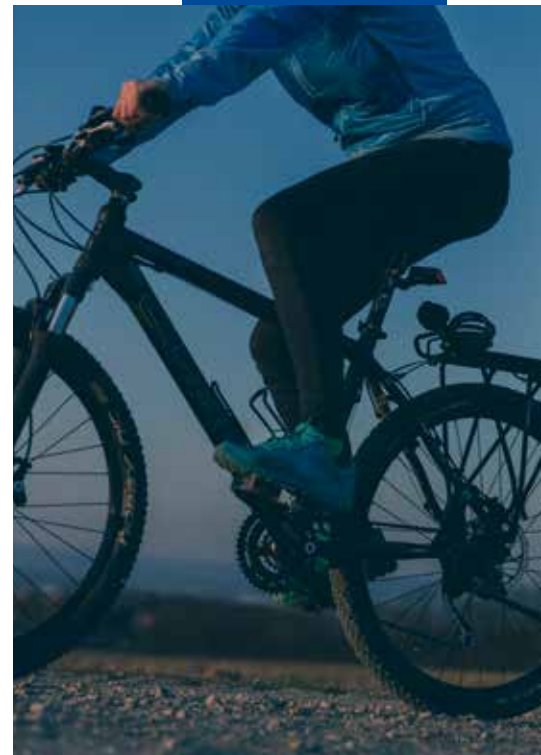


2021

# COMMUNITY HEALTH REPORT

A COMMUNITY PARTNERSHIP TO IMPROVE HEALTH



LEWIS & CLARK COUNTY, MONTANA

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**“Whatever affects one directly,  
affects all indirectly.”**

**-MARTIN LUTHER KING, JR.**

COVER PHOTOS: Clockwise from Top Left - Photo by Andrew S on Unsplash.com,  
Photo by Kevin League, Photo by Markus Spiske from Pexels.com, Photo from Shutterstock.com

# LETTER TO OUR COMMUNITY

## Greetings Lewis and Clark County Residents,

The Healthy Together Steering Committee welcomes you to the latest report that describes the health of Lewis and Clark County. This report provides a snapshot of our community on various health conditions, health behaviors, systems, and social determinants of health.

Since 2011, Lewis and Clark Public Health has partnered with St. Peter's Health to produce this community health report. In 2018, Lewis and Clark Public Health joined several agencies to form the Healthy Together Steering Committee. The goal of this committee is to ensure this report is comprehensive and provides value across multiple sectors in the community.

This report serves as the basis for the fourth community health improvement planning process in Lewis and Clark County, which will include perspectives and input from dozens of representatives in business, government, schools, nonprofit and civic organizations, service providers, and other sectors. The Healthy Together Steering Committee meets regularly to

- Review and compare county, state, and national data;
- Prioritize county health issues and identify needs;
- Develop goals and objectives to meet those needs; and
- Review progress toward those goals and objectives.

This process will be an ongoing opportunity to develop a common agenda for the entire community. It will help us to focus our energy and resources, support policies, projects, and programs that will be most effective in improving the health of the people we serve.

In the past 10 years, researchers studied and found that the conditions in the environment where people are born, live, learn, work, play, worship, and age, called social determinants of health, affect a wide range of health, functioning, and quality-of-life outcomes and risks and contribute to why some of us are healthier than others.

These include social and economic opportunities, resources and supports available in our homes, neighborhoods, and communities; the quality and opportunities for schooling; the safety of our workplaces; the cleanliness of our water, food, and air; and the nature of our social interactions and relationships. These social determinants of health are addressed throughout this report in addition to specific health conditions such as asthma or diabetes.

The *10 Essential Public Health Services* provide a framework to protect and promote the health of all people in every community [Figure 1]. One of these services calls on public health to *assess and monitor population health status, factors that influence health, and community needs and assets*. This report aims to fulfill this essential service.

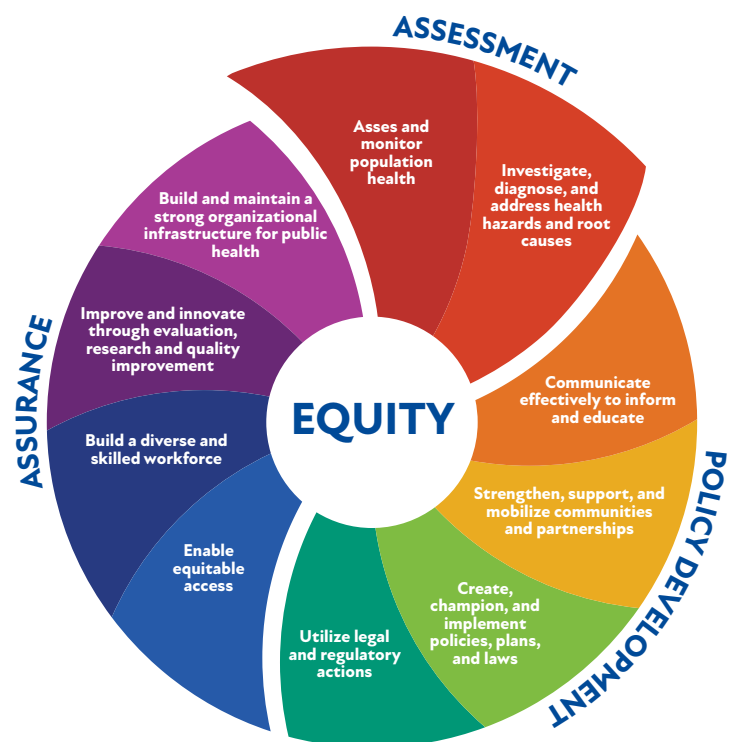
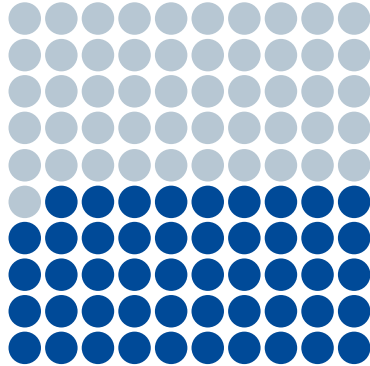
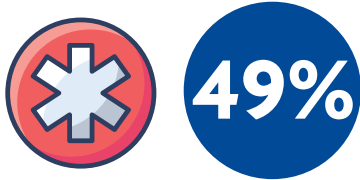


Figure 1. 10 Essential Public Health Services. Source: Centers for Disease Control and Prevention”

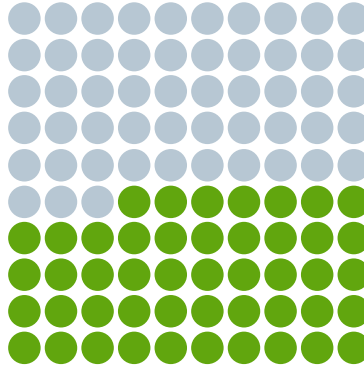


## 3 items Lewis and Clark County residents believe are most important for a healthy community

### Access to Healthcare Services



### Good Jobs and a Healthy Economy



### Access to Affordable Housing

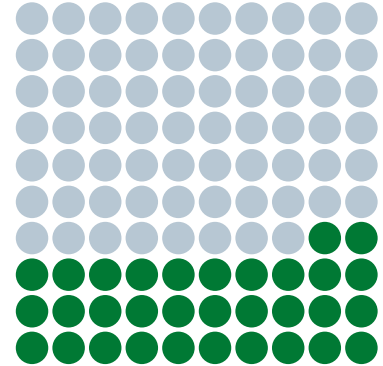


Figure 2.

Source: COVID-19 Post Vaccination Survey (n=2,265), Lewis and Clark Public Health, Montana, 2021.

For decades, Lewis and Clark Public Health has collected and analyzed data from other sources for this report. In 2021, 300 key stakeholders and about 2,250 residents were asked for their input on pressing health issues and what was important in our county. Through these data, we learned that the three most important factors for a healthy community are: access to healthcare services, good job and healthy economy, and access to affordable housing [Figure 2].

If you'd like to learn more, please visit the Health Together website at: <https://www.lccountymt.gov/health/healthy-together.html>

Yours in Community, The Healthy Together Steering Committee:

**Lori Ladas**, Executive Director: Rocky Mountain Development Council, Inc.

**Amy Emmert**, Senior Director of Population Health and **Haylie Wisemiller**, Population Health and Community Education Specialist: St. Peter's Health

**Emily McVey**, Executive Director: United Way of the Lewis and Clark Area

**Jill Steeley**, CEO: PureView Health Center

**Drenda Niemann**, Health Director/Health Officer, **Jolene Jennings**, Behavioral Health Systems Improvement Specialist, **Dorota Carpenedo**, COVID-19 Epidemiologist and **Damian Boudreau**, Communications Specialist: Lewis and Clark Public Health

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# COMMUNITY INPUT

To maintain a healthy community, it is necessary to monitor the health status of the residents and the environment. This Community Health Needs Assessment report provides an overview of the community's strengths, needs, and priorities.

The Healthy Together Steering Committee includes acting members from St. Peter's Health, Lewis and Clark Public Health, PureView Health Center, Rocky Mountain Development Council, and the United Way of the Lewis and Clark Area. The committee was actively involved in this assessment and on-going implementation process in several ways described below to seek community input included in this report.

## Methods of Data Collection:

The data in this report includes the results from phone, online, hard copy collected surveys, and social media. The data will be used to develop goals set out in the Community Health Improvement Plan in 2022.

## Primary Data Collection

- Community input surveys:
  - St. Peter's Health commissioned the Professional Research Consultants (PRC) Community Health phone survey,
  - COVID-19 Post Vaccination Survey,
  - Pride Parade Survey,
  - St. Peter's Health Stakeholder Survey,
  - Social media example: GIS Story Map via Survey 123.

## Secondary Data Collection

- Peer-reviewed literature and white papers.
- Existing individual program assessment reports; for example, the Lewis and Clark County Behavioral Health Crisis System Analysis.
- Localized data collected by different agencies such as the Elevate Montana ACEs community survey.
- Hospital admissions and emergency department rates provided by St. Peter's Health hospital.
- Data compiled by State agencies, including the Office of Epidemiology and Scientific Support, the Central Tumor Registry at the Montana Department of Public Health and Human Services, Montana Department of Environmental Quality, and Montana Department of Transportation.
- Data from Federal sources include the U.S. Census Bureau Decennial and American Community Survey, Centers for Disease Control and Prevention, Centers for Medicare and Medicaid, and United States Department of Agriculture.

A complete list and short description of data sources can be found under the "Data Sources" section in this document.

## Data Limitations

This report does not measure all the possible aspects of health in Lewis and Clark County. It also does not adequately represent all population groups living in our community. Many data elements included in this report are from self-reported sources like the Behavioral Risk Factor Surveillance System (BRFSS) and are not clinical measurements of each person living in our county. Small community-based programs do not have sufficient capacity or resources to provide reliable data and many of the data utilized in this report provide estimated rates instead of actual counts.

# HEALTH AREAS OF CONCERN

Priority areas identified as health concern for Lewis and Clark County, Montana

-  **ASTHMA**
-  **CANCER**
-  **HEART DISEASE**
-  **HOUSING**
-  **MENTAL HEALTH**
-  **SUBSTANCE USE**

Not in the order from highest to lowest priority.

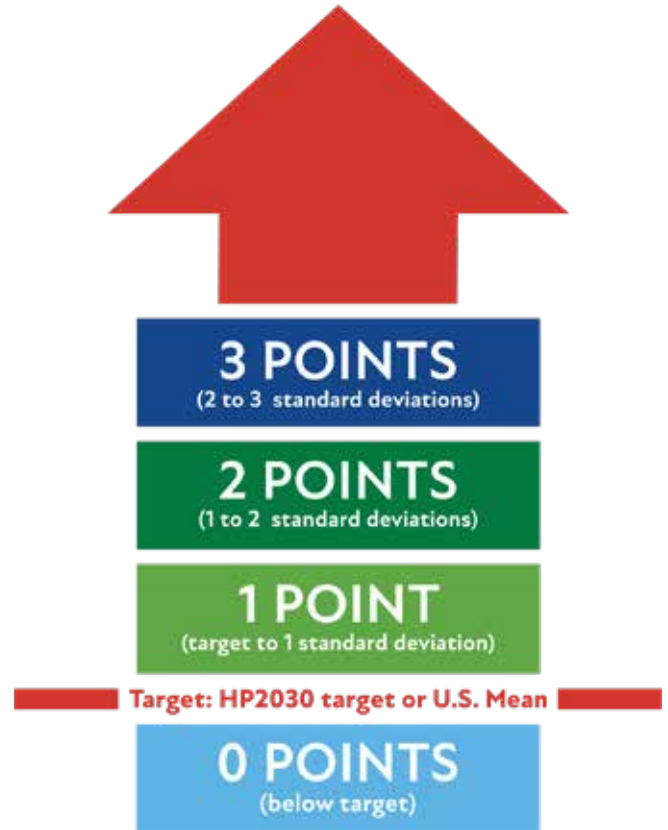


Figure: Tiered point assignment for the target.

## Methods

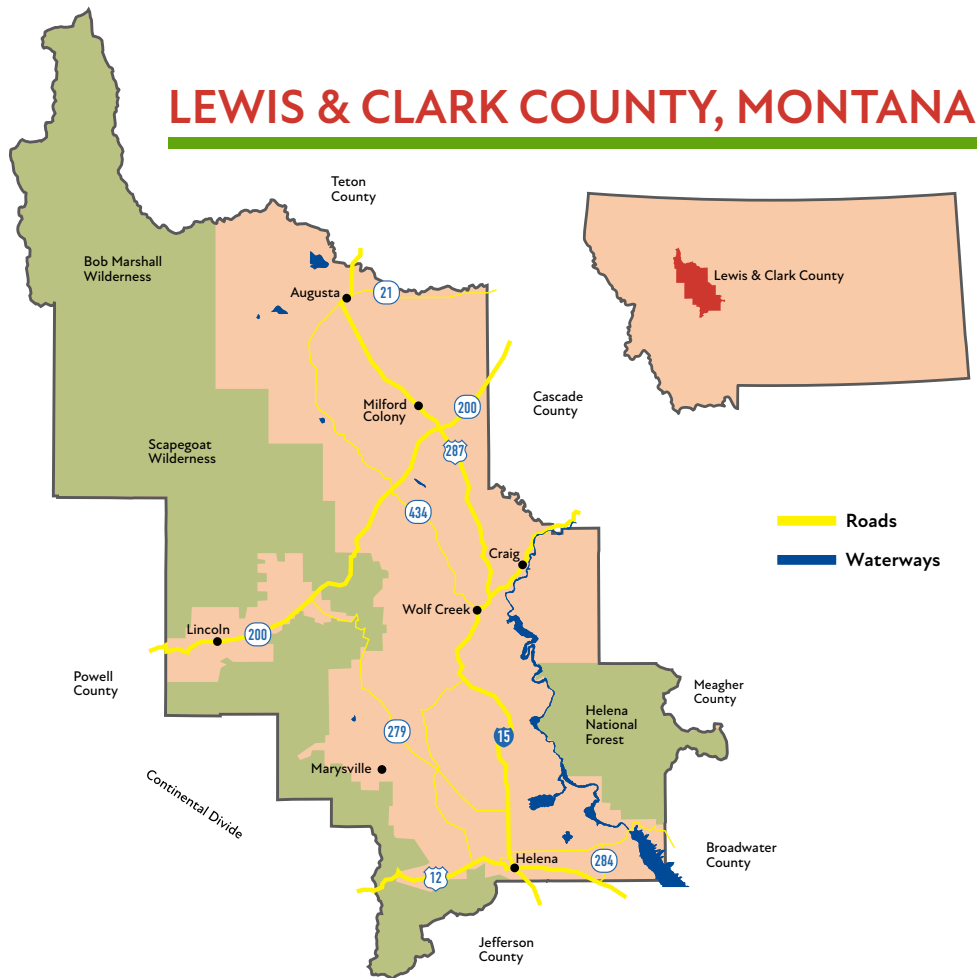
National and state data sources were used to describe health areas in this report. Every 10 years, the U.S. Department of Health and Human Services publishes national targets for improving specific health areas. These targets are referred to as *Healthy People 2030 (HP2030)*. To select the health priority areas for Lewis and Clark County, a tiered approach was used to assign points from 0 to 3. If *HP2030* target was available for comparing the county's given measure, a binary prioritization point was applied. For example, if specific percentage did not meet the *HP2030* target then 1 point was assigned, if the measure met the *HP2030* target then 0 point was assigned. In the absence of *HP2030* target, points were based on the number of standard deviations Lewis and Clark County deviated from the U.S. mean [Figure]. The greater the number of points the higher the priority given to the health area. By applying this method, 6 areas out of 20 considered were identified with 1 or more points above *HP2030* or the U.S. mean.



# SECTION I: COMMUNITY PROFILE

## GEOGRAPHY

Lewis and Clark County is located in west-central Montana, covering just over 3,000 square miles [Map]. The county is situated on the eastern slopes of the Continental Divide and has an average elevation of about 4,000 feet. Much of the northern and western parts of the county are mountainous and include portions of the Bob Marshall and Scapegoat Wilderness areas. The Front Range of the Rocky Mountain and Missouri River are also popular attractions. Helena is the largest city in the county and serves as the State capital.

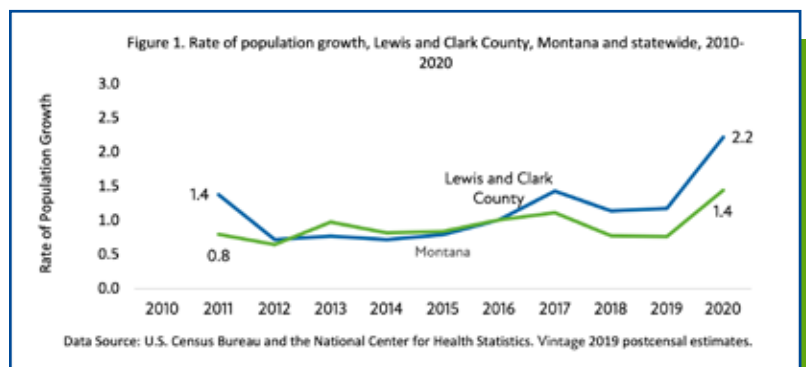


## POPULATION

### Population changes and density

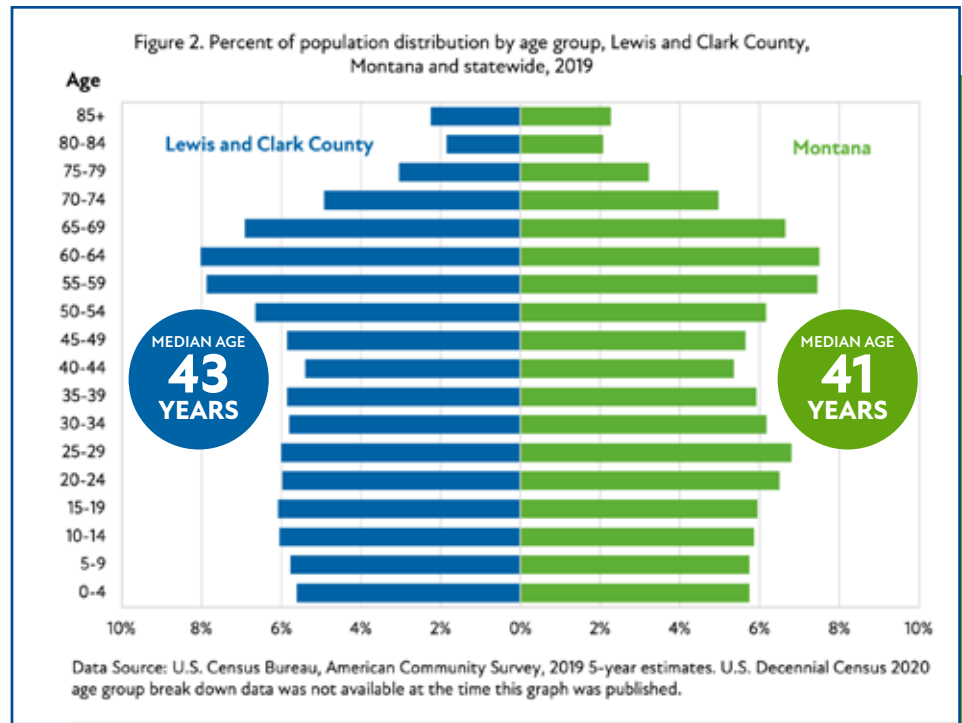
Of the 56 counties in Montana, Lewis and Clark is the 6<sup>th</sup> most populated county. The county's population increased by 12% from 2010 (63,395) to 2020 (70,973). As a result, the county's population density increased from 18.3 to 20.5 inhabitants per square miles in the last 10 years. In recent years, Lewis and Clark County experienced a higher annual population growth rate of 2.2% in 2020 from 1.2% in 2019 [Figure 1]. The gain rate was much higher compared to Montana's population growth rate.

