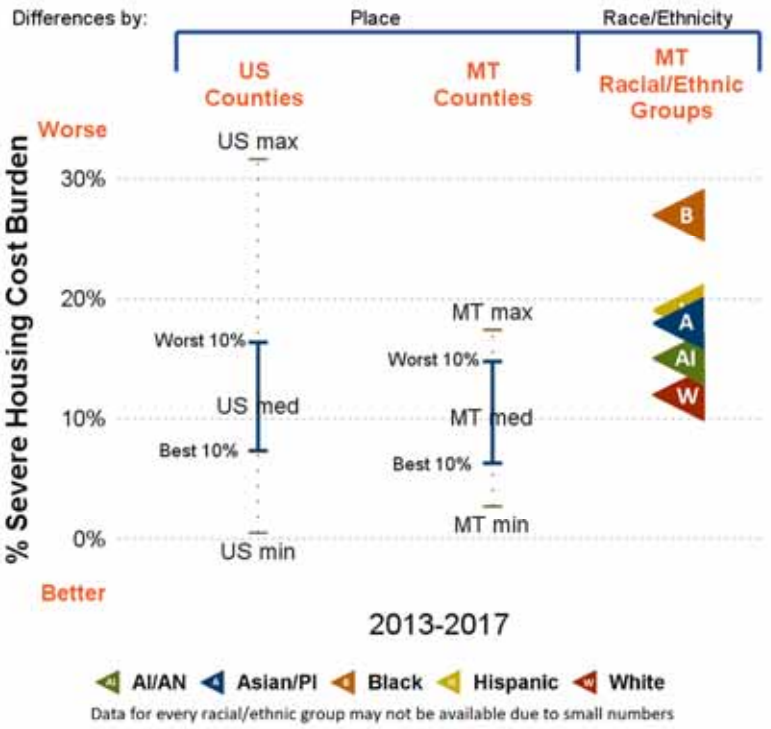


US and state values and the state minimum and maximum can be found in the table on page 12
American Indian/Alaskan Native/Native American (AI/AN) Asian/Pacific Islander (Asian/PI)

Severe Housing Cost Burden

There is a strong and growing evidence base linking stable and affordable housing to health. As housing costs have outpaced local incomes, households not only struggle to acquire and maintain adequate shelter, but also face difficult trade-offs in meeting other basic needs.

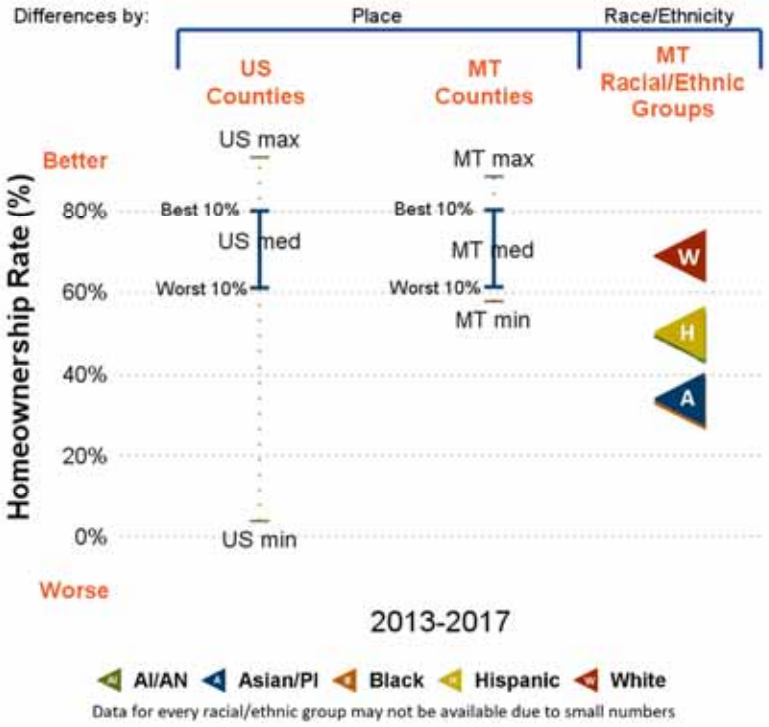
- In Montana, 13% of households spend more than half of their income on housing costs.
- Across Montana counties, severe housing cost burden ranges from 3% to 17% of households.
- Severe housing cost burden ranges from 12% to 27% among households headed by different racial/ethnic groups in Montana.