Map. Geography of Lewis and Clark County, Montana



## Age and gender

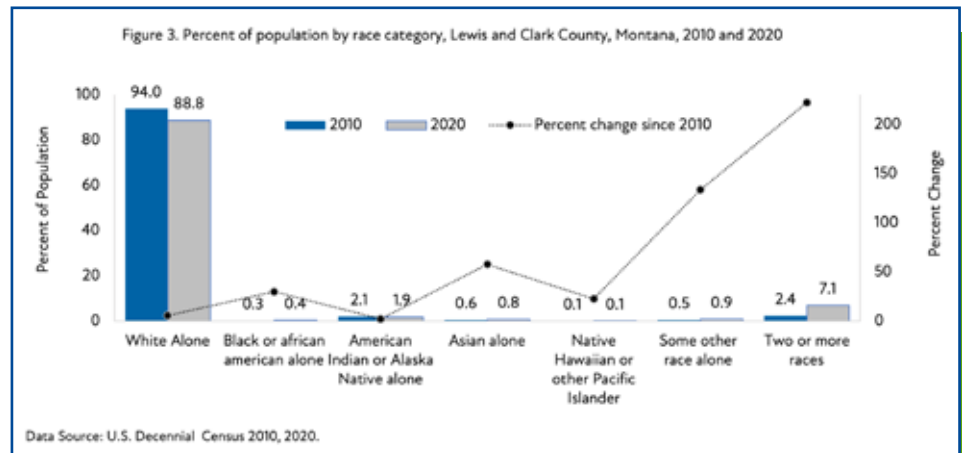
In 2019, the U.S. Census Bureau estimated approximately 21.3% of the population in Lewis and Clark County were aged 18 years and younger and 19.4 % were aged 65 years and older. The age distribution between the county and state residents were similar; however, Lewis and Clark county's population was slightly older with a median age of 43 years compared to the States' median age of 41 years [Figure 2]. The percentage of the population identifying as male or female in Lewis and Clark County is about equal. Data for transgender and non-conforming population for Lewis and Clark County is limited. However, based on the 2021 community survey, 44 individuals identified as other than male or female.<sup>1</sup>



## Race, ethnicity, and language

Between 2010 and 2020, Lewis and Clark County's population became more racially and ethnically diverse.

- In 2020, Lewis the County's White population remained the largest race or ethnicity group since 2010. American Indian population stayed about the same, accounting for about 2% of the county's population in 2010 and 2020.
- In 2020, 88.8% identified as White alone; however, this race category had the lowest percentage change (5.8%) from 2010 to 2020 Census counts compared to the County's highest percentage change (222.5%) for residents who identified as two or more races [Figure 3].
- The county's Hispanic or Latino population grew from 2.5% to 3.7% from 2010 to 2020.
- Lewis and Clark County residents predominantly speak English (97.3%) while 2.7% of the county's population speaks other languages. Spanish is spoken by 1.5% of the county's population.



## Key Highlights

- The county population grew by 12% from 2010 to 2020.
- Most (84%) of the Lewis and Clark County's population lives in the City of Helena which is also the capitol of Montana.
- In the last ten years the population of Lewis and Clark County became more racially and ethnically diverse. The county's White population dropped 5% between 2010 (94%) and 2020 (89%).
- English is the primary language (97%) spoken in the County.

# SECTION II: HEALTH CONDITIONS

Health conditions include chronic diseases such as diabetes, asthma, cancer, mental health disorders, and other health problems. These conditions are defined as a prolonged course of illness (lasting a year or longer), and often requiring ongoing medical attention. Each of these health diseases may have a long development period, are non-communicable (are not passed from person to person) and can cause functional impairment in daily activities or disability.<sup>2,3</sup>

## Chronic Disease in Our Community

- Close to 10% of Lewis and Clark County adults reported a history of heart attack and 2% said they have had a stroke.<sup>4</sup>
- On average, one thousand Lewis and Clark County residents are hospitalized annually for heart disease and stroke, and twice as many seek emergency department care. The county's heart disease and stroke hospital admissions rate increased by 11% and emergency department visits increased by 25% between 2014-2016 and 2017-2019.<sup>5</sup>
- About 430 residents are diagnosed with cancer annually and about 141 die from the disease.<sup>6,7</sup>
- 12% of Lewis and Clark County adults reported having current asthma and 6% said they have chronic obstructive pulmonary disease (COPD).<sup>4</sup>

## Chronic Diseases as Leading Causes of Death

Chronic diseases are major causes of death in our county, state, and the country. In 2019, the 5 leading causes of death for Lewis and Clark County, statewide, and the United States were heart disease, cancer, chronic lower respiratory diseases, unintentional injuries, and stroke [Figure].

Lewis and Clark County had higher mortality rates for 3 leading causes of death when compared to Montana and the United States [Figure]:

- Cancer (208.8 deaths per 100,000 population)
- Chronic lower respiratory diseases (102.3 deaths per 100,000 population)
- Stroke (50.4 deaths per 100,000 population).

## LEADING CAUSES OF DEATH IN LEWIS AND CLARK COUNTY



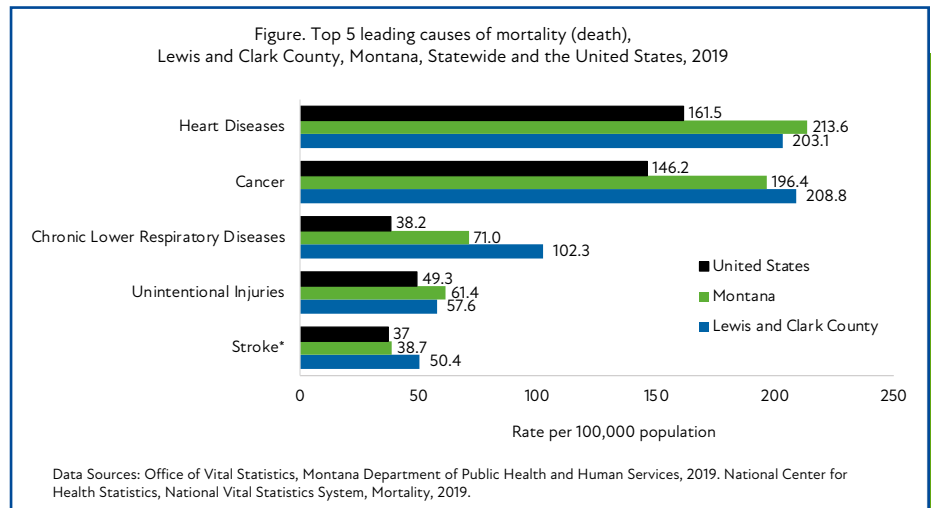
**1**  
**CANCER**



**2**  
**HEART DISEASES**



**3**  
**CHRONIC LOWER RESPIRATORY DISEASES**



## Causes of Chronic Diseases

There are many causes (risk factors) responsible for chronic diseases. Some of these risk factors are modifiable and include unhealthy diet, physical inactivity, tobacco, alcohol and other substance use. Other risk factors for chronic disease include environmental factors such as air pollution or family history of certain types of cancers.

# ARTHRITIS

## What is arthritis?

Arthritis is the overall term for conditions affecting joints or tissues around joints. Individuals with arthritis experience swelling and tenderness of one or more joints. The most common form of arthritis is osteoarthritis.<sup>8</sup> Arthritis has a major effect on quality of life such as the ability to work or preform basic daily activities like holding a cup.<sup>9</sup>

## Why is arthritis important?

Arthritis can affect people of all ages, including children, and tends to be more prevalent among women.<sup>10</sup> The disease often occurs with other chronic health conditions, such as diabetes, heart disease, and obesity. Arthritis continues to be the most common cause of disability.<sup>11</sup>

- Approximately 25% of Lewis and Clark County adults were diagnosed with arthritis in 2017-2019 [Figure 1].
- The county's arthritis rate declined 5 percentage points between 2011-2013 and 2017-2019 [Figure 1].
- In 2020, Montana's arthritis rate (26%) was higher compared to the United States rate (24%) [Figure 2].

## How is Lewis and Clark County engaged in addressing arthritis?

Coalitions and programs work to create awareness around arthritis within the county. Private sectors, families, friends, and the public health department are working together to meet those in need. Some examples of support within Lewis and Clark County include:

- The St. Peter's Health Arthritis Movement Program is a free, community-based, recreational group movement and education program designed specifically for people with arthritis and related diseases.
- There are multiple courses that help people learn healthy living habits while living with arthritis. Two of those programs include Montana Living Life Well and Walk with Ease. The Montana Living Life Well program helps those affected by chronic health conditions by educating them on increasing physical activity, improving communication, and helping decrease their fear and frustration due to their chronic health condition. Walk with Ease Self-Directed Program is a six-week walking program for anyone who would like to start or maintain a low



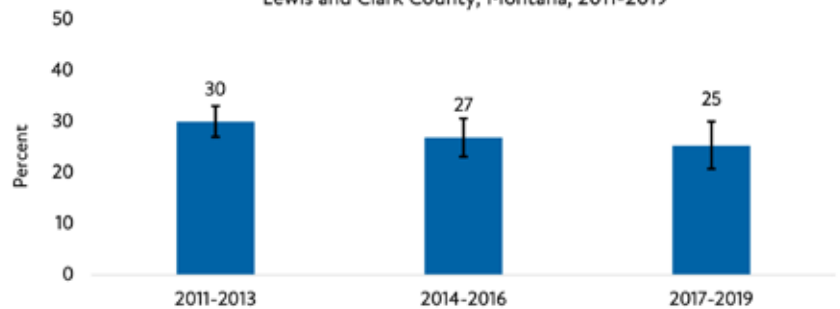
“As we turn more into an aging community, our built environment and systems are not as equipped to handle disability and chronic pain. There is more that we can do in our community to support these groups and increase livability.”

– Public Health Representative

Source: Stakeholder Survey, St. Peter's Health, Lewis and Clark County, Montana, 2021

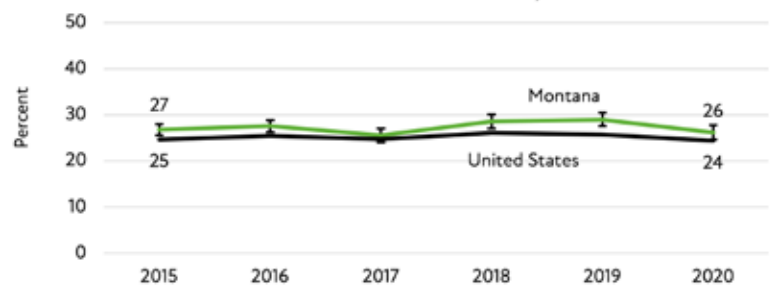


Figure 1. Percent of adults aged 18 years or older diagnosed with arthritis, Lewis and Clark County, Montana, 2011-2019



Data Source: Behavioral Risk Factor Surveillance System (BRFSS), 2011-2019  
1 – indicates 95% confidence interval

Figure 2. Percent of adults aged 18 years or older diagnosed with arthritis, Montana and the United States, 2015-2020



Data Source: Behavioral Risk Factor Surveillance System (BRFSS), 2015-2020  
1 – indicates 95% confidence interval

impact exercise program. The program focuses on people living with arthritis, but is open to all.

- The Aging Well Workgroup of the Healthy Communities Coalition works on making the community more livable for people of all ages, emphasizing the needs of older adults. The workgroup brings together a diverse and inclusive stakeholder group to focus on minimizing barriers and increasing strengths so that residents can age in an independent, healthy, and supportive way. A goal of the group is to become an AARP designated “Age-Friendly” community.

# ASTHMA

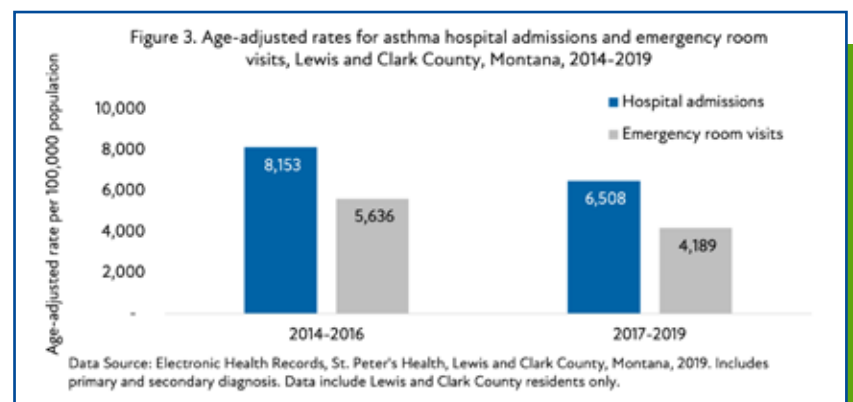
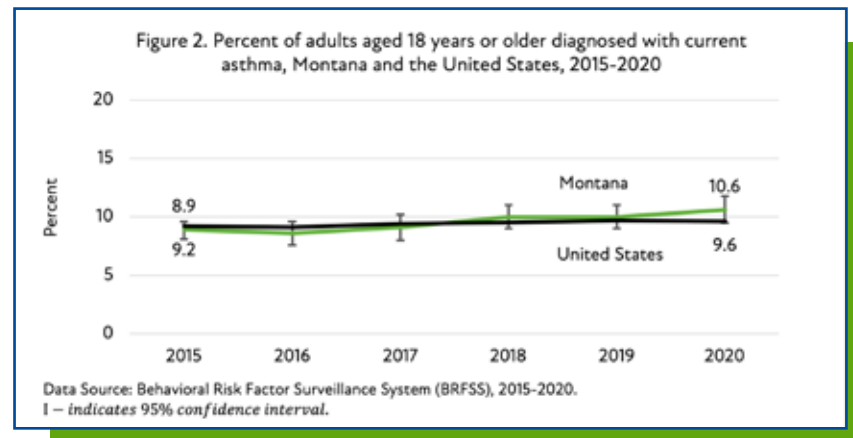
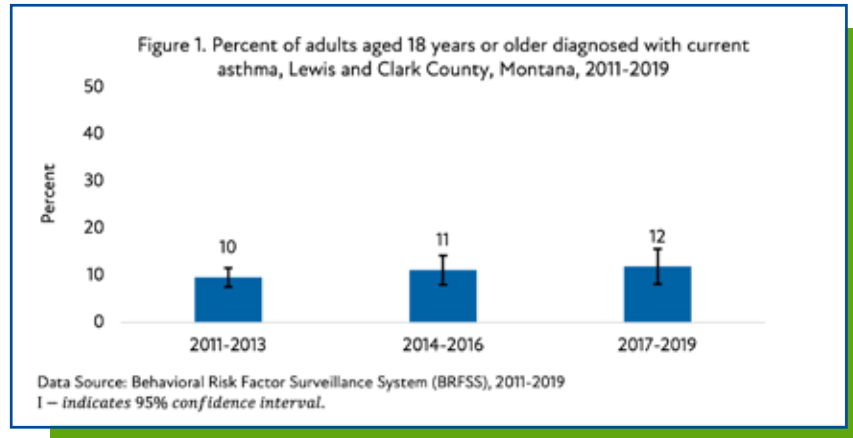
## What is asthma?

Asthma is a lung disease that inflames and narrows the airways which results in breathing problems. It causes recurring periods of wheezing, chest tightness, shortness of breath, and coughing.<sup>12</sup> Individuals with asthma may experience an asthma attack during which the body produces more thick mucus which clogs or tightness the airways making it difficult to breathe. Indoor and outdoor environmental air pollutants, genetic predisposition, and occupational factors have been linked to developing asthma.

## Why is asthma important?

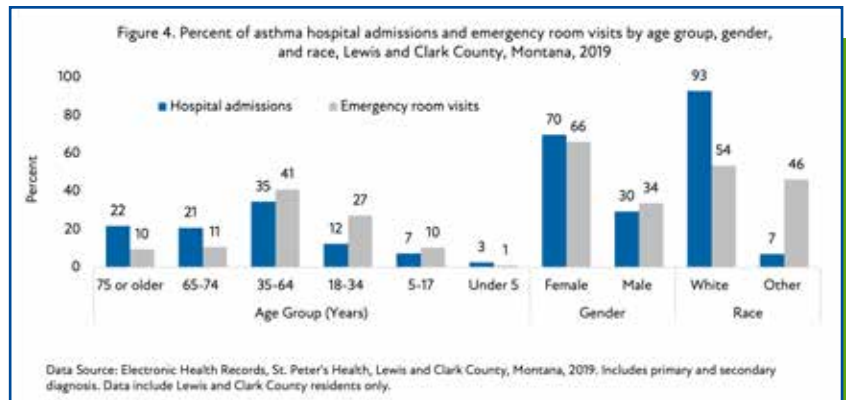
The prevalence of asthma has increased over the years.<sup>13</sup> Asthma affects people of every race, sex, and age and is the leading chronic disease in children.<sup>14</sup> More than half of all children with asthma experienced at least 1 asthma attack.<sup>15</sup> Annually, 1 in 6 children with asthma have an emergency department visit making it one of most costly diseases in the U.S. Severe asthma attacks can be deadly.

- Since 2011-2013, at least 10% of adults in Lewis and Clark County reported current asthma [Figure 1].
- Lewis and Clark County's rate of current asthma increased from 10% in 2011-2013 to 12% in 2017-2019 [Figure 1].
- In 2020, Montana's current asthma rate for adults was one percentage point higher (10.6%) compared to current asthma rate (9.6%) for adults in the United States [Figure 2].
- In 2014-2019 there were approximately 2,322 asthma-related hospital admissions and 12,051 emergency department visits for Lewis and Clark County residents.<sup>4</sup>
- Asthma hospital admissions and emergency department visits age-adjusted rates were higher for 2014-2016 compared to 2017-2019 among Lewis and Clark County residents [Figure 3]. The hospital admissions rate decreased by 20% and the emergency department visits decreased by 26% between 2014-2016 and 2017-2019.





- In 2019, the percentages of asthma hospital admissions and emergency department visits were highest for adults aged 35-64 years and female Lewis and Clark County residents [Figure 4].



## How is Lewis and Clark County engaged in addressing asthma?

The impact of asthma is being addressed through programs that assist with creating a healthy lifestyle and safe environments. Examples of these programs are:

- Lewis and Clark Public Health provides free asthma education for people of all ages with uncontrolled asthma through the Montana Asthma Home Visiting Program (MAP).
- The Montana Asthma Advisory Group is a diverse team of stakeholders representing more than 25 agencies from across the state who meet regularly to provide guidance and advice on asthma control efforts statewide.

“

“I observe that respiratory problems are noticeable particularly among lower-income households. Children and young people have asthma, and then adults with obvious breathing issues—COPD etc.—using oxygen. Frequently, the respiratory disease is related to smoking or occupational disease or both.”

-Social Services Provider

Source: Stakeholder Survey, St. Peter's Health, Lewis and Clark County, Montana, 2021

”



Dr. Bedell, Family Medicine, and patient. Photo from St. Peter's Health.

# CANCER

## What is cancer?

Cancer is a large number of diseases characterized by the abnormal body cells that grow uncontrollably, crowd out normal cells and can spread to other parts of the body.<sup>16</sup> Blood cancers and solid tumor cancers are the two main categories of cancer. Tumor can be referred to as a lump or a growth. Cancer lumps are called malignant and non-cancer lumps are called benign.

## Why is cancer important?

Cancer is the 2<sup>nd</sup> leading cause of death in the Lewis and Clark County, in Montana, and the United States.<sup>22</sup> Cancer survivors often experience an array of physical, emotional, social, and financial challenges because of a cancer diagnosis and treatment.<sup>17</sup> Often, cancer survivors are at risk of recurrence of their first cancer and are at greater risk of developing other cancers.<sup>16</sup> Risk factors, such as excessive alcohol consumption, tobacco use, and being overweight and obese, increase the risk for many cancers.<sup>18</sup>

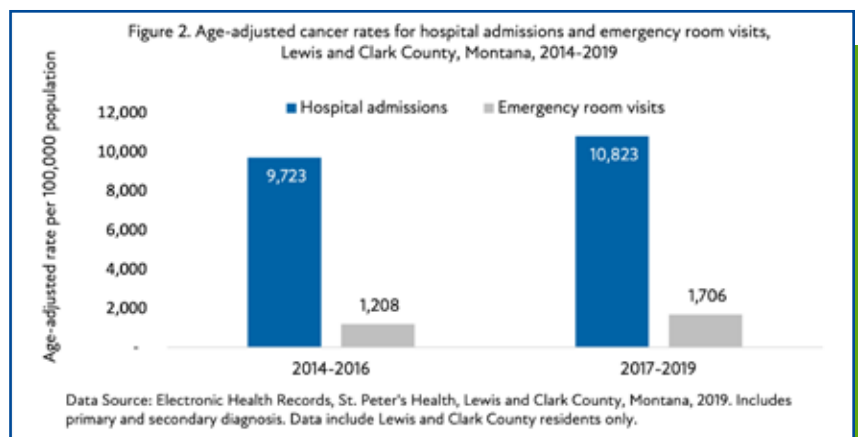
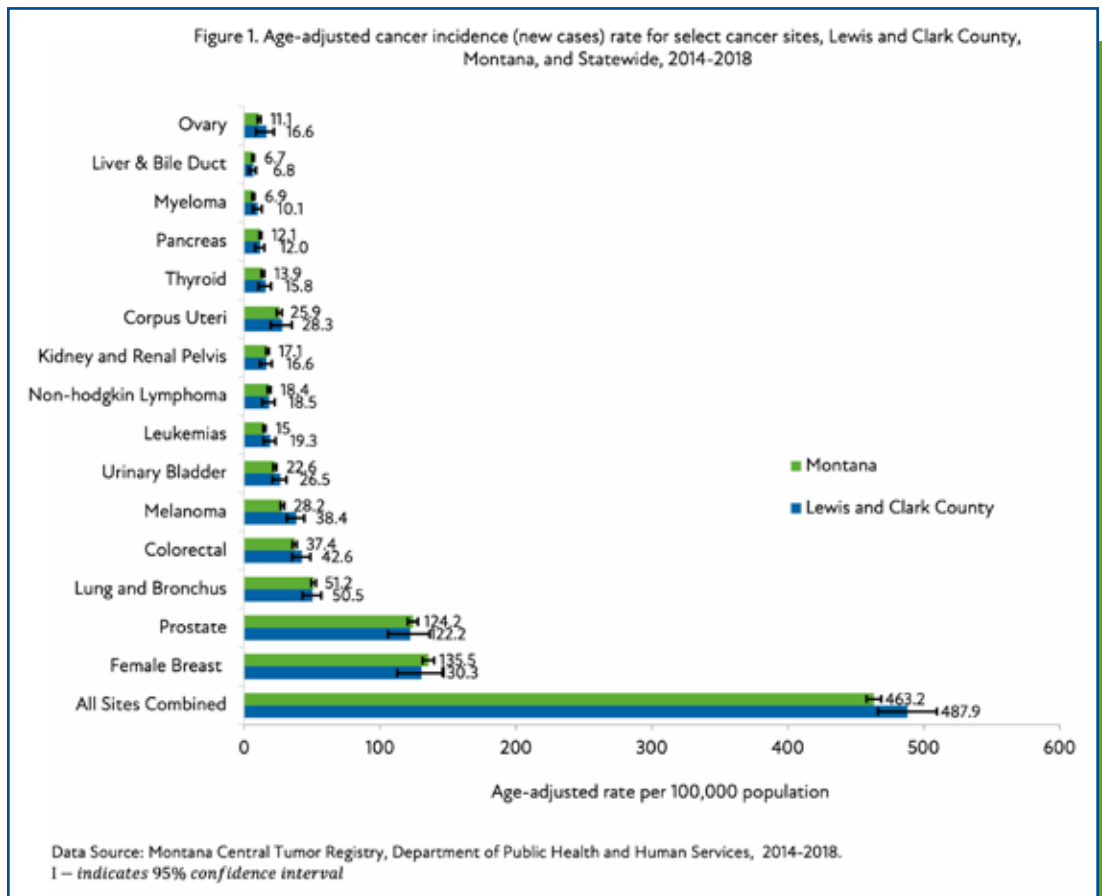
- A total of 2,146 new cancer cases were reported in Lewis and Clark County residents during a 5-year period (2014-2018).<sup>6</sup>

- In 2014-2018, female breast cancer had the highest age-adjusted incident rate (130.3 per 100,000 population) followed by prostate cancer rate (122.2 per 100,000 population) in Lewis and Clark County [Figure 1].

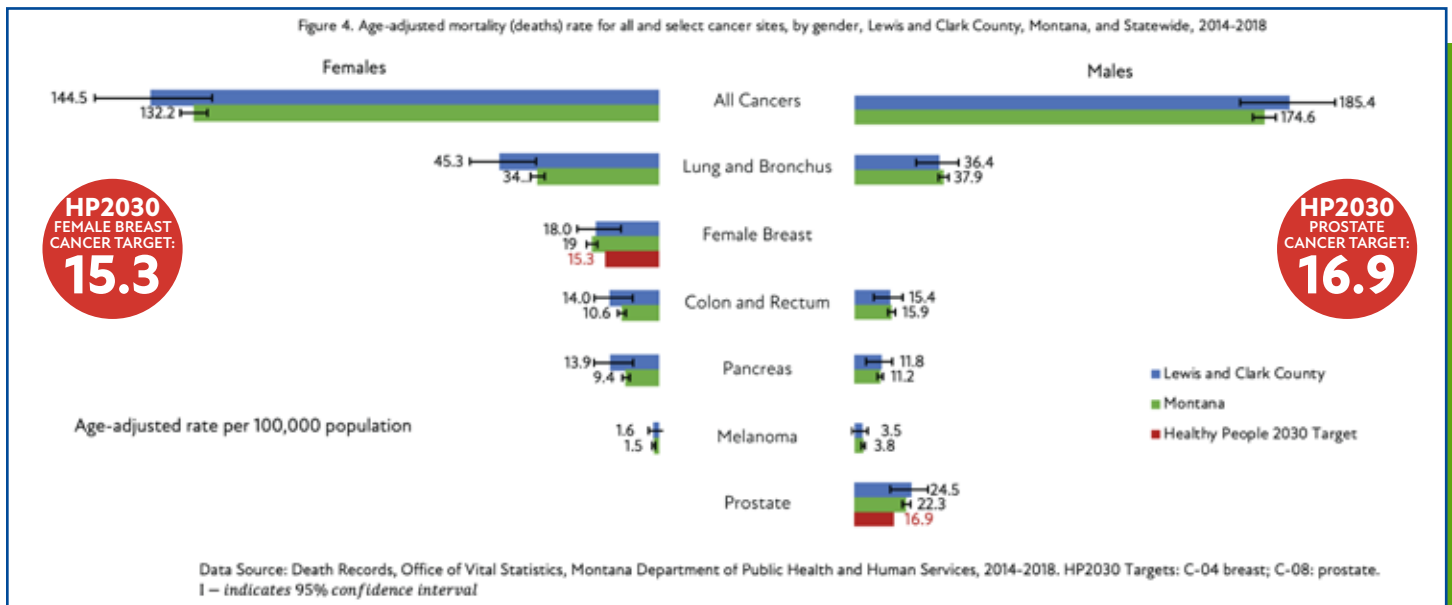
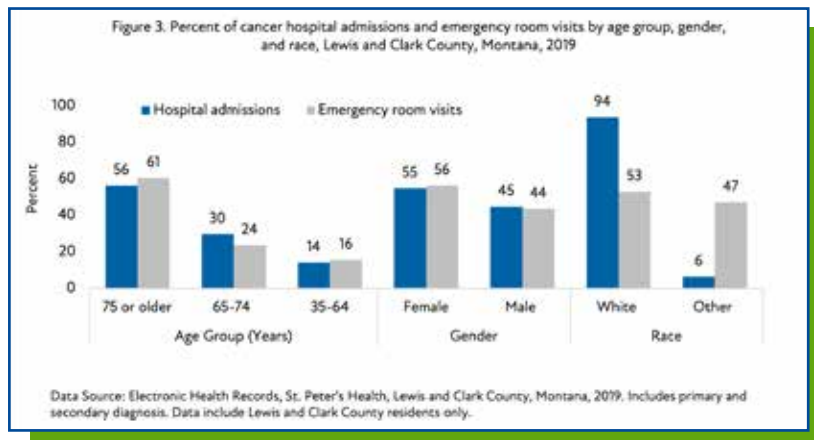
- Although not a statistically significant difference, all sites combined cancer rate was higher for Lewis and Clark County compared to the state [Figure 1].

- In 2014-2019 there were approximately 2,894 cancer-related hospital admissions and 3,178 emergency department visits among Lewis and Clark County residents.<sup>5</sup>

- Hospital admissions and emergency department visits for cancer age-adjusted rates were higher for 2017-2019 compared to 2014-2016 for Lewis and Clark County residents [Figure 2]. The hospital admissions rate increased by 11% and the emergency department visits increased by 41% between 2014-2016 and 2017-2019.



- In 2019, the percent of cancer hospital admissions and emergency department visits was the highest for adults aged 75 years or older, and female Lewis and Clark County residents [Figure 3].
- Cancer was the second leading cause of death, after heart disease, in Lewis and Clark County, Montana, and the United States.<sup>19</sup>
- A total of 706 cancer deaths were reported for Lewis and Clark County residents in 2014-2018.<sup>7</sup> During the same time, there were 42 female breast cancer deaths and 43 prostate cancer deaths.

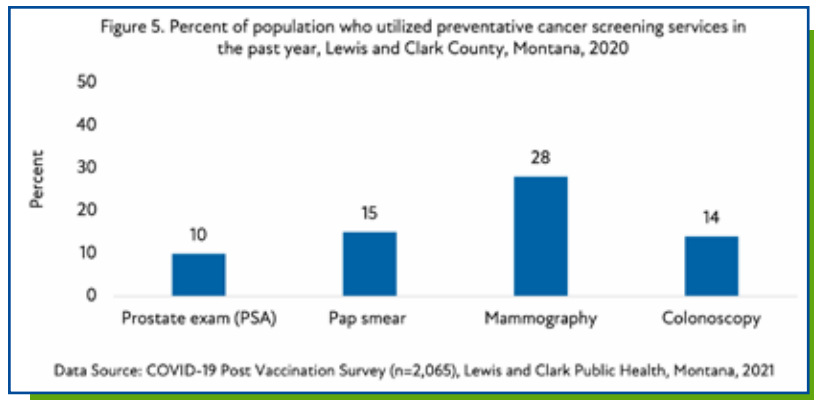


- The mortality (deaths) age-adjusted rates for female breast cancer and prostate cancer surpassed the Healthy People 2030 targets for Lewis and Clark County residents [Figure 4].
- In 2020, 28% of Lewis and Clark County survey respondents said they, or someone in their household had a mammography screening, and 10% had a prostate exam [Figure 5].

## How is Lewis and Clark County engaged in addressing cancer?

Throughout the County, collaborative partnerships of private and public individuals and organizations develop, implement, promote and advocate for a holistic approach to prevent and control cancer. Resources include:

- The Lewis and Clark Public Health Cancer Screening Program coordinates free breast and cervical cancer screening for individuals who are uninsured or underinsured and who meet certain age and income guidelines.
- The Montana Cancer Coalition (MTCC) strives to ensure better quality of life and enhance the odds of survivorship through prevention, early detection, and state-of-the-art cancer care.



“Having cancer is the major problem. We have outstanding delivery of care for cancer patients. Access to specialty care is adequate. It still may be in a patient’s best interest, when warranted, to travel to a cancer center that deals with thousands of cancer cases.”

- Community Health Provider

Source: Stakeholder Survey, St. Peter’s Health, Lewis and Clark County, Montana, 2021

# CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)

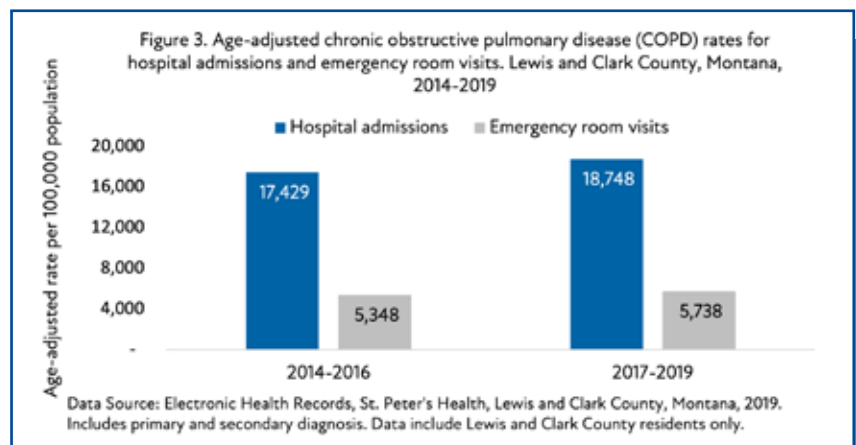
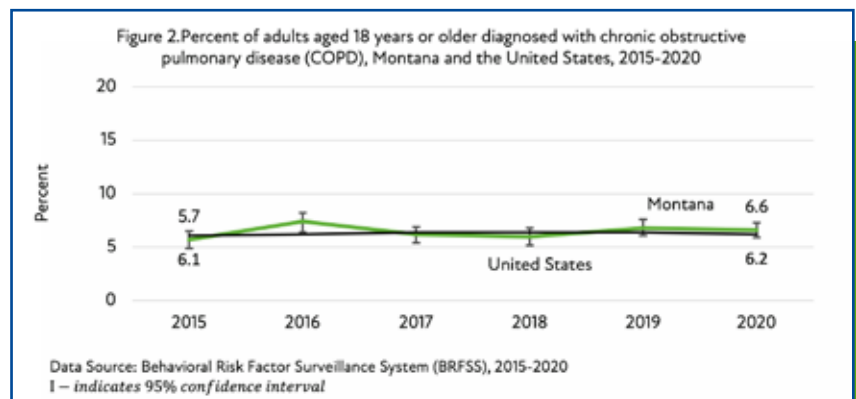
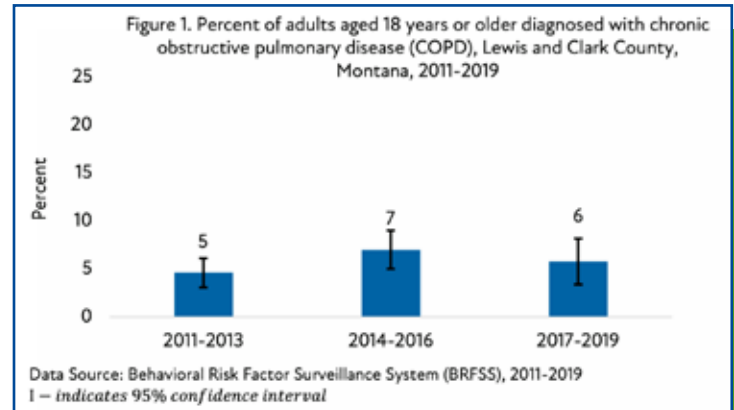
## What is chronic obstructive pulmonary disease?

Chronic obstructive pulmonary disease (COPD) refers to a group of diseases, such as emphysema and chronic bronchitis, causing airflow limitation and breathing-related difficulties.<sup>20</sup> The airflow limitation is usually progressive and linked to an abnormal inflammatory response of the lungs to toxic particles or gases most often caused by exposure to cigarette smoke.<sup>21</sup>

## Why is chronic obstructive pulmonary disease important?

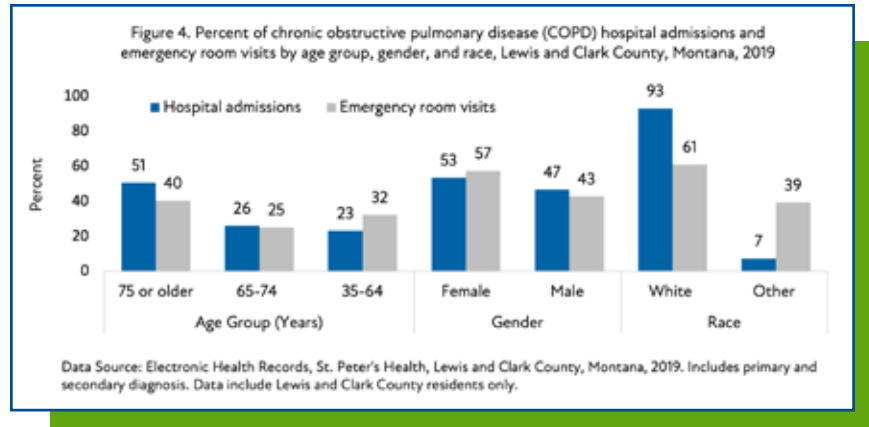
COPD is often preventable and treatable. In 2019, COPD was the 4<sup>th</sup> leading cause of death in the United States and a 3<sup>rd</sup> leading cause of death among women in 2017.<sup>22,23</sup> COPD can get worse for individuals who are smokers, are around air pollutants in home or a workplace, and experience respiratory infections.<sup>24</sup> As COPD progresses, individuals find it harder to carry out their normal daily activities, often due to breathlessness.

- Since 2011, at least 5% of adults in Lewis and Clark County have been diagnosed with chronic obstructive pulmonary disease (COPD) [Figure 1].
- In 2020, Montana’s COPD rate (6.6%) for adults was similar to the rate reported for the United States (6.2%) [Figure 2].
- In 2014-2019, there were approximately 5,702 COPD-related hospital admissions and 13,722 emergency department visits for Lewis and Clark County residents.<sup>5</sup>
- COPD-related hospital admissions and emergency department visits age-adjusted rates were higher for 2017-2019 compared to 2014-2016 among Lewis and Clark County residents [Figure 3]. From 2014-2016 to 2017-2019, the hospital admissions rate increased by 8% and emergency department visits increased by 7%.





- In 2019, the percent of COPD hospital admissions and emergency department visits were the highest among older adults aged 75 years or older, and female Lewis and Clark County residents [Figure 4].



## How is Lewis and Clark County engaged in addressing chronic obstructive pulmonary disease?

Local programs help community members gain access to education, resources, and guidance to help face their health and work towards improving it. Some of these programs include:

- **Tobacco Cessation Program:** St. Peter's Health offers clinically based programs to help tobacco users quit for good. Using only evidence-based programming that combines the use of medication and behavioral counseling, St. Peter's has partnered both with the Montana QuitLine and the American Lung Association to ensure folks know they can quit.
- **Air Quality Monitoring:** The Environmental Services Division of Lewis and Clark Public Health monitors year-round the fine-particulate air pollution in the Air Pollution Control District. The program also enforces local outdoor air-quality regulations that were adopted to protect the health of area residents by controlling emissions of fine particulate pollution, also known as PM2.5



When asked about respiratory chronic diseases, a community member said the following:

“Population with increasing diagnoses of respiratory diseases. Patterns of unhealthy air quality caused by drought, dust/allergens, and wildfires. Continued high use of tobacco products and vaping, and possibly even weed.”

- Community Leader

Source: Stakeholder Survey, St. Peter's Health, Lewis and Clark County, Montana, 2021



Dr. Tarver, Radiology, examines chest x-ray. Photo from St. Peter's Health.



# DEMENTIA, INCLUDING ALZHEIMER'S DISEASE

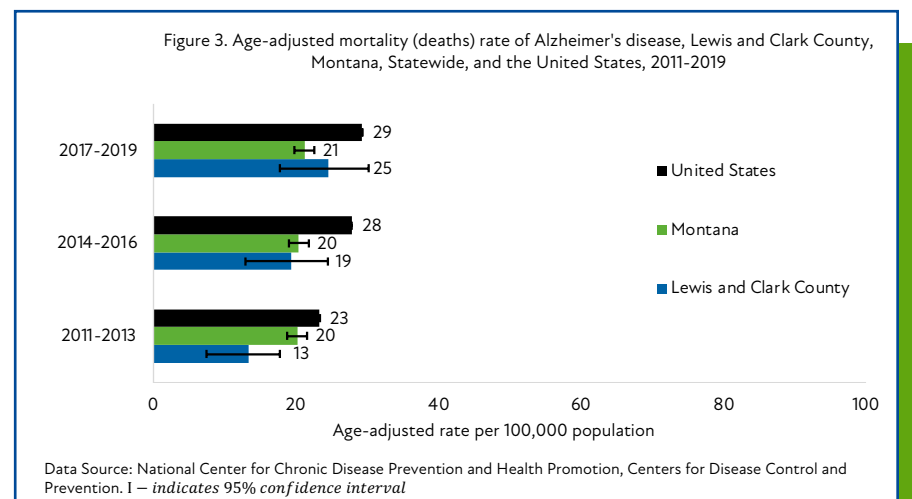
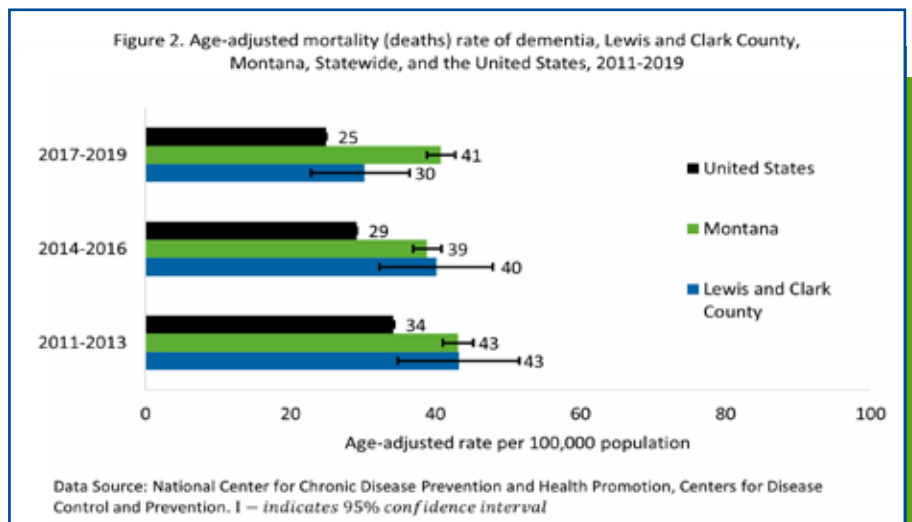
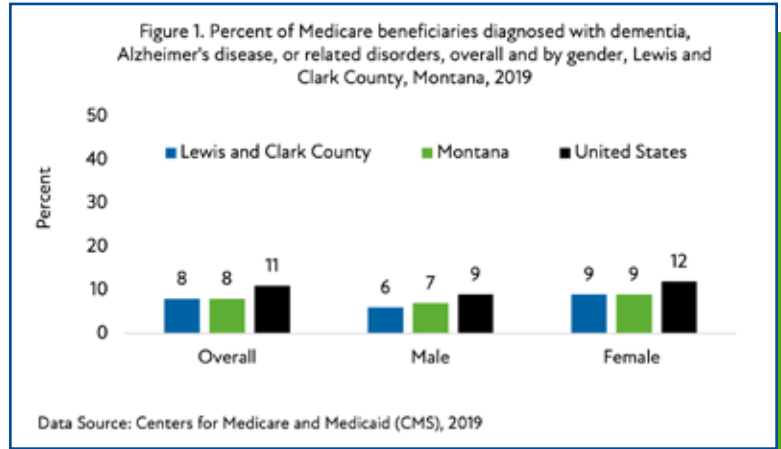
## What are Dementia and Alzheimer's diseases?

Dementia is an overall term for specific group of symptoms which include difficulties with memory, language, problem-solving and thinking skills.<sup>25</sup> Alzheimer's disease is the most common cause of dementia. It involves parts of the brain that control thought, memory, and language.<sup>26</sup>

## Why are Dementia and Alzheimer's diseases important?

Dementia impacts an individual's health, quality of life, and ability to live independently. Dementia can diminish an individual's ability to effectively carry out daily activities such as dressing, prevent physical injury, managing medical conditions, or taking prescribed medications. Age has been identified as a known risk factor for Alzheimer's disease. It is the 5<sup>th</sup> leading cause of death among people aged 65 years or older.<sup>27</sup>

- In 2019, approximately, 8% of Lewis and Clark County Medicare beneficiaries had a diagnosis of dementia, Alzheimer's disease or related disorders; the rate was the same as Montana's (8%), but lower compared to the United States (11%) [Figure 1].<sup>28</sup>
- Females had a higher rate of this disease compared to males [Figure 1].
- Dementia's age-adjusted mortality rate decreased from 43 per 100,000 population in 2011-2013 to 30 per 100,000 population in 2017-2019 for Lewis and Clark County residents [Figure 2].
- Alzheimer's age-adjusted mortality rates increased from 13 per 100,000 population in 2011-2013 to 25 per 100,000 population in 2017-2019 for Lewis and Clark County residents [Figure 3].
- A similar trend for dementia and Alzheimer's disease mortality rates have been reported for Montana and the United States [Figure 2 and 3].