Homeownership

Homeownership has historically been a springboard for families to enter the middle class. Owning a home over time can help build savings for education or for other opportunities important to health and future family wealth. High levels of homeownership are associated with more stable housing and more tightly knit communities.

- In Montana, 68% of households own their home.
- Homeownership rates among Montana counties range from 58% to 89% of households.
- Homeownership rates among racial/ethnic groups in Montana range from 33% to 69%.



2019 County Health Rankings for the 48 Ranked Counties in Montana

County	Health Outcomes	Health Factors
Beaverhead	10	3
Big Horn	48	47
Blaine	45	45
Broadwater	7	25
Carbon	8	5
Carter	NR	NR
Cascade	31	26
Chouteau	35	29
Custer	6	15
Daniels	22	16
Dawson	5	13
Deer Lodge	43	30
Fallon	24	10
Fergus	18	12

County	Health Outcomes	Health Factors
Flathead	9	20
Gallatin	3	1
Garfield	28	21
Glacier	47	48
Golden Valley	NR	NR
Granite	30	22
Hill	38	43
Jefferson	4	14
Judith Basin	NR	NR
Lake	41	40
Lewis and Clark	12	4
Liberty	NR	NR
Lincoln	32	42
Madison	1	9

County	Health Outcomes	Health Factors
McCone	25	7
Meagher	40	32
Mineral	42	38
Missoula	17	19
Musselshell	36	39
Park	23	18
Petroleum	NR	NR
Phillips	16	37
Pondera	26	34
Powder River	NR	NR
Powell	21	36
Prairie	29	23
Ravalli	14	28
Richland	2	24

County	Health Outcomes	Health Factors
Roosevelt	46	46
Rosebud	44	44
Sanders	39	41
Sheridan	11	8
Silver Bow	37	31
Stillwater	15	2
Sweet Grass	13	6
Teton	19	11
Toole	34	33
Treasure	NR	NR
Valley	20	27
Wheatland	33	35
Wibaux	NR	NR
Yellowstone	27	17

Stay Up-To-Date with County Health Rankings & Roadmaps

For the latest updates on our Rankings, community support, RWJF Culture of Health Prize communities, and more visit countyhealthrankings.org/news. You can see what we're featuring on our webinar series, what communities are doing to improve health, and how you can get involved!

2019 County Health Rankings for Montana: Measures and National/State Results

Measure	Description	US	MT	MT Minimum	MT Maximum
HEALTH OUTCOMES					
Premature death	Years of potential life lost before age 75 per 100,000 population	6900	7,500	4,300	21,000
Poor or fair health	% of adults reporting fair or poor health	16%	14%	11%	26%
Poor physical health days	Average # of physically unhealthy days reported in past 30 days	3.7	3.6	2.9	5.4
Poor mental health days	Average # of mentally unhealthy days reported in past 30 days	3.8	3.5	2.9	4.7
Low birthweight	% of live births with low birthweight (< 2500 grams)	8%	7%	4%	12%
HEALTH FACTORS					
HEALTH BEHAVIORS					
Adult smoking	% of adults who are current smokers	17%	19%	13%	30%
Adult obesity	% of adults that report a BMI ≥ 30	29%	25%	16%	38%
Food environment index	Index of factors that contribute to a healthy food environment, (0-10)	7.7	7.1	4.0	8.8
Physical inactivity	% of adults aged 20 and over reporting no leisure-time physical activity	22%	20%	12%	28%
Access to exercise opportunities	% of population with adequate access to locations for physical activity	84%	75%	0%	100%
Excessive drinking	% of adults reporting binge or heavy drinking	18%	21%	17%	26%
Alcohol-impaired driving deaths	% of driving deaths with alcohol involvement	29%	45%	0%	100%
Sexually transmitted infections	# of newly diagnosed chlamydia cases per 100,000 population	497.3	427.5	97.0	1,434.8
Teen births	# of births per 1,000 female population ages 15-19	25	26	9	94
CLINICAL CARE					
Uninsured	% of population under age 65 without health insurance	10%	10%	7%	21%
Primary care physicians	Ratio of population to primary care physicians	1,330:1	1,350:1	1,940:0	760:1
Dentists	Ratio of population to dentists	1,460:1	1,390:1	3,360:0	870:1
Mental health providers	Ratio of population to mental health providers	440:1	360:1	820:0	190:1
Preventable hospital stays	# of hospital stays for ambulatory-care sensitive conditions per 100,000 Medicare enrollees	4,520	3,236	694	7,352
Mammography screening	% of female Medicare enrollees ages 65-74 that receive mammography screening	41%	42%	23%	52%
Flu vaccinations	% of Medicare enrollees who receive an influenza vaccination	45%	40%	11%	55%
SOCIAL AND ECONOMIC FACTORS					
High school graduation	% of ninth-grade cohort that graduates in four years	85%	86%	68%	100%
Some college	% of adults ages 25-44 with some post-secondary education	65%	68%	40%	82%
Unemployment	% of population aged 16 and older unemployed but seeking work	4.4%	4.0%	2.2%	13.4%
Children in poverty	% of children under age 18 in poverty	18%	16%	8%	33%
Income inequality	Ratio of household income at the 80th percentile to income at the 20th percentile	4.9	4.5	3.1	6.9
Children in single-parent households	% of children that live in a household headed by a single parent	33%	28%	0%	49%
Social associations	# of membership associations per 10,000 population	9.3	14.1	0.0	32.9
Violent crime	# of reported violent crime offenses per 100,000 population	386	346	0	611
Injury deaths	# of deaths due to injury per 100,000 population	67	92	54	208
PHYSICAL ENVIRONMENT					
Air pollution – particulate matter	Average daily density of fine particulate matter in micrograms per cubic meter (PM2.5)	8.6	6.0	4.5	9.5
Drinking water violations	Indicator of the presence of health-related drinking water violations. Yes - indicates the presence of a violation, No - indicates no violation.	N/A	N/A	No	Yes
Severe housing problems	% of households with overcrowding, high housing costs, or lack of kitchen or plumbing facilities	18%	15%	5%	24%
Driving alone to work	% of workforce that drives alone to work	76%	76%	40%	82%
Long commute – driving alone	Among workers who commute in their car alone, % commuting > 30 minutes	35%	16%	7%	47%