“

“There is limited intervention and support for dementia patients and their families. As patients face this devastating disease we need to increase the support system for the patients and the respite care for their families. There are limited resources in our community to protect caregivers and the vulnerable population they support. This affects an estimated 1 in 9 families in our community, and affects not just the patient but the whole family and support structure.”

– Physician

Source: St. Peter's Health, Lewis and Clark County, Montana, 2021

”

## How is Lewis and Clark County engaged in addressing dementia and Alzheimer's diseases?

Agencies within the county provide services for those facing living with dementia and to help make the transition easier for those diagnosed with the disease. Examples of existing programs/coalitions addressing dementia in Lewis and Clark County include:

- The Aging Well Workgroup is a subset of the Healthy Communities Coalition that focuses specifically on creating a more livable community for our aging population, which will also improve livability for people with dementia.
- Public education and learning opportunities regarding dementia and Alzheimer's disease are presented through Area IV Agency on Aging, AARP, and the Alzheimer's Association.

“

“With Lewis and Clark County being one of the main hubs with a robust population over 65 years of age, dementia definitely impacts our county. Encouraging early diagnosis through education programs and other resources is important so that those living with the disease can receive appropriate medical care allowing them to live more independently longer.”

–Community Leader

Source: Alzheimer's Association, Montana, 2021

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Close-up of elderly person's hands. Photo by Danie Franco on Unsplash.com

# DIABETES AND PREDIABETES

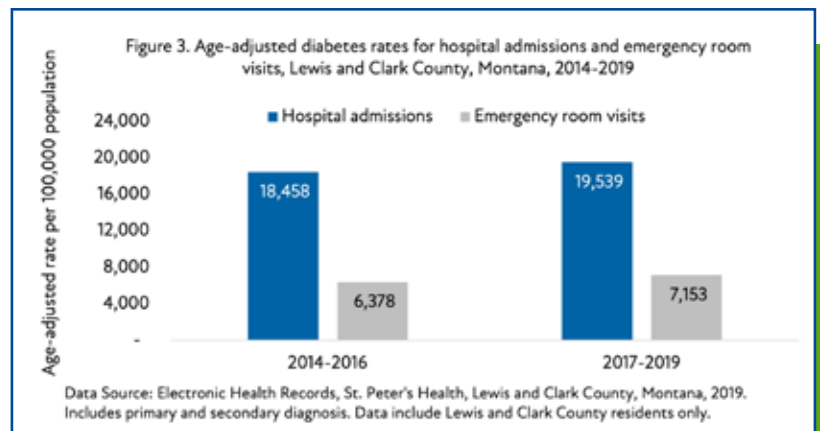
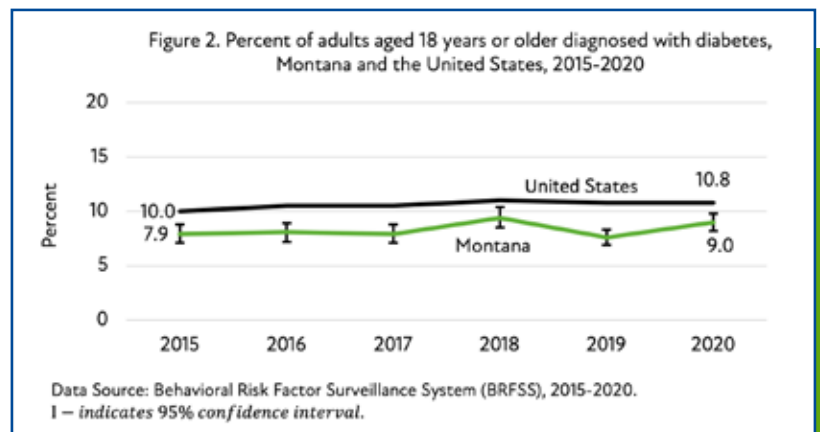
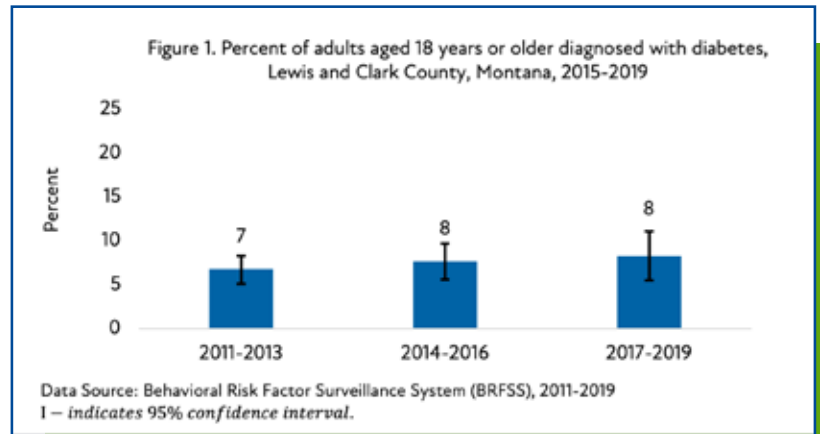
## What are diabetes and prediabetes?

Type 1 diabetes is an autoimmune reaction where the body attacks itself by mistake and stops the body from making insulin.<sup>29</sup> Type 2 diabetes is when a body does not use insulin well and cannot keep blood sugar at normal levels. Prediabetes is when blood sugar levels are higher than normal, but not high enough to be diagnosed as type 2 diabetes. Having prediabetes puts a person at an increased risk for developing type 2 diabetes.

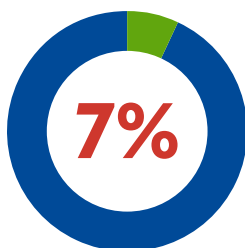
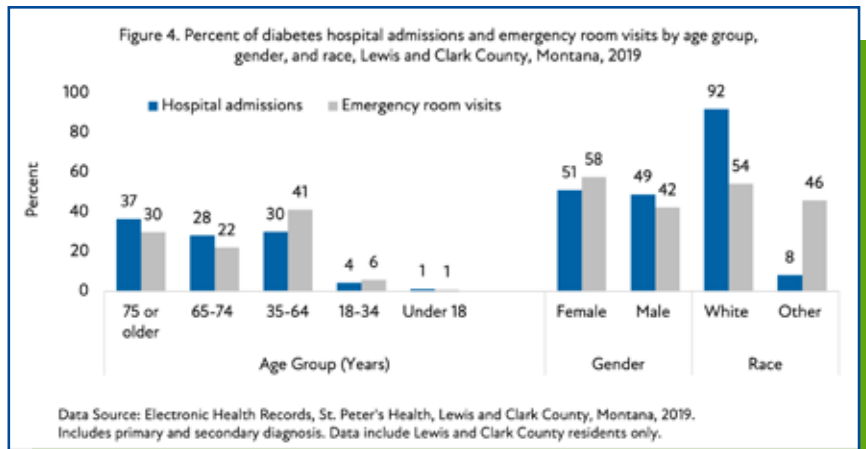
## Why are diabetes and prediabetes important?

Diabetes and its complications are the leading causes of hospitalization and the 7<sup>th</sup> leading cause of death in the county, state, and the country.<sup>30</sup> Diabetes also increases the risk for heart attack and is the leading cause of kidney failure, lower limb amputations, and adult-onset blindness.<sup>34, 31, 32</sup> More than 88 million US adults have prediabetes and 90% of them do not know they have it.<sup>33</sup>

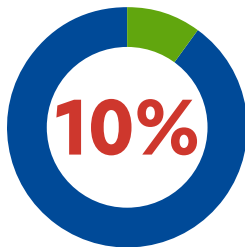
- In 2017-2019, 8% of adults in Lewis and Clark County were diagnosed with diabetes [Figure 1].
- In 2020, Montana's diabetes rate for adults was lower (9.0%) compared to rate reported for the United States (10.8%) in the same year. [Figure 2].
- In 2014-2019 there were approximately 6,138 diabetes-related hospital admissions and 16,771 emergency department visits for Lewis and Clark County residents [Figure 3].
- Diabetes hospital admissions and emergency department visits age-adjusted rates were higher in 2017-2019 compared to 2014-2016 among Lewis and Clark County residents [Figure 3]. The hospital admissions rate increased by 6% and the emergency department visits increased by 12% between 2014-2016 and 2017-2019.



- In 2019, the county’s diabetes hospital admissions rate was highest for older adults aged 75 years or older (37%); however, the percent of diabetes emergency department visits rate was the highest for residents aged 35-64 years (41%) [Figure 4].
- In 2017, 7.4% of Montana adults reported having prediabetes.<sup>4</sup> The county’s rate is not available.



**POPULATION WHO UTILIZED PREVENTATIVE DIABETES SERVICES IN THE PAST YEAR**



**POPULATION WHO UTILIZED SELF-MANAGEMENT DIABETES SERVICES IN THE PAST YEAR**

Data Source: COVID-19 Post Vaccination Survey (n=2,605), Lewis and Clark Public Health, Montana, 2021

## How is Lewis and Clark County engaged in addressing diabetes and prediabetes?

Programs have been established to ensure those at risk for diabetes, or people diagnosed with the disease, receive support for a healthy lifestyle. Examples of these partnerships within Lewis and Clark County include:

- Inch by Inch located at St. Peter’s Health is part of the National Diabetes Prevention Program and has achieved Full Recognition status with the Centers for Disease Control. This 12-month nutrition and physical activity course focuses on the prevention of diabetes and heart disease through lifestyle change. Classes are six months of weekly sessions and six months of monthly sessions.
- Local clinics (such as PureView Health Center and Helena Indian Alliance) and St. Peter’s Health have Diabetes Self-Management classes and counseling for those living with diabetes. Diabetes Self-Management Education and Support (DSMES) is a critical element of care for all people with diabetes. DSMES is the ongoing process of facilitating the knowledge, skills, and ability necessary for prediabetes and diabetes self-care as well as activities that assist a person in implementing and sustaining the behaviors needed to manage his or her condition on an ongoing basis, beyond or outside of formal self-management training.

“Prevention of diabetes is the biggest problem. Lifestyle issues and diet lead to an epidemic of diabetes leading to shorter lives with less quality. The proliferation of cheap, good tasting poor quality food and lack of exercise made worse by screen addiction (TV, video games, and devices) contribute to this.”  
 - Physician

“Medication is the biggest challenge--- Insulin for Insulin dependent [people with diabetes] is not a “want”, it is a necessity to survive. Insurances choose which medications/insulin brands they will approve. Some other brands may work for people, and prevent complications/hospitalizations, but they can’t afford them because they aren’t approved by their health insurance.”  
 -Public Health Representative

“Fitness can be an issue, unless you are able to handle a lot of hills. In addition, we can have some deep dark winters here. There isn’t a facility that is free to community members for fitness. We are a bit behind the times with our nutrition information. While we have a pre-diabetes and diabetes prevention program, it really doesn’t touch a lot of people. We need more.”  
 -Community Leader

Source: Stakeholder Survey, St. Peter’s Health, Lewis and Clark County, Montana, 2021



# DISABILITY

## What are disabilities?

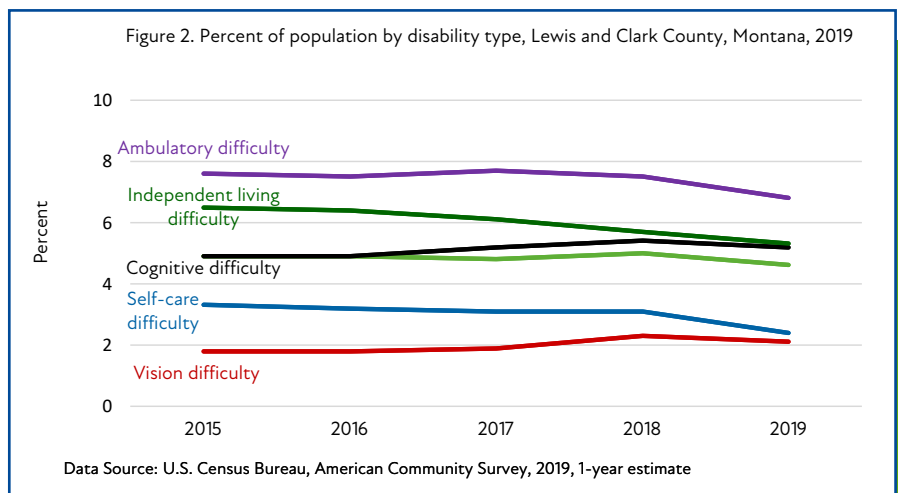
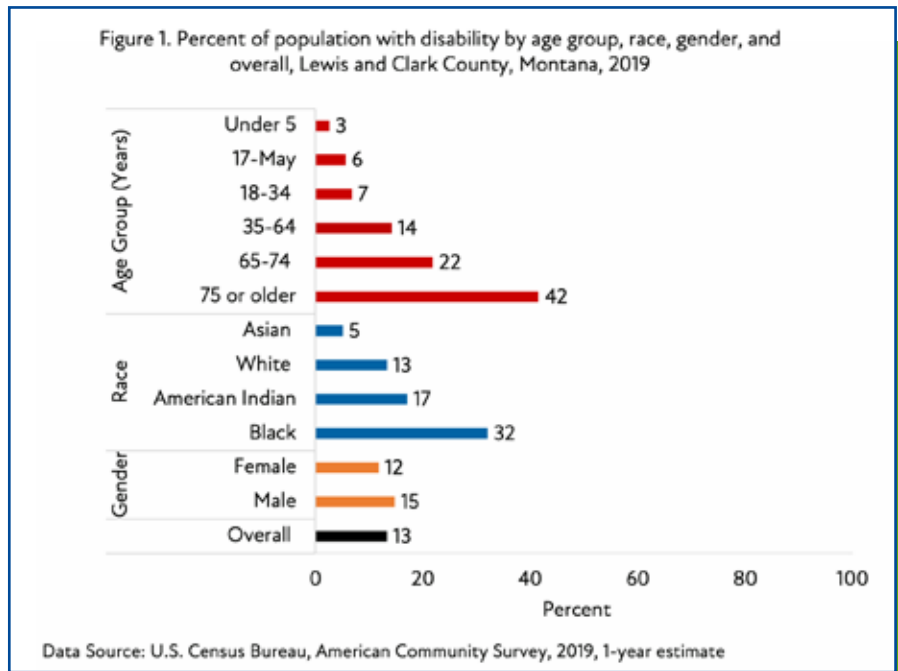
Disability is part of the human condition. Disability is the umbrella term for; a) impairments such as paralysis or blindness, b) activity limitations such as walking or eating and c) participation restrictions such as facing discrimination in employment or transportation, referring to the negative aspects of the interaction between an individual (with a health condition) and that individual's contextual factors (environmental and personal factors).<sup>34, 35</sup>

## Why are disabilities important?

Individuals with disabilities experience greater health disparities compared to individuals without disabilities. Individuals with disabilities are more likely to experience challenges finding a job, being included in regular educational classrooms, attending college, obtaining preventive health care services, being able to visit homes in the neighborhood, using fitness facilities, using health information technology, and receiving sufficient social-emotional support.<sup>36, 37</sup>

Individuals with disabilities are at risk for developing secondary conditions such as pain, obesity, hypertension, fall-related injuries, and mood disorders such as depression.<sup>38</sup> Additionally, they are more likely to engage in unhealthy behaviors that put their health at risk, such as cigarette smoking and inadequate physical activity.<sup>39</sup>

- Approximately 13% of Lewis and Clark County residents reported having at least one disability type which includes difficulty with hearing, vision, cognitive, ambulatory, self-care, or independent living [Figure 1]. Similar disability rates were reported for Montana (14%) and the United States (13%).<sup>95</sup>
- Among Lewis and Clark County residents, adults aged 75 years or older, Black or African American, or males, accounted for a higher percentage of people with disabilities when compared to the population within their respective groups [Figure 1].
- The county's prevalence of ambulatory difficulty slightly decreased from 8% in 2015 to 7% in 2019. This type of disability was most frequently reported among Lewis and Clark County residents [Figure 2].





## How is Lewis and Clark County engaged in addressing disabilities?

Entities around the county work to reduce the severity of chronic health secondary conditions for individuals with disabilities. These efforts include, engaging with community partners to carry out intervention strategies focusing on rights, independence, and disseminating information and resources.

- Lewis and Clark County is home to a variety of private and public organizations, local and statewide, that work collaboratively to make sure the greatest needs are being met of people living with disabilities. One coordinated activity the groups do together are conducting Inclusive and Interdisciplinary Walk Audits. Walk audits are a tool to gather invested individuals to explore an area while learning from each other's lived experience and knowledge. Moving through an area while engaging in thorough conversation with people with different perspectives provides deeper insights into the zone's attributes and what opportunities there are for improvement. A more accessible community creates independence, health, and connectedness.

“

“As we turn more into an aging community, our built environment and systems are not as equipped to handle disability and chronic pain. There is more that we can do in our community to support these groups and increase livability.”

-Public Health Representative

Source: Stakeholder Survey, St. Peter's Health, Lewis and Clark County, Montana, 2021

”



Young girl participating in a wheelchair basketball training session. Photo by Danny Nee on Unsplash.com.

# HEART DISEASE AND STROKE

## What are heart disease and stroke?

Heart disease is a range of health conditions that affect a person’s heart. These conditions include heart valve disease, heart infections, blood vessels disease, heart rhythm disease, disease of the heart muscle, and heart infection. The most common form of heart disease is coronary artery disease which affects the blood flow to the heart.<sup>40</sup> Stroke occurs when a blood supply is interrupted to part of the brain or when a blood vessel in the brain bursts.<sup>41</sup>

## Why are heart disease and stroke important?

Heart disease is the 1<sup>st</sup> and stroke is the 5<sup>th</sup> leading cause of death in the county, state, and the country.<sup>22</sup> Every year, \$214 billion is spent by health care systems on these diseases combined.<sup>41</sup> Increased risk behaviors for heart disease and stroke include high blood pressure, high cholesterol, diabetes, unhealthy diet, physical inactivity, obesity, excessive alcohol consumption, and tobacco use.

- The prevalence for heart disease among Lewis and Clark County residents decreased from 9% in 2011-2013 to 7% in 2017-2019 [Figure 1].
- The prevalence for stroke among Lewis and Clark County residents stayed about the same at 2% throughout the years [Figure 1].
- In 2014-2019 there were approximately 6,185 heart disease and stroke related hospital admissions and 12,755 emergency department visits for Lewis and Clark County residents.<sup>5</sup>
- Heart disease and stroke hospital admissions and emergency department visits age-adjusted rates were higher in 2017-2019 compared to 2014-2016 among Lewis and Clark County residents [Figure 2]. From 2014-2016 to 2017-2019, hospital admissions rate increased by 11% and emergency department visits increased by 25%.
- In 2019, the county’s heart disease and stroke hospital admissions and emergency department visits rates were the highest among older adults aged 75 years or older and female [Figure 3].

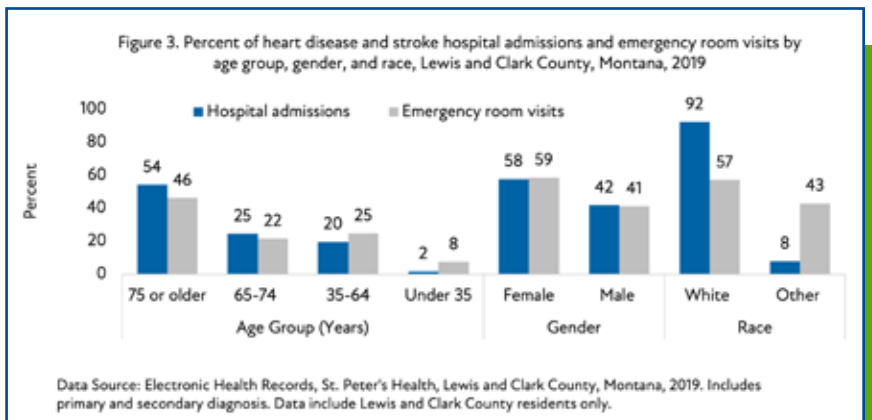
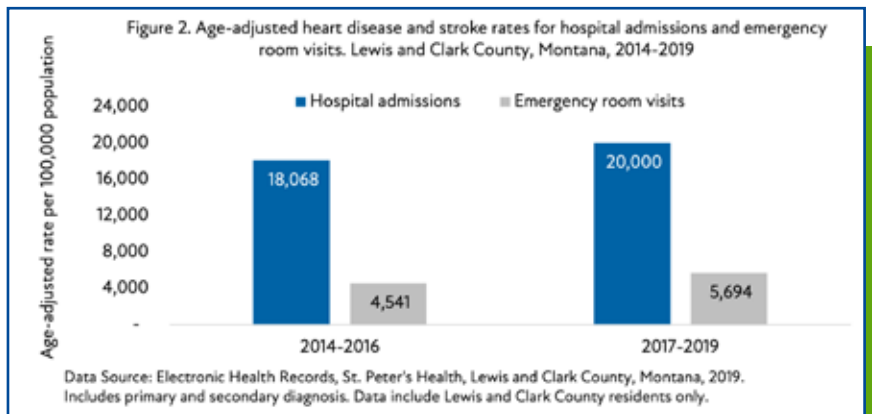
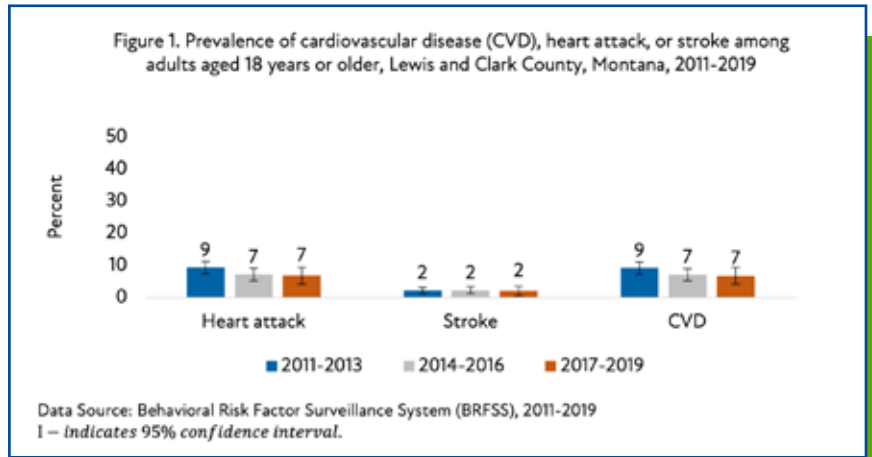
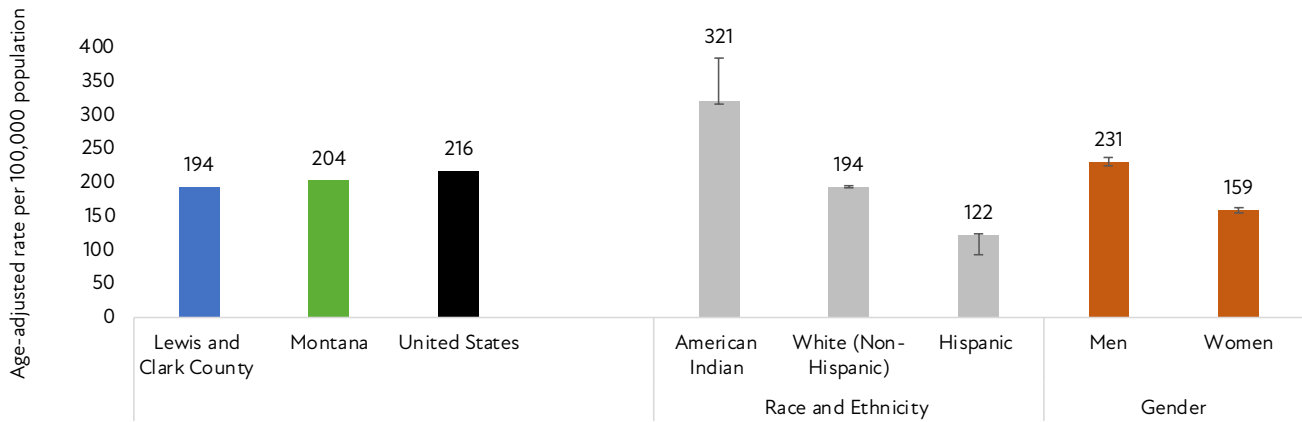


Figure 4. Age-adjusted mortality (deaths) rate per 100,000 population for cardiovascular disease by race/ethnicity and gender, Lewis and Clark County, Montana, 2017-2019



Data Source: National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention  
I – indicates 95% confidence interval

- The mortality (deaths) age-adjusted rate per 100,000 population for cardiovascular disease was lower for Lewis and Clark County (194) compared to Montana (204) and the United States (216) [Figure 4]<sup>42</sup>.
- In 2017-2019 Lewis and Clark County mortality age-adjusted rate per 100,000 population for cardiovascular disease among the American Indian population was significantly higher (321 per 100,000) compared to rates of White (194 per 100,000) and Hispanic (122 per 100,000) [Figure 4].
- Among Lewis and Clark County survey respondents, 50% said they, or someone in their household, had their blood pressured checked, and 37% had a cholesterol check in 2020.

“So many people have heart disease. [We] Need more education, opportunities for affordable programs to encourage weight loss, activity, etc. to decrease heart disease.”  
-Public Health Representative  
Source: Stakeholder Survey, St. Peter’s Health, Lewis and Clark County, Montana, 2021

### How is Lewis and Clark County engaged in addressing heart disease and stroke?

Programs provide support to those affected by heart disease and stroke and help promote the prevention of heart disease. Programs help people facing heart disease take preventative measures. Examples of these programs are:

- Health Coaches for Hypertension Control at St. Peter’s Health is a free program proven to help improve the health of people diagnosed with high blood pressure. These 8-weekly classes help manage the condition by focusing on nutrition, physical activity, stress management, and more. Trained facilitators guide the small-group program and participants receive a free electronic blood pressure monitor and other educational materials, like cookbooks and pedometers, among others.
- Montana Stroke Workgroup is a working collaborative of doctors, emergency response professionals, rehabilitation professionals, and healthcare facilities dedicated to implementing a stroke initiative.



Data Source: COVID-19 Post Vaccination Survey (n=2,065), Lewis and Clark Public Health, Montana, 2021

# INFECTIOUS DISEASE

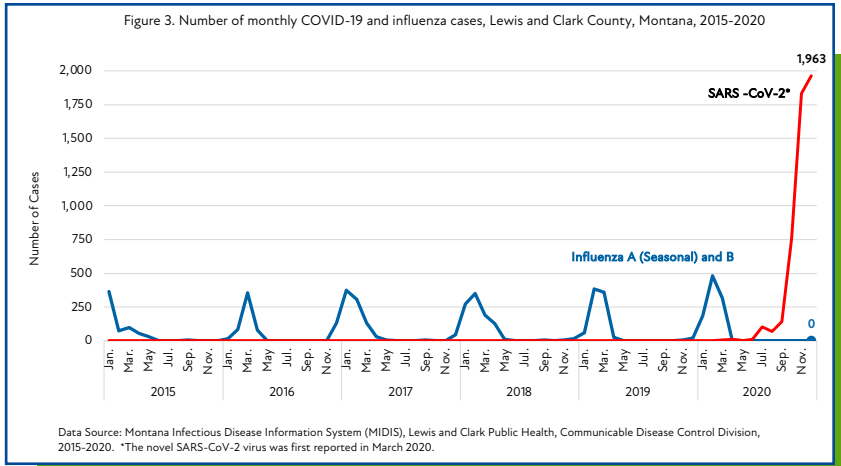
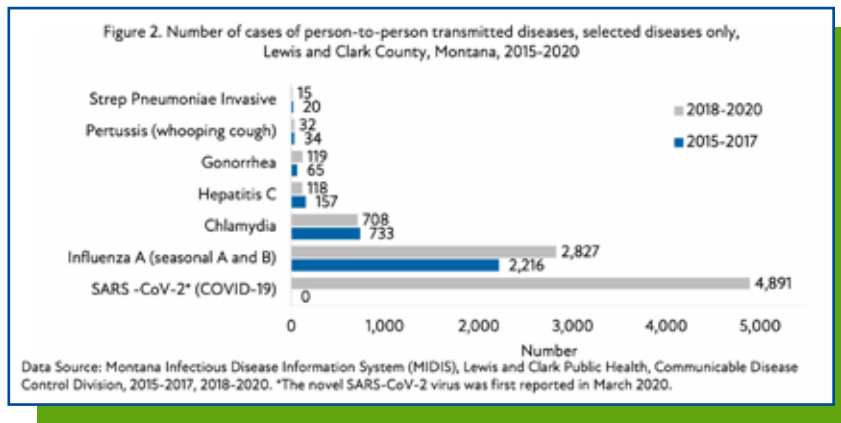
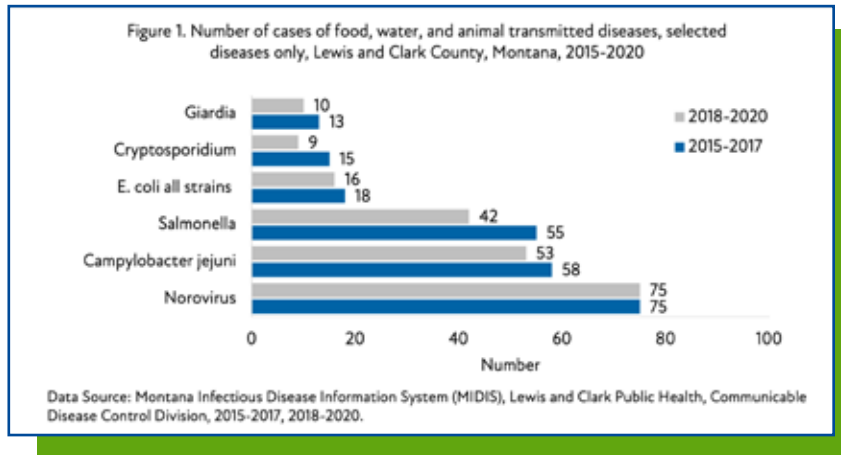
## What are infectious diseases?

Infectious diseases are caused by germs such as bacteria, fungi, parasites, or viruses.<sup>43</sup> These diseases can spread from one person to another, by contact with animal, or from insect bites. Bacteria are responsible for common infections such as strep throat. Fungi are root cause of many skin diseases such as ringworm. Parasites related infectious diseases are more common in the tropics and subtropics and can be transmitted by insect bites.<sup>44</sup> The novel SARS-CoV-2 virus causes the COVID-19 infectious disease.

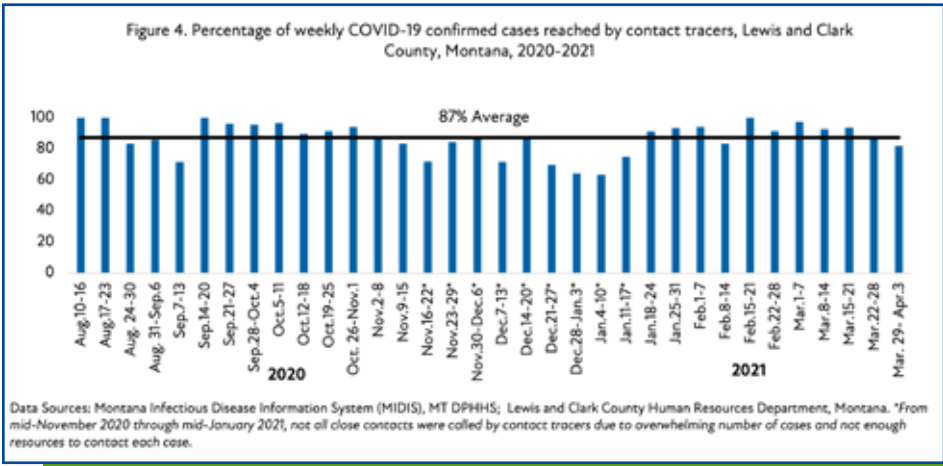
## Why are infectious diseases important?

In 2019, acute respiratory infections, including influenza and pneumonia were the 9th leading cause of death in the U.S.<sup>22</sup> Some infectious diseases are vaccine preventable and can greatly reduce the risk of illness and premature death. Increased risks for infectious diseases include infrequent hand washing, being around someone who displays symptoms of infectious disease, and spending time at work or home areas with high concentration of bacteria.

- In the 6 year period (2015-2020) there were a total of 7,475 reported disease cases of which approximately 9% accounted for cases from food, water, or animal transmitted diseases, and 93% were person-to-person transmitted diseases reported in Lewis and Clark County.<sup>45</sup>
- On average, 88 norovirus cases per year were reported from 2018 through 2020. It was the most frequently reported disease among Lewis and Clark County residents during this time [Figure 1].
- The novel SARS-CoV-2 (COVID-19) virus was first reported in the County, in March 2020. During a 1.5 year period, the total number of COVID-19 cases was almost the same as the total number of influenza cases during a 6-year period (2015-2020) [Figure 2].
- The flu season begins in October and end in May. Despite of county residents testing for flu, the number of influenza cases decreased sharply to zero cases by the end of 2020; the number of COVID-19 cases surged to 1,963 in December of 2020 [Figure 3].







- On average 87% of all COVID-19 cases contacted from August 2020 through March 2021 were interviewed by Lewis and Clark County contact tracers as part of active disease investigation and surveillance [Figure 4].

**Community Input:**

“Many people in our community do not believe it is a real risk and they do not take it seriously. It is a concern that [COVID-19] variants will continue to cause harm in our community because people refuse to take safety precautions.”

– Social Service Provider

Source: Stakeholder Survey, St. Peter’s Health, Lewis and Clark County, Montana, 2021

**How is Lewis and Clark County engaged in addressing infectious diseases?**

Infectious disease related services offer help and guidance to those within the community who have or know someone who has been affected by an infectious disease. These deliver education, offer assistance, and provide care to those who have been diagnosed with an infectious disease.

- The Disease Control and Prevention Division of Lewis and Clark Public Health is responsible for investigating incidents of communicable disease, including those caused by food, water, and ticks.
- Public health nurses perform investigations and notify partners of all cases of sexually transmitted diseases (STDs) reported by healthcare providers in Lewis and Clark County. Providers report cases of syphilis, chlamydia, hepatitis B, gonorrhea, and HIV/AIDS.



Immunization nurses at drive thru vaccination event. Photo from James Ridle.

# MENTAL HEALTH

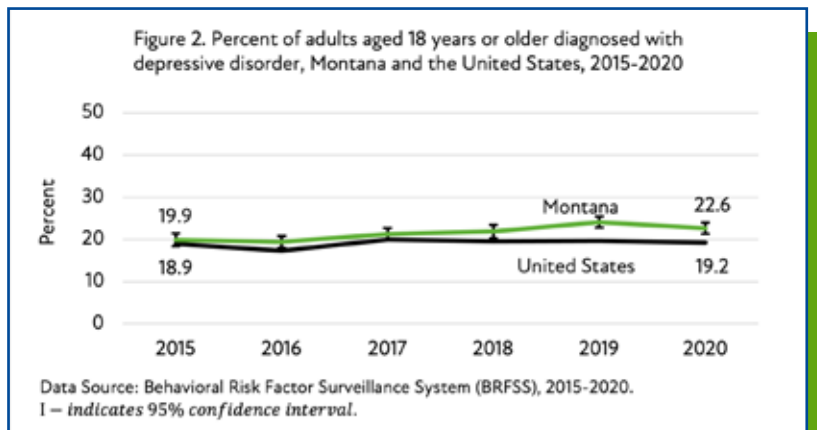
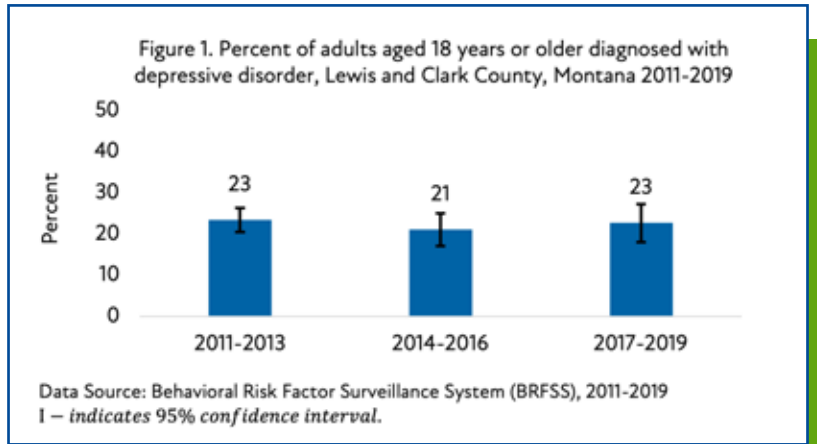
## What is mental health?

*Mental health* and *mental illness* are often used interchangeably, but do not mean the same thing.<sup>46</sup> *Mental health* includes personal social, emotional, and psychological well-being. *Mental illness* alters a person’s thinking, mood, behavior, feelings, and is associated with distress and/or impaired functioning.<sup>47</sup>

## Why is mental health important?

*Mental illnesses*, such as depression and anxiety, increase the risk for a variety of long-lasting health conditions like stroke, type 2 diabetes, and heart disease. The presence of chronic health conditions such as cancer, heart disease or diabetes can increase the risk of mental illness.<sup>48</sup> *Mental health* is fundamental to person’s family and interpersonal relationships, and the ability to contribute to one’s community or society. *Mental illness* contributes to a host of problems that may include disability, pain, or death.

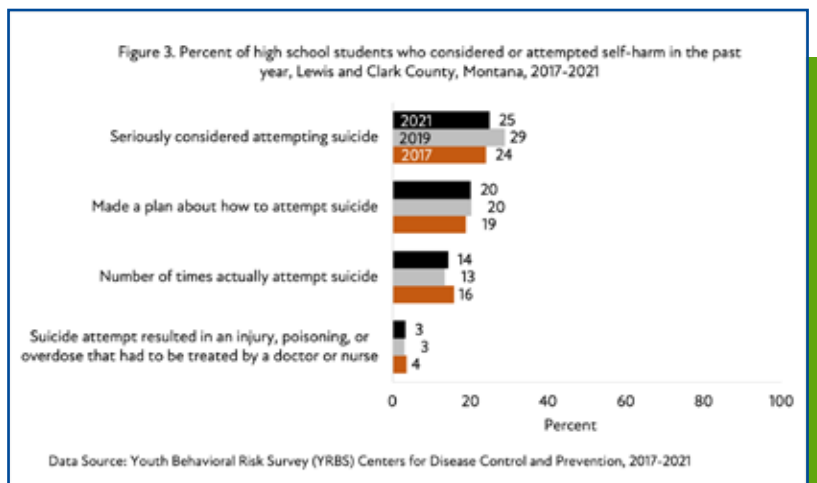
- In 2017-2019, almost a quarter (23%) of Lewis and Clark County adults were diagnosed with depressive disorder [Figure 1]. The rate remained stable since 2011-2013.
- Since 2015 to 2020, the prevalence of diagnosed depressive disorder among the adult population increased in Montana (19.9% to 22.6%) and the United States (18.9% to 19.2%) [Figure 2].
- In 2021, 25% of Lewis and Clark County high school students reported seriously considering attempting suicide in the last year [Figure 3].
- In 2020, 30% of Lewis and Clark County Medicaid population aged 10-17 years had a suicide and self-harm diagnoses.<sup>49</sup>



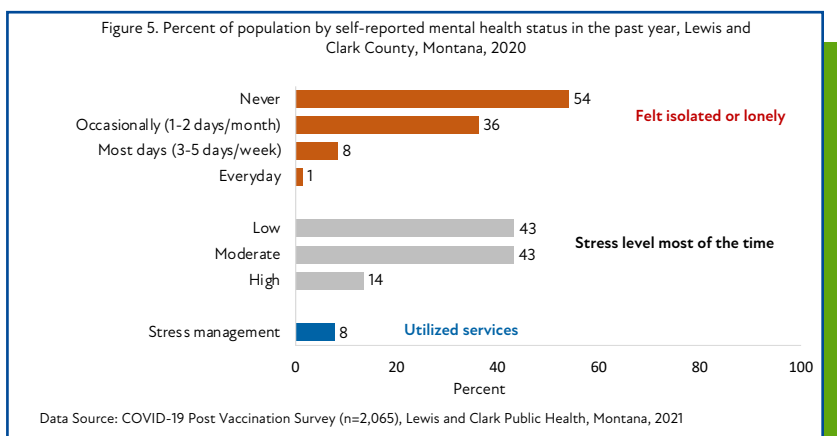
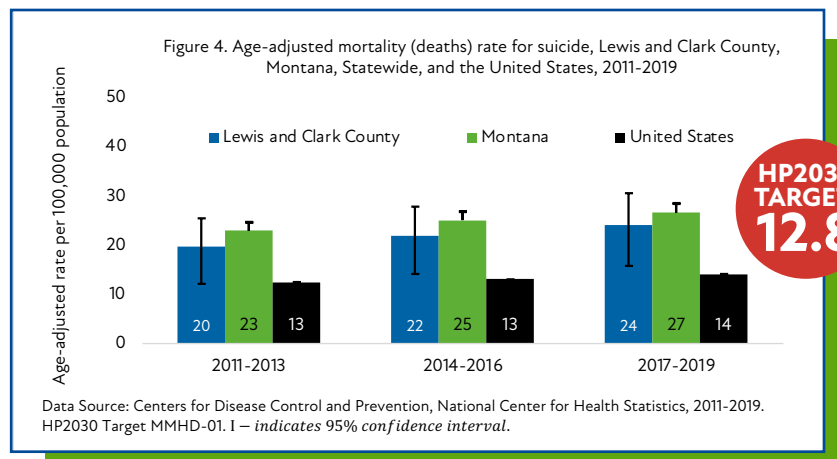
“There are not enough resources for people who have mental health problems. Many are homeless and have addictions and we do not have enough safe housing options to help them succeed. The housing options for people with nothing are very limited, sometimes infested with drugs and not safe.”  
-Physician

“Stigma. If you have a broken bone, people understand and are sympathetic. If you are struggling with mental health issues, no one wants to talk about it, hear about it, acknowledge it. So those issues often go unaddressed and untreated, potentially leading to greater problems for individuals, families, and our entire community.”  
-Community Leader

Source: Stakeholder Survey, St. Peter’s Health, Lewis and Clark County, Montana, 2021



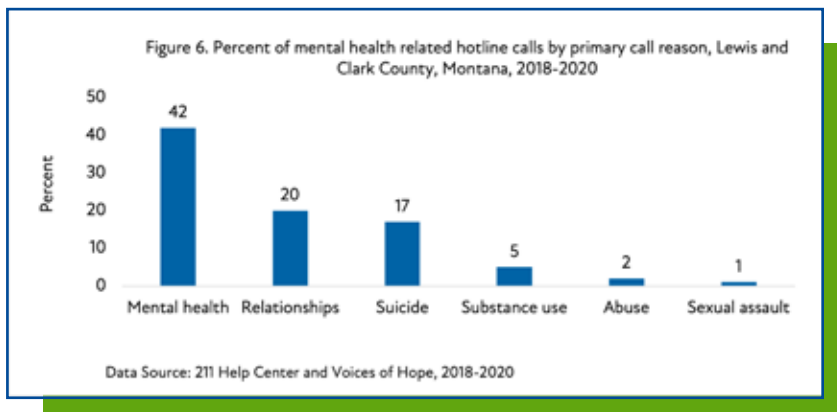
- The county's suicide mortality (deaths) age-adjusted rate increased from 20 deaths per 100,000 population in 2011-2013 to 24 deaths per 100,000 population in 2017-2019 [Figure 4].
- During all reporting periods, the suicide mortality age-adjusted rates for the county and the state were significantly higher compared to the United States and did not meet the Healthy People 2030 target of reducing the death rate to 12.8 deaths per 100,000 population [Figure 4].
- Approximately 9% of Lewis and Clark County survey respondents reported feeling isolated or lonely most days (3 to 5 days per week) or every day in 2020 [Figure 5].
- In 2020, over half (57%) of the county's population felt moderate or high stress level most of the time. Only 8% utilized stress management services [Figure 5].
- In 2018-2020, of all calls placed to the 211 hotline 42% were related to mental health and inquired about essential community services in Lewis and Clark County [Figure 6].