2019 County Health Rankings: Ranked Measure Sources and Years of Data

	Measure	Source	Years of Data
HEALTH OUTCOMES			
Length of Life	Premature death	National Center for Health Statistics – Mortality files	2015-2017
Quality of Life	Poor or fair health	Behavioral Risk Factor Surveillance System	2016
	Poor physical health days	Behavioral Risk Factor Surveillance System	2016
	Poor mental health days	Behavioral Risk Factor Surveillance System	2016
	Low birthweight	National Center for Health Statistics – Natality files	2011-2017
HEALTH FACTORS			
HEALTH BEHAVIORS			
Tobacco Use	Adult smoking	Behavioral Risk Factor Surveillance System	2016
Diet and Exercise	Adult obesity	CDC Diabetes Interactive Atlas	2015
	Food environment index	USDA Food Environment Atlas, Map the Meal Gap	2015 & 2016
	Physical inactivity	CDC Diabetes Interactive Atlas	2015
	Access to exercise opportunities	Business Analyst, Delorme map data, ESRI, & U.S. Census Files	2010 & 2018
Alcohol and Drug Use	Excessive drinking	Behavioral Risk Factor Surveillance System	2016
	Alcohol-impaired driving deaths	Fatality Analysis Reporting System	2013-2017
Sexual Activity	Sexually transmitted infections	National Center for HIV/AIDS, Viral Hepatitis, STD, and TB	2016
	Teen births	National Center for Health Statistics – Natality files	2011-2017
CLINICAL CARE			
Access to Care	Uninsured	Small Area Health Insurance Estimates	2016
	Primary care physicians	Area Health Resource File/American Medical Association	2016
	Dentists	Area Health Resource File/National Provider Identification file	2017
	Mental health providers	CMS, National Provider Identification file	2018
Quality of Care	Preventable hospital stays	Mapping Medicare Disparities Tool	2016
	Mammography screening	Mapping Medicare Disparities Tool	2016
	Flu vaccinations	Mapping Medicare Disparities Tool	2016
SOCIAL AND ECONOMIC FACTORS			
Education	High school graduation	State-specific sources & EDFacts	Varies
	Some college	American Community Survey	2013-2017
Employment	Unemployment	Bureau of Labor Statistics	2017
Income	Children in poverty	Small Area Income and Poverty Estimates	2017
	Income inequality	American Community Survey	2013-2017
Family and Social Support	Children in single-parent households	American Community Survey	2013-2017
	Social associations	County Business Patterns	2016
Community Safety	Violent crime	Uniform Crime Reporting – FBI	2014 & 2016
	Injury deaths	CDC WONDER mortality data	2013-2017
PHYSICAL ENVIRONMENT			
Air and Water Quality	Air pollution – particulate matter*	Environmental Public Health Tracking Network	2014
	Drinking water violations	Safe Drinking Water Information System	2017
Housing and Transit	Severe housing problems	Comprehensive Housing Affordability Strategy (CHAS) data	2011-2015
	Driving alone to work	American Community Survey	2013-2017
	Long commute – driving alone	American Community Survey	2013-2017

*Not available for AK and HI.

2019 County Health Rankings: Additional Measure Sources and Years of Data

	Measure	Source	Years of Data
HEALTH OUTCOMES			
Length of Life	Life expectancy	National Center for Health Statistics - Mortality Files	2015-2017
	Premature age-adjusted mortality	CDC WONDER mortality data	2015-2017
	Child mortality	CDC WONDER mortality data	2014-2017
	Infant mortality	CDC WONDER mortality data	2011-2017
Quality of Life	Frequent physical distress	Behavioral Risk Factor Surveillance System	2016
	Frequent mental distress	Behavioral Risk Factor Surveillance System	2016
	Diabetes prevalence	CDC Diabetes Interactive Atlas	2015
	HIV prevalence	National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention	2015
HEALTH FACTORS			
HEALTH BEHAVIORS			
Diet and Exercise	Food insecurity	Map the Meal Gap	2016
	Limited access to healthy foods	USDA Food Environment Atlas	2015
Alcohol and Drug Use	Drug overdose deaths	CDC WONDER mortality data	2015-2017
	Motor vehicle crash deaths	CDC WONDER mortality data	2011-2017
Other Health Behaviors	Insufficient sleep	Behavioral Risk Factor Surveillance System	2016
CLINICAL CARE			
Access to Care	Uninsured adults	Small Area Health Insurance Estimates	2016
	Uninsured children	Small Area Health Insurance Estimates	2016
	Other primary care providers	CMS, National Provider Identification File	2018
SOCIAL & ECONOMIC FACTORS			
Education	Disconnected youth	American Community Survey	2013-2017
Income	Median household income	Small Area Income and Poverty Estimates	2017
	Children eligible for free or reduced price lunch	National Center for Education Statistics	2016-2017
Family and Social Support	Residential segregation - black/white	American Community Survey	2013-2017
	Residential segregation - non-white/white	American Community Survey	2013-2017
Community Safety	Homicides	CDC WONDER mortality data	2011-2017
	Firearm fatalities	CDC WONDER mortality data	2013-2017
PHYSICAL ENVIRONMENT			
Housing and Transit	Homeownership	American Community Survey	2013-2017
	Severe housing cost burden	American Community Survey	2013-2017
DEMOGRAPHICS			
All	Population	Census Population Estimates	2017
	% below 18 years of age	Census Population Estimates	2017
	% 65 and older	Census Population Estimates	2017
	% Non-Hispanic African American	Census Population Estimates	2017
	% American Indian and Alaskan Native	Census Population Estimates	2017
	% Asian	Census Population Estimates	2017
	% Native Hawaiian/Other Pacific Islander	Census Population Estimates	2017
	% Hispanic	Census Population Estimates	2017
	% Non-Hispanic white	Census Population Estimates	2017
	% not proficient in English	American Community Survey	2013-2017
	% Females	Census Population Estimates	2017
	% Rural	Census Population Estimates	2010