## How is Lewis and Clark County engaged in addressing mental health?

County agencies and partners advocate for policy changes, coordinate services, and conduct trainings for education and awareness around mental health and suicide prevention.

- The Behavioral Health Systems Improvement Leadership Team is a community collaboration that works at a system level and throughout the continuum of care so that number of mental health crises are decreased and wellbeing is increased. Their current contributions include resource mapping, MCRT and The Lewis and Clark County Behavioral Health Crisis System Analysis, 2021. Future work entails crisis facility model planning.
- The purpose of the Behavioral Health Local Advisory Council is to assist in the improvement of Lewis and Clark County Public Health Behavioral Health (Mental Illness and Substance Use Disorders) services and to review and make recommendations about behavioral health services to the Lewis and Clark Service Area Authorities (SAA).
- The Lewis and Clark County Suicide Prevention Coalition (LCSPC) works to decrease the suicide rate among Lewis and Clark County adults, as well as the number of suicide attempts made by youth in the area. LCSPC provides evidence-based interventions and policies to create a community that has a network of support for mental health.





# ORAL HEALTH

## What is oral health?

Dental caries or tooth decay, often referred to as cavities, are caused by the damage to a tooth's surface or enamel.<sup>50</sup> Good oral health improves the ability of facial expressions without experiencing difficulties when someone chews, smiles, speaks, swallows, or tastes.<sup>51, 52</sup>

## Why is oral health important?

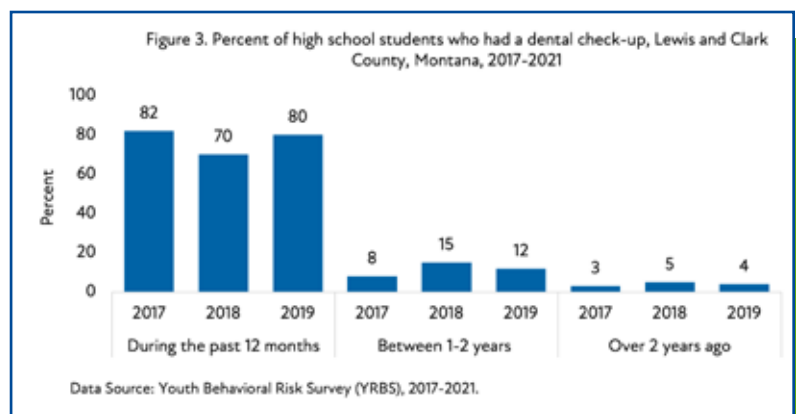
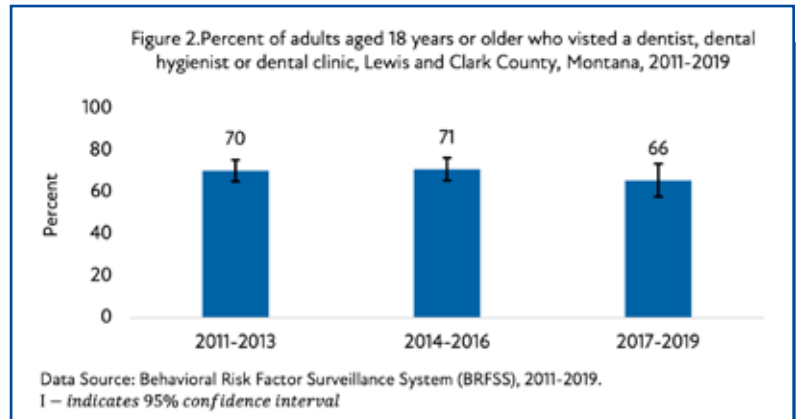
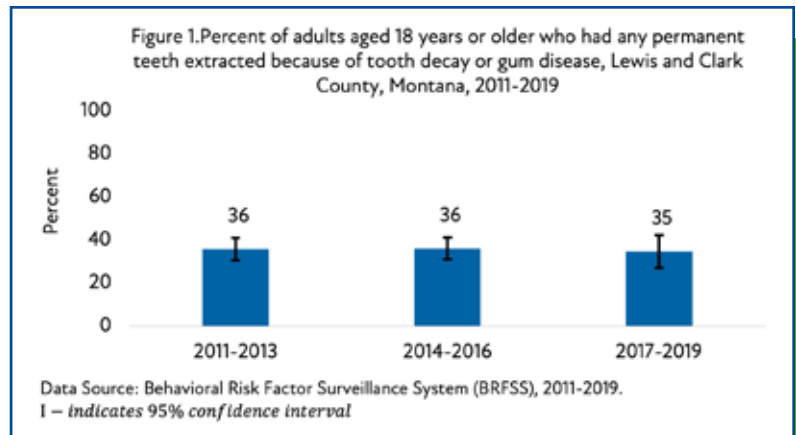
Oral health is essential to person's overall health and well-being. Oral health becomes compromised through a poor diet and activities that increase the risk of oral disease and injury such as contact sports, tobacco use, and oral piercings. Tooth decay disproportionately affects children of racial and ethnic minority groups from areas of lower socioeconomic status.<sup>53</sup>

- In 2017-2019, about one-third (35%) of Lewis and Clark County adults had at least one tooth extracted due to tooth decay or gum disease [Figure 1].
- Since 2011-2013, well over half of the county's adults have had a dental visit [Figure 2].
- In 2019, 80% of Lewis and Clark County high school students had a dental check-up in the last 12 months [Figure 3].

“Many of our clients struggle with oral health. They often use the dental clinic at PureView, but often only after their oral health has deteriorated to the point of needing dentures. Many people struggle to get into dentists to engage in preventative care and maintenance. Payment is also hard for many of our clients and there are sometimes remedies other than pulling teeth that are too expensive for our clients to afford. Clients with substance use history often complain of judgment and inappropriate care from dental providers and neglect that part of their health to avoid the shame and judgment that often comes with seeking services.”

– Social Service Provider

Source: Stakeholder Survey, St. Peter's Health, Lewis and Clark County, Montana, 2021



## How is Lewis and Clark County engaged in addressing oral health?

The provision of oral health services, prevention and treatment, is a collaborative effort between communities, families, individuals, providers, private clinics, public sectors and decision-makers. Examples of innovative and effective programs and policies in Lewis and Clark County include:

- School-based dental screening helps to increase awareness of oral health needs among parents, school officials, and dental providers.
- Sealants for Smiles focuses on prevention and avoiding tooth decay by providing preventive sealants to school children from low-income families.

# OVERWEIGHT AND OBESITY

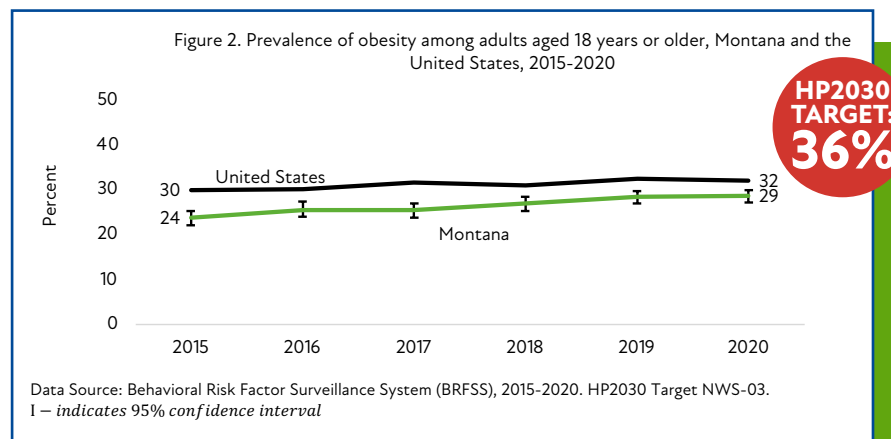
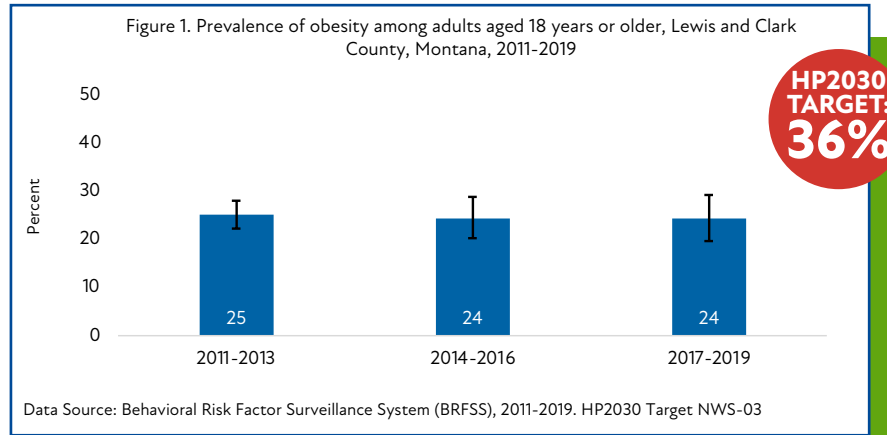
## What are overweight and obesity?

Healthy body weight is related to health status. Unhealthy weight is defined by the Centers for Disease Control and Prevention (CDC) as “weight that is higher than what is considered as a healthy weight for a given height.”<sup>54</sup> Weight, height, and gender are used to calculate the body mass index (BMI). BMI is used to categorize overweight and obesity. Overweight is defined as a BMI between 25 and 29.9 and obesity is a BMI of 30 or higher.

## Why are overweight and obesity important?

Overweight and obesity increase the risk of premature death as well as the likelihood of developing health conditions such as hypertension, elevated cholesterol, diabetes, some types of cancer, and other chronic illnesses.<sup>55</sup>

- Approximately a quarter (24%) of Lewis and Clark County adults were obese in 2017-2019 [Figure 1]. Lewis and Clark County met the Health People 2030 target for adult obesity.
- Obesity prevalence increased five percentage points from 2015 (24%) to 2020 (29%) among Montana adults [Figure 2].
- From 2015 to 2020, obesity rates were significantly higher for the United States compared to Montana [Figure 2].
- In 2019, almost 16% of high school students in Montana were obese.<sup>56</sup>



“When asked about healthy eating and obesity a community member stated the following:

“Low-cost exercise facilities. No cooking classes or programs to foster healthy eating. Individual dietary counseling for those at risk; no insurance coverage for seeing dietician. Need more programs to support general health and well-being (i.e., free exercise classes, cooking classes, education) to focus on healthy lifestyle and disease prevention.”

– Physician

Source: Stakeholder Survey, St. Peter's Health, Lewis and Clark County, Montana, 2021

## How is Lewis and Clark County engaged in addressing overweight and obesity?

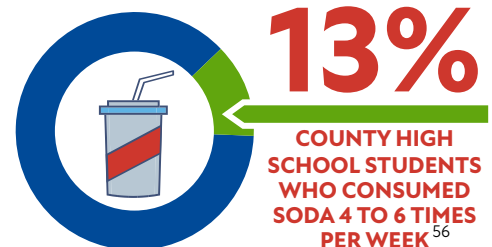
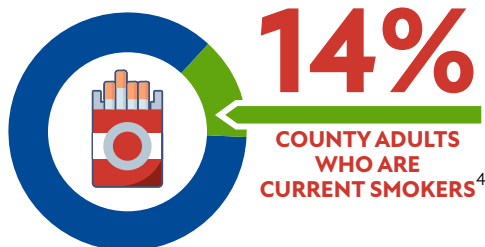
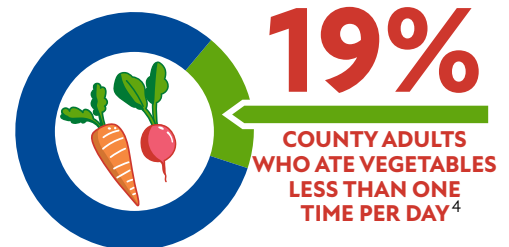
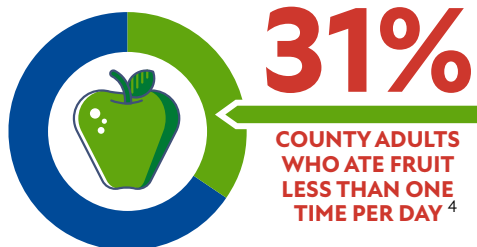
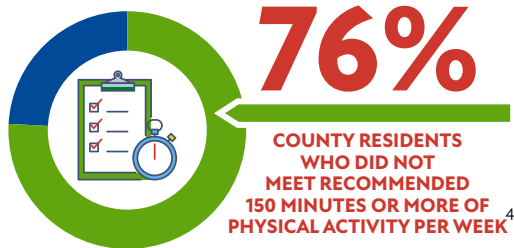
Partners from public health, healthcare, non-profits, community members, and learning centers in our communities work together to decrease the risk of obesity among youth and adults. Examples of existing interventions in Lewis and Clark County include:

- The Healthy Communities Coalition (HCC) is a Chronic Disease Prevention Coalition of health advocates a variety of community organizations and members working together on policies, programs, environmental change, and systems change.
- The Helena District Wellness Committee's mission is to foster an engaging and empowering environment that promotes and protects students' health, well-being, and ability to learn. They focus on strategies related to nutrition, physical activity, and mental health.

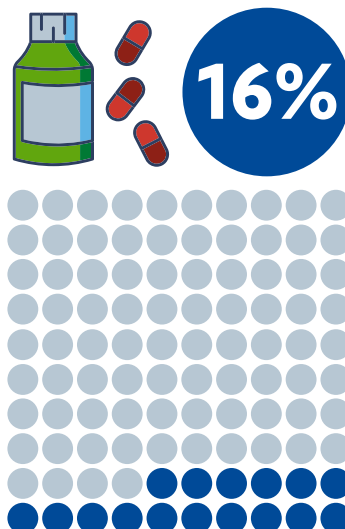
# SECTION III: HEALTH BEHAVIORS

Health risk behaviors are often described as behaviors with potentially negative effects on health. These include physical inactivity, poor diet, substance abuse, risky driving, or high risk sexual behaviors, among others, that could lead to chronic conditions, injury, disability, or death.<sup>57</sup>

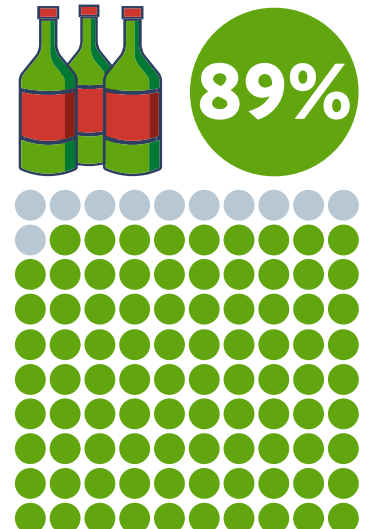
## Health Risk Behaviors in Our Community



### Admissions to Lewis & Clark County Regional Hospital for Substance Use Disorder<sup>49</sup>



### Incident Arrests for Driving Under the Influence<sup>49</sup>



As of December 2021.





Two adults and a child in Trout Creek Canyon. Photo from Kevin League.

# CHILD ABUSE AND NEGLECT

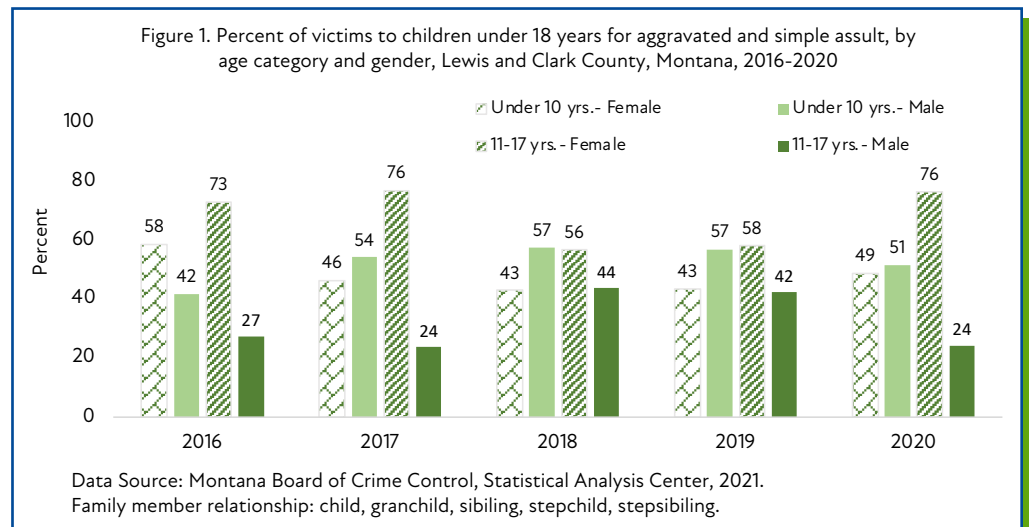
## What are child abuse and neglect?

Child abuse and neglect include threats of harm, potential for harm, or harm against children aged 18 years and younger.<sup>58</sup> The four common types of abuse and neglect include the neglect of providing child with basic physical and emotional needs, physical abuse such as intentional force which can result in physical injury, sexual abuse such as pressuring or forcing a child to engage in sexual acts, and emotional abuse harming child's self-worth or emotional well-being.<sup>59</sup>

## Why are child abuse and neglect important?

Child abuse and neglect are preventable. Children subjected to abuse and neglect can suffer immediate physical injuries such as bruises, or may experience lifelong health problems like anxiety, trauma, long-term and lifelong adverse health outcomes.<sup>58, 60</sup> Risk factors that increase the likelihood of a child being subjected to abuse or neglect are complex and range from individuals' risk factors, such as caregivers who use drugs or alcohol, family risk factors like family members in jail or prison, or community risk factors like high rates of violence and crime.

- 363 Lewis and Clark County residents under 18 years old experience aggravated or simple assaults from 2016 through 2020. Approximately 55% of these assaults were experienced by females under 18 years old.<sup>61</sup>

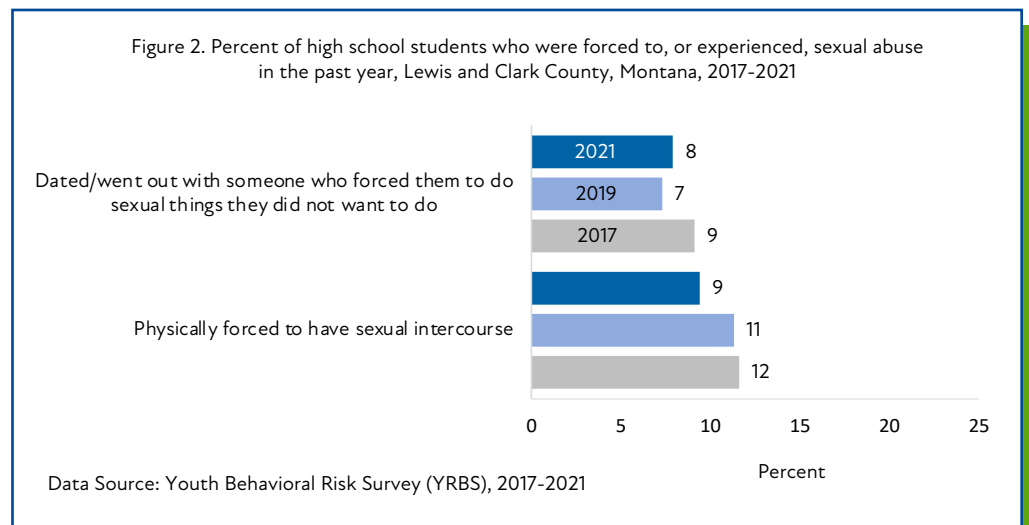


- In almost all years from 2016 through 2020, the highest percentage of aggravated or simple assaults was reported against the female population aged 11-17 years old in Lewis and Clark County [Figure 1].

- 1 out of 10 Lewis and Clark County high school students said they have dated or went out with someone who forced them to do sexual things they did not want to do [Figure 2].

- The percentage of Lewis and Clark County high school students who reported being physically forced to have sexual intercourse decreased 3 percentage points from 2017 (12%) to 2021 (9%) [Figure 2].

- In 2020, 35% of Lewis and Clark County high school students reported having someone on the internet trying to get them to talk online about sex or look at a sexual picture.<sup>62</sup>





## How is Lewis and Clark County engaged in addressing child abuse and neglect?

The purpose of these programs set in place are to help ensure children are safe and protected from harm, neglect, or abuse. Programs ensure children are in a safe home and are getting the care and treatment they need, in addition to preventing domestic violence, and helping families stay together. Examples of these programs include:

- The Circle of Security Parenting Classes and the Partnership for Home Visiting, which includes programs like Safe Care, Nurse Family Partnership, and Parents as Teachers provide parents the resources and support they need to be healthy and equipped parents.
- The Home Visiting Task Force (HVTF) strategically coordinates home visiting services and connects families with the services that best fit their needs. The task force will meet these goals through collectively educating parents/guardians in the community and coordinating mindful transitions with families as their needs change.