Technical Notes and Glossary of Terms

What is health equity? What are health disparities? And how do they relate?

Health equity means that everyone has a fair and just opportunity to be as healthy as possible. This requires removing obstacles to health such as poverty and discrimination, and their consequences, including powerlessness and lack of access to good jobs with fair pay, quality education and housing, safe environments, and health care.

Health disparities are differences in health or in the key determinants of health such as education, safe housing, and discrimination, which adversely affect marginalized or excluded groups.

Health equity and health disparities are closely related to each other. Health equity is the ethical and human rights principle or value that motivates us to eliminate health disparities. Reducing and ultimately eliminating disparities in health and its determinants of health is how we measure progress toward health equity.

Braveman P, Arkin E, Orleans T, Proctor D, and Plough A. What is Health Equity? And What Difference Does a Definition Make? Robert Wood Johnson Foundation. May 2017

How do we define racial/ethnic groups?

In our analyses by race/ethnicity we define each category as follows:

- Hispanic includes those who identify themselves as Mexican, Puerto Rican, Cuban, Central or South American, other Hispanic, or Hispanic of unknown origin.
- American Indian/Alaskan Native includes people who identify themselves as American Indian or Alaskan Native and do not identify as Hispanic. This group is sometimes referred to as Native American in the report.
- Asian/Pacific Islander includes people who identify themselves as Asian or Pacific Islander and do not identify as Hispanic.
- Black includes people who identify themselves as black/African American and do not identify as Hispanic.
- White includes people who identify themselves as white and do not identify as Hispanic.

All racial/ethnic categories are exclusive so that one person fits into only one category. Our analyses do not include people reporting more than one race, as this category was not measured uniformly across our data sources.

We recognize that “race” is a social category, meaning the way society may identify individuals based on their cultural ancestry, not a way of characterizing individuals based on biology or genetics. A strong and growing body of empirical research provides support for the notion that genetic factors are not responsible for racial differences in health factors and very rarely for health outcomes.

How did we compare county ranks and racial/ethnic groups for length and quality of life?

Data are from the same data sources and years listed in the table on page 14. The mean and standard deviation for each health outcome measure (premature death, poor or fair health, poor physical health days, poor mental health days, and low birthweight) are calculated for all ranked counties within a state. This mean and standard deviation are then used as the metrics to calculate z-scores, a way to put all measures on the same scale, for values by race/ethnicity within the state. The z-scores are weighted using CHR&R measure weights for health outcomes to calculate a health outcomes z-score for each race/ethnicity. This z-score is then compared to the health outcome z-scores for all ranked counties within a state; the identified-score calculated for the racial/ethnic groups is compared to the quartile cut-off values for counties with states. You can learn more about calculating z-scores on our website under Rankings Methods.

How did we select evidence-informed approaches?

Evidence-informed approaches included in this report represent those backed by strategies that have demonstrated consistently favorable results in robust studies or reflect recommendations by experts based on early research. To learn more about evidence analysis methods and evidence-informed strategies that can make a difference to improving health and decreasing disparities, visit What Works for Health.

Technical Notes:

- In this report, we use the terms disparities, differences, and gaps interchangeably.
- We follow basic design principles for cartography in displaying color spectrums with less intensity for lower values and increasing color intensity for higher values. We do not intend to elicit implicit biases that “darker is bad”.
- In our graphics of state and U.S. counties we report the median of county values, our preferred measure of central tendency for counties. This value can differ from the state or U.S. overall values.

Report Authors

University of Wisconsin-Madison
School of Medicine and Public Health
Department of Population Health Sciences
Population Health Institute

Marjory Givens, PhD, MSPH
Amanda Jovaag, MS
Anne Roubal, PhD, MS

Suggested citation: University of Wisconsin Population Health Institute. County Health Rankings State Report 2019.

Research Assistance:
Courtney Blomme, RD
Keith Gennuso, PhD
Elizabeth Pollock, PhD
Joanna Reale
Matthew Rodock, MPH

With contributions from our CHR&R team including:
What Works for Health
Community Transformation
Operations
RWJF Culture of Health Prize

This work could not be done without out partnerships with
The Centers for Disease Control and Prevention for providing us with key health indicators
Burness for supporting our communication efforts
Forum One for website design and support

This work is possible thanks to a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute

County Health Rankings & Roadmaps

Building a Culture of Health, County by County

A Robert Wood Johnson Foundation program

Appendix D:
About the Community Needs Index (CNI)

Truven Health Analytics
2015

TRUVEN HEALTH ANALYTICS

Community Need Index

Methodology and Source Notes

Overview

Not-for-profit and community-based health systems have long considered community need a core component of their mission of service to local communities. While specific initiatives designed to address health disparities vary across local communities (outreach to migrant farm workers, asthma programs for inner city children, etc), the need to prioritize and effectively distribute hospital resources is a common thread among all providers.

Given the increased transparency of hospital operations (quality report cards, financial disclosures, etc.), community benefit efforts need to become increasingly strategic and targeted in order to illustrate to a variety of audiences how specific programs have been designed and developed. While local community needs assessments will always play a central role in this process, they are often voluminous, difficult to communicate, and may lack necessary qualitative and statistical justification for choosing specific communities as having the "greatest need".

Because of such challenges, Dignity Health and Truven Health jointly developed a Community Need Index ("CNI") in 2004 to assist in the process of gathering vital socio-economic factors in the community. The CNI is strongly linked to variations in community healthcare needs and is a strong indicator of a community's demand for various healthcare services.

Based on a wide array of demographic and economic statistics, the CNI provides a score for every populated ZIP code in the United States on a scale of 1.0 to 5.0. A score of 1.0 indicates a ZIP code with the least need, while a score of 5.0 represents a ZIP code with the most need. The CNI should be used as part of your larger community need assessment, and can help pinpoint specific areas that have greater need than others. The CNI should be shared with your community partners and used to justify grants or resource allocations for community initiatives.

Methodology

The CNI score is an average of five different barrier scores that measure various socio-economic indicators of each community using the 2015 source data. The five barriers are listed below along with the individual 2015 statistics that are analyzed for each barrier. These barriers, and the statistics that comprise them, were carefully chosen and tested individually by both Dignity Health and Truven Health:

1. **Income Barrier**
    - Percentage of households below poverty line, with head of household age 65 or more
    - Percentage of families with children under 18 below poverty line
    - Percentage of single female-headed families with children under 18 below poverty line

2. **Cultural Barrier**
    - Percentage of population that is minority (including Hispanic ethnicity)
    - Percentage of population over age 5 that speaks English poorly or not at all
3. **Education Barrier**
    - Percentage of population over 25 without a high school diploma
4. **Insurance Barrier**
    - Percentage of population in the labor force, aged 16 or more, without employment
    - Percentage of population without health insurance
5. **Housing Barrier**
    - Percentage of households renting their home

Every populated ZIP code in the United States is assigned a barrier score of 1, 2, 3, 4, or 5 depending upon the ZIP code national rank (quintile). A score of 1 represents the lowest rank nationally for the statistics listed, while a score of 5 indicates the highest rank nationally. For example, ZIP codes that score a 1 for the Education Barrier contain highly educated populations; ZIP codes with a score of 5 have a very small percentage of high school graduates.