**Lewis & Clark County high school students who reported having someone on the internet trying to get them to talk online about sex or look at a sexual picture**



Child's Hands on Child's Drawings. Photo by cottonbro from Pexels.com.

“Many of the families with lower incomes do not have great access to health care and the ability to pay. In addition, the amount of child and infant abuse in the community is largely underestimated.”  
– Social Service Provider

“Judges, lawyers, and law enforcement not understanding the psychology of family violence. Continued practice of blaming the victim of domestic assaults instead of holding the abuser accountable. Children having no rights inside the child welfare system. Lack of safe, affordable housing contributes to the victimization of people living at no or low income and people with mental illness.”  
– Community Member

Source: Stakeholder Survey, St. Peter's Health, Lewis and Clark County, Montana, 2021

# INJURY PREVENTION

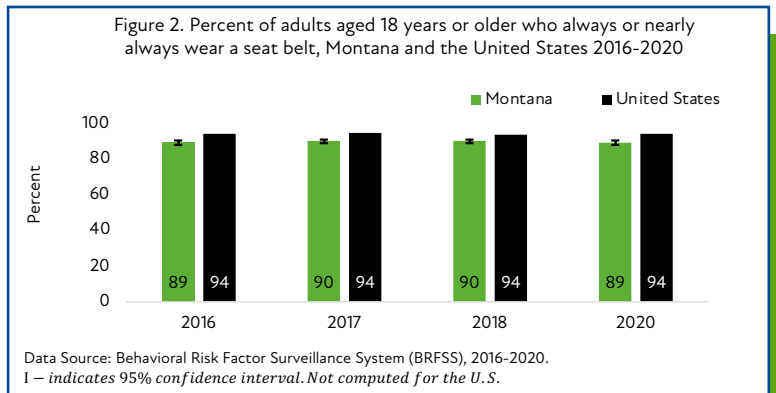
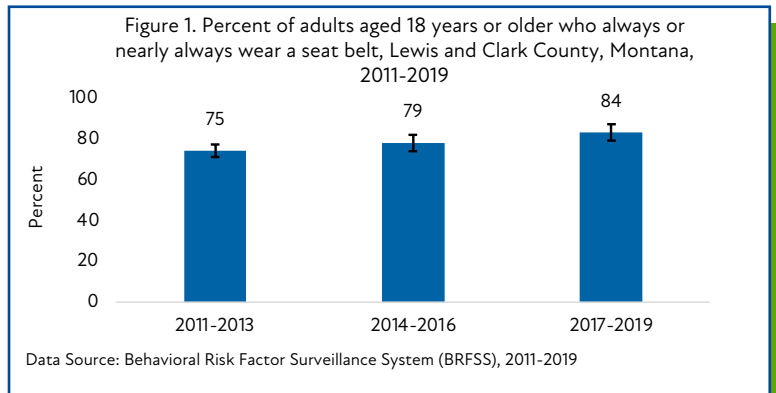
## What is injury prevention?

Injury prevention is defined as activities to prevent, improve, treat, and/or reduce injury-related disability and death.<sup>63</sup> There are two categories of injury prevention; the first is unintentional general injuries, such as traumatic brain injuries, motor vehicle or pedestrian-related injuries, poisoning, falls, water-related injuries, fires, or natural disasters. The second is violence related to child maltreatment, partner violence, sexual violence, suicide, youth violence, or terrorism.

## Why is injury prevention important?

Many unintentional injuries are preventable. Each year, thousands of people suffer from unintentional injuries and many lives are lost making it the fourth leading cause of death in the county in 2019.<sup>7</sup> Environmental factors have significant influence on the risk for unintentional injury including individual social experiences such as education, social relationships, like parental monitoring, community environment, for example neighborhoods, and societal-level factors such as attitudes, laws and regulations.<sup>90</sup>

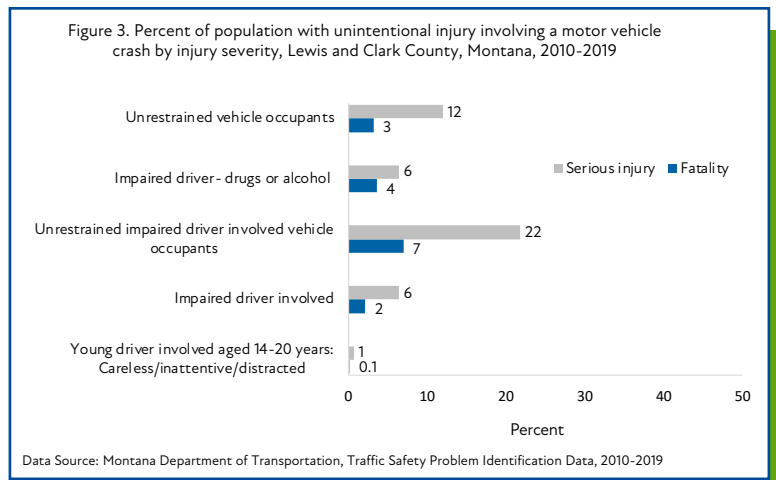
- In 2021, 20% of survey respondents from Lewis and Clark County said that their household with children had one or more unlocked and loaded weapons.<sup>64</sup>
- In 2017-2019, 84% of adults in Lewis and Clark County reported always, or nearly always, wearing a seat belt [Figure 1]. The rate increased 9% percentage points from 2011-2013 (75%) to 2017-2019 (84%).
- In 2020, approximately 90% of Montana adults always, or nearly always, wore a seat belt. The rate for the United States was five percentage points higher compared to Montana’s rate reported in the same year [Figure 2].
- During the 10-year period of 2010-2019, among Lewis and Clark County residents who were involved in a motor vehicle crash, 22% of crashes were attributed to an unrestrained impaired driver involving vehicle occupants and resulted in serious injury, and 7% resulted in death [Figure 3].
- In 2014-2019, there were approximately 1,231 unintentional injury related hospital admissions and 2,217 emergency department visits involving Lewis and Clark County residents.<sup>5</sup>



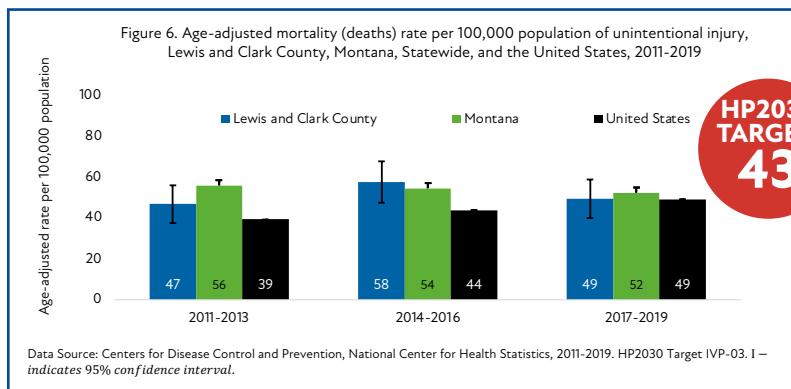
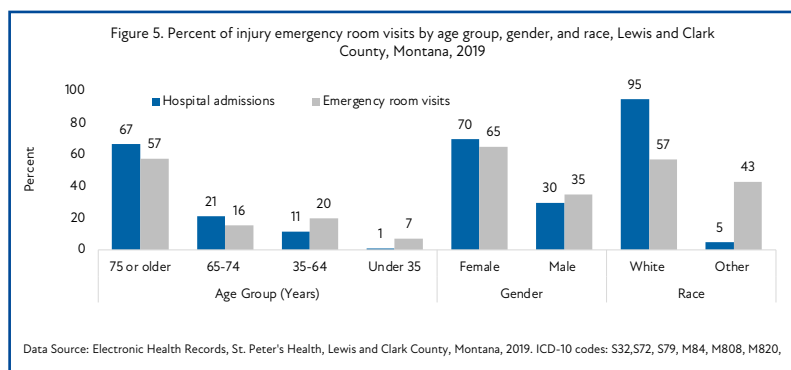
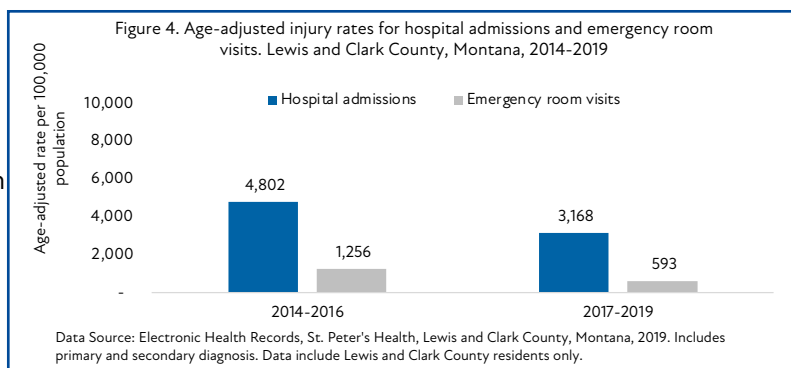
“Domestic violence, [and] rape is rarely talked about, but affects over 20% of the population. One of the leading causes of death for teens is alcohol-related car crashes. A leading cause of death for kids is injury.”

– Provider

Source: Stakeholder Survey, St. Peter’s Health, Lewis and Clark County, Montana, 2021



- The county's unintentional injury hospital admissions and emergency department visits age-adjusted rates decreased from 2014-2016 to 2017-2019 [Figure 4]. Hospital admission rate decreased by 34%, and the emergency department visit rate decreased by 53% between 2014-2016 and 2017-2019.
- In 2019, Lewis and Clark County residents aged 75 years or older accounted for over 50% of unintentional injuries associated hospital admissions or emergency department visits [Figure 5].
- During 2019, emergency department visits were higher for county residents aged 35- 64 years compared to adults aged 64-74 years [Figure 5].
- In 2019, males in Lewis and Clark County were less frequently hospitalized for unintentional injuries (30%), but more often had emergency department visits (35%). During the same year, a higher percentage of female population were hospitalized (70%) and lower percentage had emergency department visits (30%) [Figure 5].
- From 2014-2016 to 2017-2019, Lewis and Clark County unintentional injury age-adjusted mortality (deaths) rate decreased by 9 deaths per 100,000 population [Figure 6].
- The county's age-adjusted mortality rates for unintentional injury were lower compared to Montana's rates [Figure 6].
- Lewis and Clark County did not meet the Healthy People 2030 target of 43 deaths per 100,000 population from unintentional injury deaths. The county's rate was 49 deaths per 100,000 population in 2017-2019. [Figure 6].



## How is Lewis and Clark County engaged in addressing injury prevention?

Injuries can occur at all ages. There are numerous programs in our county to help prevent injuries, help with costs due to injuries, and improve the safety of the community by helping educate the community. Examples include:

- Safer Communities Montana (SCM) advocates for suicide prevention in Lewis and Clark County through collaboration with firearm and pharmaceutical communities to reduce means access by people at risk. SCM does so by providing appropriate suicide prevention tools and training to pharmacies, firearm-related businesses, health providers, and community members.
- Stepping On is an evidence-based fall prevention program that reduces falls among participants. The Stepping On course is a seven-week program designed to help older adults reduce their risk for falls. Numerous organizations in the county offer this course.
- The pregnancy and parenting programs of Lewis and Clark Public Health provide parents with the knowledge and resources they need to make those first years the best they can be. Nurse Home visitors as well as parent educators provide developmental assessments for children up to the age of five. Nurse Home Visitors and Parent Educators assess intimate partner violence and work closely with families to assist them in receiving the services they need to be happy and healthy. Home visitors are trained in perinatal mood disorders and Lewis and Clark Public Health offers Peer to Peer support for mothers struggling with mental health. The goal of Circle of Security classes is to improve a child's sense of security within a family, which research has shown leads to better self-esteem, better relationships, enhanced school readiness, and improved ability to cope with emotions. Referrals to other community services are also facilitated through this program.

# NUTRITION AND PHYSICAL ACTIVITY

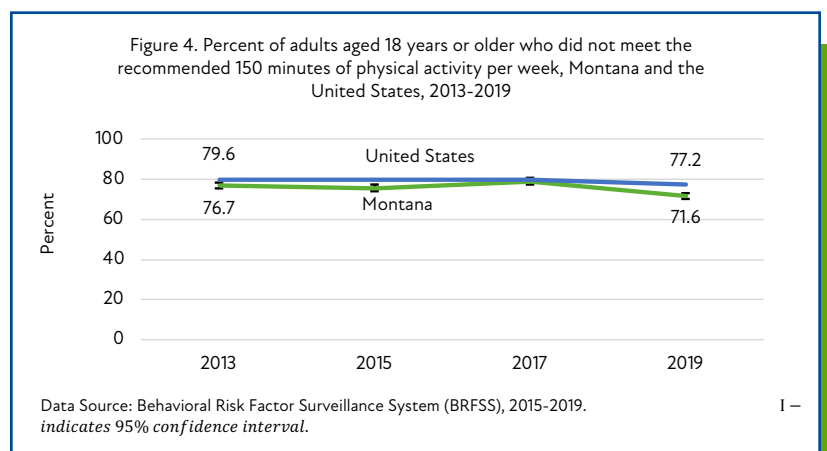
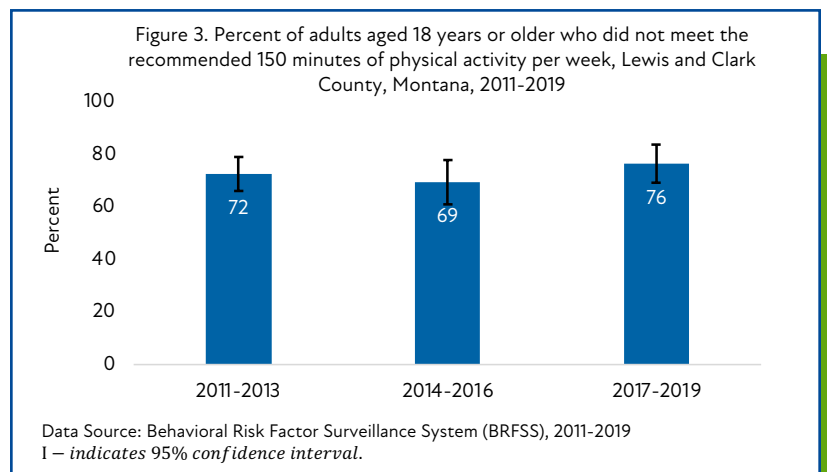
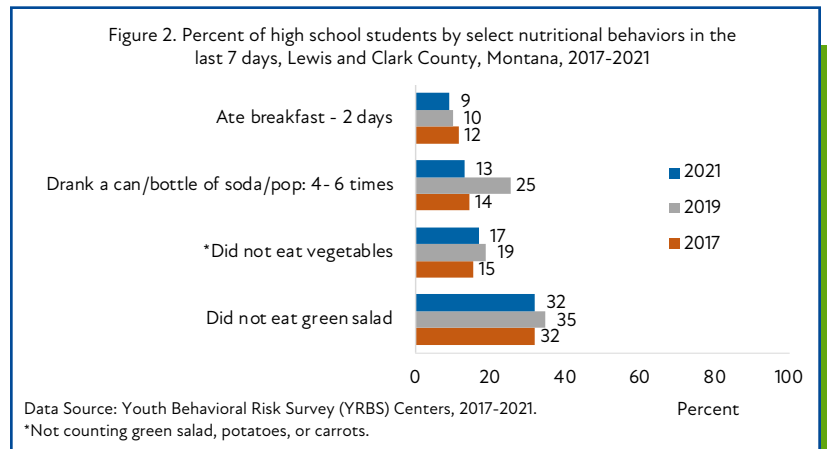
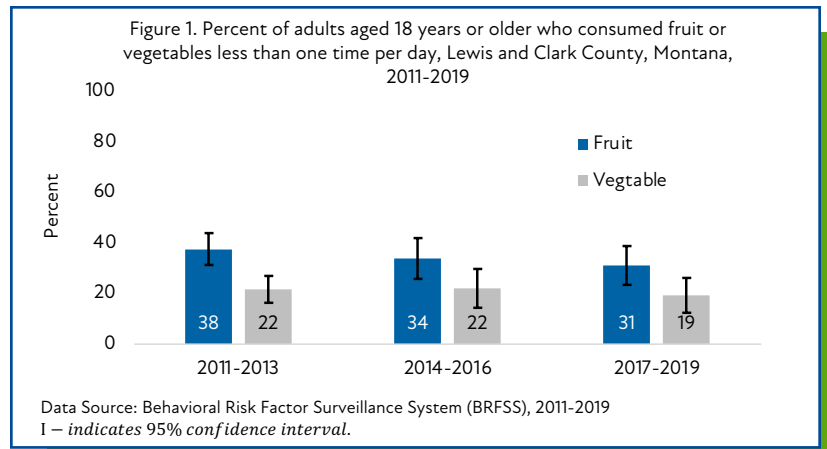
## What are nutrition and physical activity?

Nutrition is defined as obtaining the food necessary for health and growth.<sup>65</sup> A balanced diet gives the body the nutrients it needs to function correctly. Most calories should come from five groups of food including fruits, vegetables, grains, proteins, and dairy.<sup>66</sup> Physical activity is bodily movement that requires energy expenditure. It refers to all types of movement during leisure time, accessing transportation, or as part of individual's work.<sup>67</sup> Children and adolescents are recommended at least 60 minutes of moderate-to-vigorous intensity physical activity daily. It's recommended that adults get at least 150 minutes of moderately intense activity per week.<sup>68</sup>

## Why are nutrition and physical activity important?

Diet and body weight are associated with health status. Poor nutrition and inadequate physical activity are two of the risk factors for obesity and other chronic health conditions, such as type 2 diabetes, cardiovascular disease, liver disease, dental caries, and certain cancers.<sup>69</sup> In recent years, diet-related chronic disease rates have increased and continue to be a major public health concern.<sup>70</sup>

- In 2017-2019, 31% of Lewis and Clark County adults consumed fruit less than one time per day, and 19% consumed vegetables less than one time per day [Figure 1]. The daily fruit or vegetables consumption percent decreased since 2011-2013.
- The percentage of Lewis and Clark County high school students who reported eating breakfast 2 days per week decreased from 12% in 2017 to 9% in 2021 [Figure 2].
- In 2021, approximately 13% of the county's high school students consumed a bottle or can of soda 4 to 6 times per week [Figure 2].
- In 2017-2019, 76% of Lewis and Clark County adults did not meet the recommended at least 150 minutes or more of physical activity per week [Figure 3].
- From 2013 to 2019, the rate of physical activity decreased in Montana and the United States [Figure 4].





- In 2021, 65% of Lewis and Clark County high school student did not meet the recommend 60 minutes or more of physical activity every day [Figure 5].
- Among Lewis and Clark County survey respondents, 39% reported being physically active for at least 20 minutes 2 to 4 times a week [Figure 6].

## How is Lewis and Clark County engaged in addressing nutrition and physical activity?

Within the community, programs and groups are working together to help create accessible opportunities to engage in physical activity and access healthy foods. Oftentimes, these groups focus on environmental, systematic, and programmatic changes to create opportunities for all. Examples of these programs are:

- The Food, Nutrition, and Physical Activity Workgroup of the Healthy Communities Coalition focuses on programs, systems, and environmental changes associated with available opportunities for healthy foods and accessible options for movement. Examples of projects included the Active Living Wayfinding Plan, routes for in-town walking, and promotion of events.
- The community has a variety of organizations and groups that offer different walking/moving programs and challenges. These different projects encourage the community to be active, whether that be for 5 minutes or hiking Mount Helena.

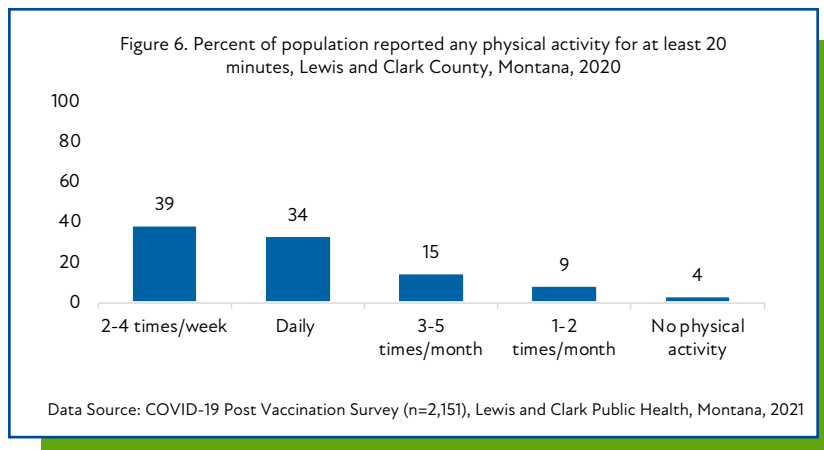
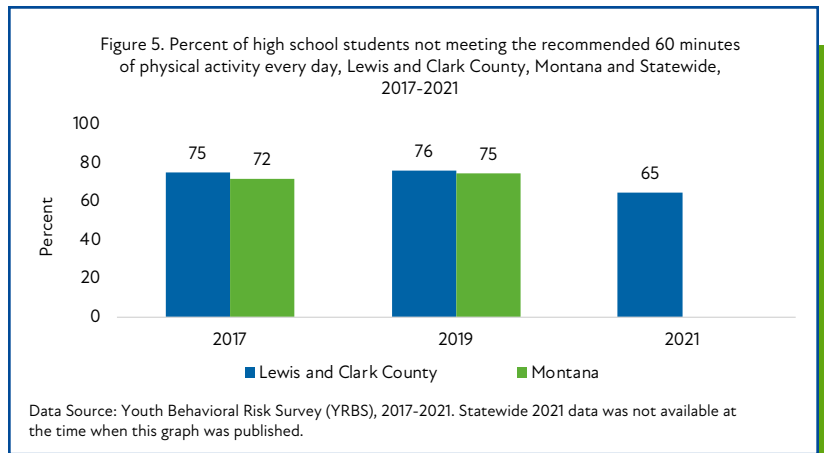
“All of this plays an overall role in the health of our community. I think that workplaces need to be more invested in the health of their employees. I feel like we do a good job of getting children out and active, but options drop off for organized physical activities for adults of all ages. It’s also really easy to go through a fast food drive through, but there are not any quick, easy, affordable healthier options.”