For the two barriers with only one statistic each (education and housing), Truven Health used only the single statistic listed to calculate the barrier score. For the three barriers with more than one component statistic (income, cultural and insurance), Truven Health analyzed the variation and contribution of each statistics for its barrier; Truven Health then weighted each component statistic appropriately when calculating the barrier score.

Once each ZIP code is assigned its barrier scores from 1 to 5, all five barrier scores for each ZIP code are averaged together to yield the CNI score. Each of the five barrier scores receives equal weight (20% each) in the CNI score. A score of 1.0 indicates a ZIP code with the least need, while a score of 5.0 represents a ZIP code with the most need.

Data Sources

- 2015 Demographic Data, The Nielsen Company
- 2015 Poverty Data, The Nielsen Company
- 2015 Insurance Coverage Estimates, Truven Health Analytics

Applications and Caveats

- CNI scores are not calculated for non-populated ZIP codes. These include such areas as national parks, public spaces, post office boxes and large unoccupied buildings.
- CNI scores for ZIP codes with small populations (especially less than 100 people) may be less accurate. This is due to the fact that the sample of respondents to the 2010 census is too small to provide accurate statistics for such ZIP codes. This issue is mitigated by either eliminating such ZIP codes from your analysis completely, or by making sure that low population ZIP codes are combined with other surrounding high population ZIP codes using the weighted average technique described above.

VI. Acknowledgements

A special thanks to . . .

Healthy Lives, Vibrant Futures Steering Committee

Andrea Withey	Great Falls Clinic
Anna Attaway	City-County Health Department
Erin Merchant	Alluvion Health
Jane Weber	County Commissioner
Kim Skornogoski	United Way of Cascade County
Kristy Pontet-Stroop	Alliance for Youth
Lacey Hallett	United Way of Cascade County
Laura Merchant	Benefis Health System
Tanya Houston	Alluvion Health
Trista Besich	Alluvion Health
Wes Old Coyote	Indian Family Health Clinic

Substance Abuse Prevention Alliance

Adam Hunt	Great Falls Police Department
Barbara Bessette	Gateway Recovery Services
Beth Morrison	Alliance for Youth
Brittany Olson	City Council
Chad Dever	MT Highway Patrol
Doug Nicholson	DA Davidson
Jody Murray	Great Falls Public Schools
Josh Bailly	Youth Court Services
Josh Jensen	Central Assembly of God
Justin Geise	Youth Court Services
Kady Murphy	KRTV
Kristy Pontet-Stroop	Alliance for Youth
Lacey Hallett	United Way of Cascade County
Lynette Scriver-Colburn	RSVP of Cascade County
Mark Hewitt	Malmstrom Air Force Base
Mike Mikulski	Youth Dynamics
Teddy Nault	City-County Health Department
Thomas Risberg	Rocky Mountain Treatment Center

Access to Healthcare — Core

Austin Mills	Benefis Health System
Coleen Hill	Indian Family Health Clinic
Dani Prinzing	Benefis Health System
Deb Kottel	St. Vincent de Paul
Jackie Gittens	Voices of Hope
Justin Grohs	GF Emergency Services
Kate Nessan	Planned Parenthood
Lacey Hallett	United Way of Cascade County
Laura Merchant	Benefis Health System
Mary Lynne Old Coyote	Indian Family Health Clinic
Nikki Phillips	Benefis Health System
Sydney Blair	Center for Mental Health
Tanya Houston	City-County Health Department
Tina Bundtrock	Benefis Health System
Trista Besich	Alluvion Health
Wes Old Coyote	Indian Family Health Clinic

Access to Healthcare — Dental

Caleen Tacke	City-County Health Department
Dee Goss	Westside Family Dental
Dr. Kevin Fairhurst	Westside Family Dental
Justine Marchion	Hygienist
Kelsey Gummer	Alluvion Health
Lacey Hallett	United Way of Cascade County
Mallory Wood	Alluvion Health
Robin Williams	Great Falls College - MSU

A special thanks to . . .

Get Fit Great Falls (Healthy Weight)

Aaron Weissman	Teriyaki Madness
Abigail Lichliter	City-County Health Department
Anna Attaway	City-County Health Department
Barbara Bessette	Gateway Recovery Services
Beth Munsterteiger	The Peak Health Club
Bill Bronson	City Commissioner
Bruce Pollington	Recreation Trails, Inc.
Camille Consolvo	Community Volunteer
Clark Carlson-Thompson	Montana State Parks
Dave Cunningham	Lewis & Clark National Forest
Erica Harp	Great Falls Action for Healthy Kids
Erin Merchant	Alluvion Health
Gerry Jennings	Montana Wilderness Association
Jane Weber	County Commissioner
Jody Murray	Great Falls Public Schools
John Juras	Great Falls Bicycle Club
John Taillie	Montana State Parks
Kim Skornogoski	United Way of Cascade County
Lacey Gallagher	City-County Health Department
Patti Jo Lane	Great Falls Clinic
Patty Rearden	Great Falls Parks & Recreation
Penny Paul	City-County Health Department
Sarah Kenyon	The Peak Health Club
Scott Lettre	Great Falls Voyagers
Shelly Mackenstadt	Cascade County WIC
Tanya Houston	City-County Health Department
Teddy Nault	City-County Health Department
Tryna Noyd	Benefis Health System

Building Active Communities Initiative (Healthy Weight)

Abigail Lichliter	City-County Health Department
Bill Bronson	City Commissioner
Carol Bronson	NeighborWorks Great Falls
Clark Carlson-Thompson	Montana State Parks
Erin Merchant	Alluvion Health
Jake Bash	Visit Great Falls Montana
Joan Rendeen	Business Improvement District
Jody Murray	Great Falls Public Schools
Kellie Pierce	Downtown Association
Kim Skornogoski	United Way Cascade County
Shane Etzwiler	Chamber of Commerce
Shyla Patera	North Central MT Ind. Living
Tom Micuda	Great Falls City Planning

Child Abuse & Neglect Task Force

Carol Paul	Great Falls Public Schools
Cyndie Einan	City-County Health Department
Deb Huestis	Family Connections
Ellie Zwerneman	City-County Health Department
Jamie Marshall	Dandelion Foundation
Jana Heyes	Benefis Health System
Jo-Viviane Jones	City-County Health Department
Kim Mehaffey	City-County Health Department
Kristin McGuire	Peace Place
Lacey Racine	Victim Witness
Leesha Ford	MSU College of Nursing
Linda Mettam	Dandelion Foundation
Margaret Rhodes-Fannin	Malmstrom Air Force Base
Mike Ammons	Child Bridge Montana
Nicole Zimmerman	Alliance for Youth
Rayna Joshu	City-County Health Department
Sahrita Jones	MT DPHHS Child & Family Services
Sandi Filipowicz	YWCA

And last, but certainly not least...

Organizations in attendance at the January 17, 2019 Community Health Symposium

Alliance for Youth
Alluvion Health
Benefis Foundation
Benefis Health System
CASA (Court-Appointed Special Advocates)
Cascade City–County Health Department
Cascade County Board of Health
Cascade County Commissioners
Cascade County Juvenile Probation
Community Members
Get Fit Great Falls
Great Falls College – MSU
Great Falls Public Schools
Indian Family Health Clinic
Montana State University College of Nursing, Bozeman
Montana State University College of Nursing, Great Falls
NeighborWorks Great Falls
North Central Independent Living Services, Inc.
Opportunities, Inc.
Planned Parenthood
Rocky Mountain Treatment Center
Special Olympics Montana
State of Montana
The Peak Health & Wellness
United Way of Cascade County
YWCA Great Falls

Thank you

For more information, please contact:

LACEY HALLETT
UNITED WAY OF CASCADE COUNTY
lacey.hallett@uwccmt.org
406-727-3400