– Healthcare Provider

“Prevention and continuous management when there’s an overall lack of nutrition education in K-12 schools, and lack of support and promotion for healthy eating and physical activity.”

– Social Services Provider

Source: Stakeholder Survey, St. Peter’s Health, Lewis and Clark County, Montana, 2021



Adult and child on a hike. Photo from Kevin League.



# PREGNANCY AND BREASTFEEDING

## What are pregnancy and breastfeeding?

Pregnancy lasts about 40 weeks, or 9 months, and is grouped into three trimesters. Each trimester last approximately 3 months.<sup>71</sup>

Breastfeeding, also called nursing, is a process in which a baby feeds directly from the woman’s breast or when milk is expressed (pumped out) from the breast and the baby is bottle-fed the expressed milk.<sup>72</sup> Breastfeeding and breast milk provide a baby with essential calories, nutrients such as fat, protein and carbohydrates and micronutrients such as vitamins and minerals.<sup>73</sup>

## Why are pregnancy and breastfeeding important?

A women’s health before (preconception), during, and after pregnancy can have a significant impact on a baby’s health. Preconception health and pregnancy can provide opportunity to identify and address risk behaviors to improve and prevent negative health outcomes for a mother and the baby. There are many risk factors that may cause pregnancy-related complications, for example, existing diabetes or risky behaviors such as smoking or alcohol consumption.<sup>74</sup>

Children who are breastfed may have a lower risk for asthma, type 1 diabetes, obesity, severe lower respiratory disease, ear infections, sudden infant death syndrome and diarrhea/vomiting. Women who breastfeed can also lower their own risk for high blood pressure, type 2 diabetes, and ovarian or breast cancers.<sup>75</sup>

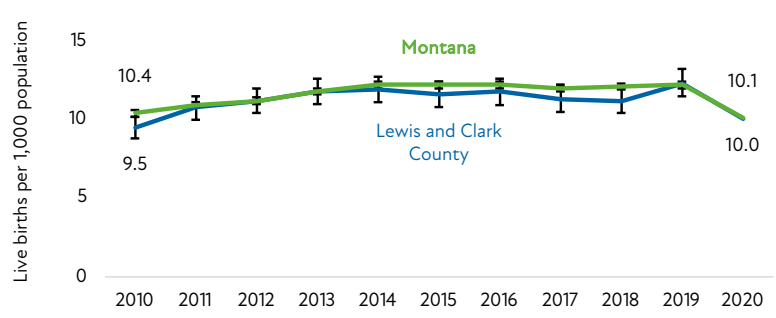
- Since 2010, on average 745 babies are born every year to Lewis and Clark County residents.<sup>7</sup>
- From 2014 to 2019 the birth rates per 1,000 population for the county have been slightly lower compared to the state [Figure 1].
- The percent of preterm births to Lewis and Clark County residents decreased by approximately 0.5% from 2010 to 2020, and the percent of low-birth-weight babies increased by the same percentage point during that time [Figure 2].
- The county met the Healthy People 2030 target of reducing preterm births to below 9.4% [Figure 2].

“I am seeing an increase in the number of pregnant women reporting use of marijuana in pregnancy to self-treat depression, anxiety, nausea and vomiting. Marijuana use has become a major barrier to breastfeeding as studies have shown that marijuana use during lactation is contra indicated. A large number of pregnant mothers in our county struggle with mental health issues and lack access to adequate mental health treatment. Many rely on the use of medical marijuana and/or psychiatric medication without the support of a mental health professional. Insufficient housing, lack of transportation, and inadequate access to healthful foods also remain major issues for our pregnant mothers. Lack of access to basic needs exacerbates stress, increases feeling of insecurity, and diminishes one’s quality of life.”

– Public Health Representative

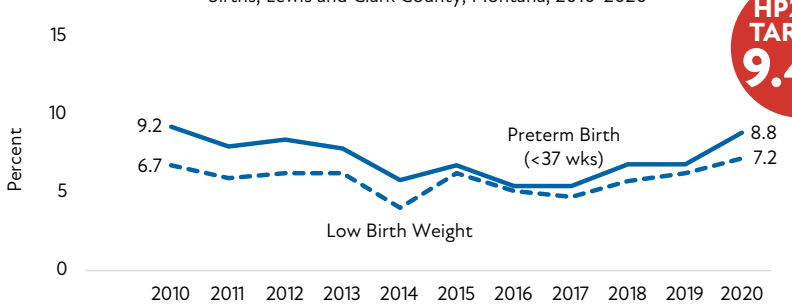
Source: Lewis and Clark County, Montana, 2021

Figure 1. Birth rate per 1,000 population, Lewis and Clark County, Montana and Statewide, 2010-2019



Data Source: Office of Vital Statistics, Montana Department of Public Health and Human Services, 2010-2019. Data only includes live births. I – indicates 95% confidence interval.

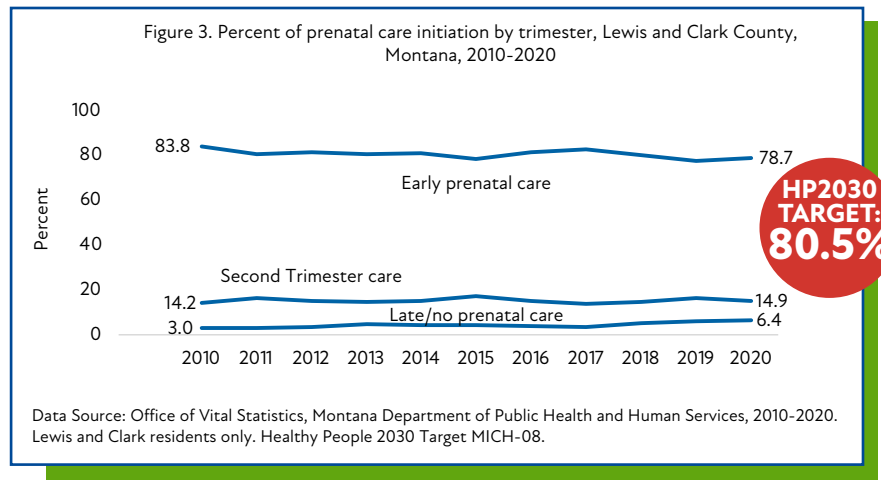
Figure 2. Percent of preterm less than 37 weeks of gestational age and low weight births, Lewis and Clark County, Montana, 2010-2020



**HP2030 TARGET: 9.4%**

Data Source: Office of Vital Statistics, Montana Department of Public Health and Human Services, 2010-2020. Lewis and Clark residents only. Birth weight data includes only singleton live births. Healthy People 2030 Target MICH-07.

- The county's late (7-9 months into pregnancy), or no prenatal care initiation percent approximately doubled from 2010 (3.0%) to 2020 (6.4%); whereas the early prenatal care initiation decreased 5.1 percentage points during the same time [Figure 3].
- The county did not meet the Healthy People 2030 target of 80.5%, the proportion of women who receive early and adequate prenatal care [Figure 3].
- In 2020, approximately 10% of Lewis and Clark County mothers breastfeed their babies at the time of hospital discharge.<sup>7</sup>
- Among Lewis and Clark County survey respondents, 1.3% said they or someone in their household, utilized breastfeeding assistance services in 2020.<sup>76</sup>



## How is Lewis and Clark County engaged in addressing pregnancy and breastfeeding?

Services are provided to families, caregivers, and mothers seeking advice, care, and guidance through pregnancy and breastfeeding. These programs promote care and education to help those in need. These programs include:

- Women, Infants, and Children (WIC), provides tools for low-income mothers and caregivers when going through pregnancy and need healthy food, breastfeeding support, nutrition education and care beyond. The WIC Breastfeeding Peer Counselor which provides support to breastfeeding new mothers.
- The Kids Hunger Coalition brought several stakeholders together to form a Breastfeeding Collaborative to discuss successes and identify gaps in promoting and supporting breastfeeding in our community. Its main priority is to celebrate and normalize breastfeeding. For families embarking on their own breastfeeding journey, community support and normalizing breastfeeding can make an incredible difference in the duration and ease of breastfeeding.
- **Parenting support and classes:** The Lewis and Clark Public Health offers a year-round Parenting from the Heart program, funded in part by the Montana Children's Trust Fund. The program consists of two parts: a Parent Support Group and "Circle of Security" parenting classes.
- **Parenting Support Group:** Meets once a week under the guidance of a professionally trained facilitator. Free child care is provided.
- **Circle of Security Parenting Classes:** 8-10 week courses are regularly scheduled. The goal of the classes is to improve a child's sense of security within a family, which research has shown leads to better self-esteem, better relationships, enhanced school readiness, and improved ability to cope with emotions.
- **Breastfeeding Support:** Registered nurses at St. Peter's Health and WIC staff who are specially trained as certified lactation counselors or internationally board-certified lactation counselors can answer questions about breastfeeding and help solve breastfeeding problems. Visits can be by phone, at the health department, or in the home, whichever is most comfortable. Free weight checks for breastfeeding infants are available. Breastfeeding support is available to any woman in Lewis and Clark County who is pregnant or breastfeeding



Hands on pregnant stomach.  
Photo by SHVETS production from Pexels.com.

# SLEEP

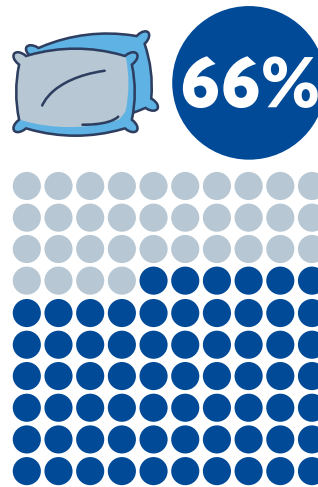
## What is sleep?

“Sleep health is a multidimensional pattern of sleep-wakefulness, adapted to individual, social, and environmental demands, that promotes physical and mental well-being. Good sleep health is characterized by subjective satisfaction, appropriate timing, adequate duration, high efficiency, and sustained alertness during waking hours.”<sup>77</sup>

Adults should sleep at least 7 hours each night for optimal health.<sup>78</sup>

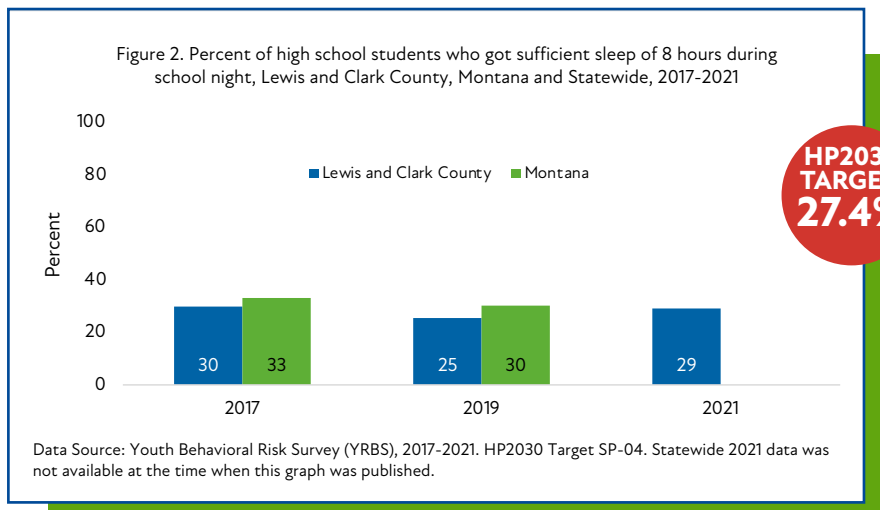
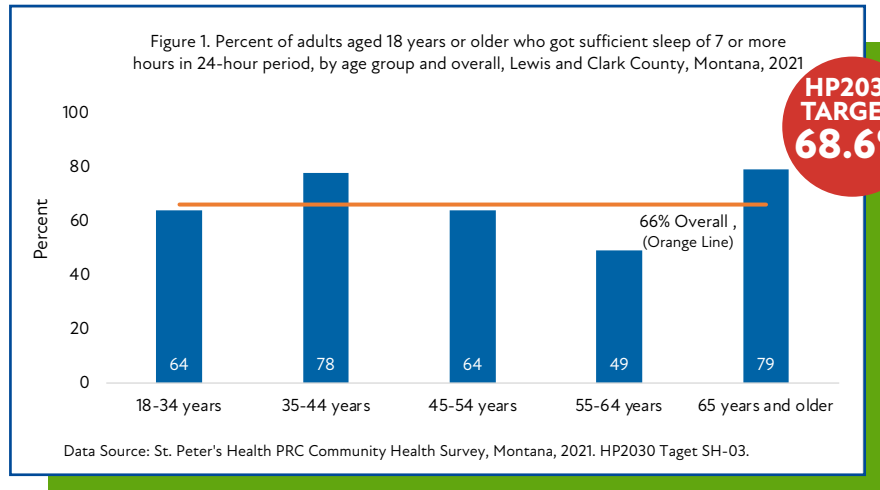
## Why is sleep important?

Sleep is essential for physical, mental and emotional well-being.<sup>79</sup> A third of a person’s life span is spent sleeping. Not getting enough sleep is associated with increased risk for chronic health conditions including diabetes, cardiovascular diseases, stroke, obesity, and depression.<sup>80</sup> Lack of adequate sleep has been identified as a contributing factor in motor vehicle crashes and machinery-related injuries resulting in injuries and disabilities.<sup>80</sup>



**Lewis & Clark County Adults who Reported Sufficient Sleep of 7 or More Hours in a 24 Hour Period** <sup>64</sup>

- The county’s highest proportion of sufficient sleep was for adults aged 65 years and older (79%) and the lowest was among residents aged 55-64 years old (49%) [Figure 1].
- Two county population age groups, those aged 35-44 years and adults aged 65 years and older, met the Healthy People 2030 target of 68.6% for getting sufficient sleep [Figure 1].
- More Montana high school students get sufficient sleep compared to the County [Figure 2].
- In 2021, the county met the People 2030 target of 27.4%, proportion of students grades 9 through 12 who get sufficient sleep [Figure 2].



## How is Lewis and Clark County engaged in addressing sleep?

Local programs help educate and promote safe sleep for babies and sleep hygiene for adults. Examples of those programs include:

- To ensure that all Montana families can create safe sleep environments for babies, Healthy Mother's Healthy Babies promotes the Safe Sleep for Baby Program which provides families with portable cribs at no cost.
- The Chronic Disease Prevention and Health Promotion Bureau of Department of Health and Human Services promotes worksite wellness programs to ensure that all Montana employees have support and access to health promotion resources. This includes topics relating to sleep. County coordinators work with local organizations to create worksite wellness committees and policies.

# 3 OUT OF 10



**Lewis & Clark County High School Students Who Reported Sufficient Sleep of 8 Hours or More on a School Night**<sup>56</sup>

“

“Sleep is a vital component to employee success and longevity, and yet most adults don't get the recommended hours of sleep per night. Employers can support their staff by focusing on better sleep through evidence-based workplace health programs.”

– Public Health Representative

Source: Lewis and Clark Health Department, Lewis and Clark County, Montana, 2021

”



Close-up of phone alarm. Photo by Miriam Alonso from Pexels.com.

# SUBSTANCE USE: ALCOHOL, DRUG, AND TOBACCO

## What is substance use?

Substance use is the medical term to describe a pattern of using a substance which may cause significant problems or distress. Excessive alcohol use is referred to as binge drinking. Men who consume at least 5 drinks and women at least 4 drinks in about 2 hours are considered to be engaging in binge drinking.<sup>81</sup> Drug misuse means taking medication beyond what was prescribed, taking someone else's prescribed medication, or taking medication to "get high".<sup>82</sup> There are three groups of most often misused medication: 1. opioids prescribed to ease pain, 2. central nervous system depressants such as tranquilizers, sedatives, and hypnotics prescribed to treat anxiety and sleep disorders and, 3. Stimulants often prescribed for attention-deficit hyperactivity disorders. Tobacco use is ingesting the smoke from a tobacco plant that contains highly addictive stimulant containing nicotine. Tobacco and tobacco smoke contain thousands of harmful chemicals that can disturb normal brain development.<sup>83</sup>

## Why is substance use important?

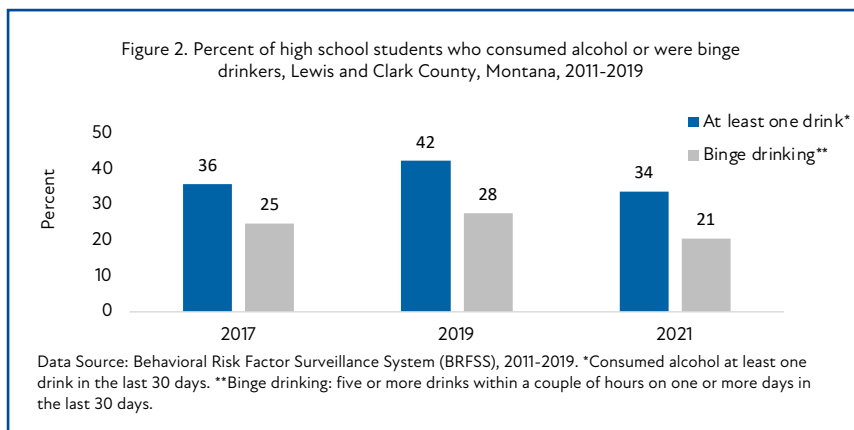
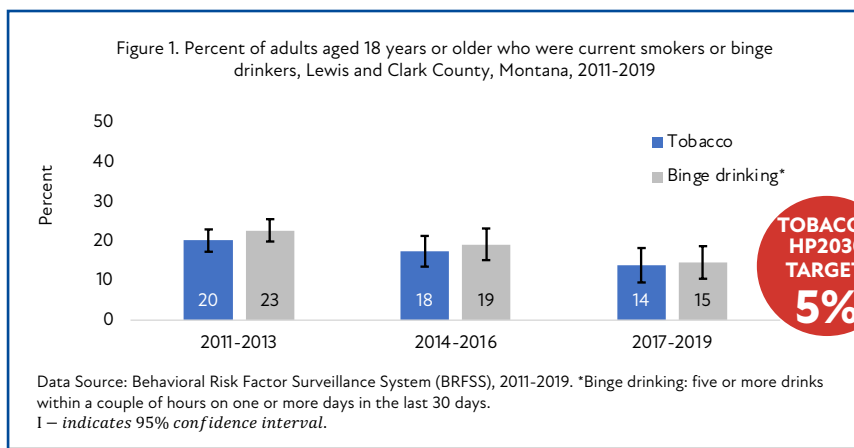
The misuse and use of alcohol, drugs, and tobacco can lead to addiction and trigger negative behavioral and health outcomes. Excessive alcohol consumption and the use of drug and tobacco products can increase a person's risk of many serious health and other problems, including brain and liver damage, respiratory disease, heart disease, cancer, harm the fetus in pregnant women, and premature death. These substances are considered risk factors for injuries, violence, unintended pregnancy, and motor vehicle crashes.<sup>81, 82, 83</sup>

- The prevalence of current smokers among Lewis and Clark County residents dropped 6 percentage points from 2011-2013 (20%) to 2017-2019 (14%) [Figure 1]. A similar trend was reported for binge drinking.
- The prevalence of at least one drink (34%), or binge drinking (21%) among Lewis and Clark County high school students was lower in 2021 compared to previous years [Figure 2].

## WHAT IS BINGE DRINKING?

Binge drinking is defined as a pattern of drinking that brings a person's blood alcohol concentration (BAC) to 0.08 g/dl or above. This typically happens when men consume 5 or more drinks or women consume 4 or more drinks in about 2 hours.

Data Source: Centers for Disease Control and Prevention, 2021



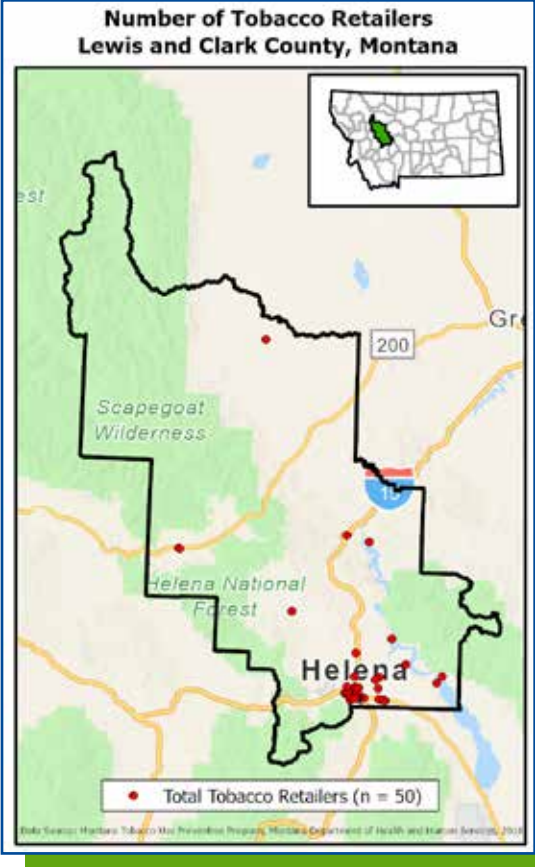
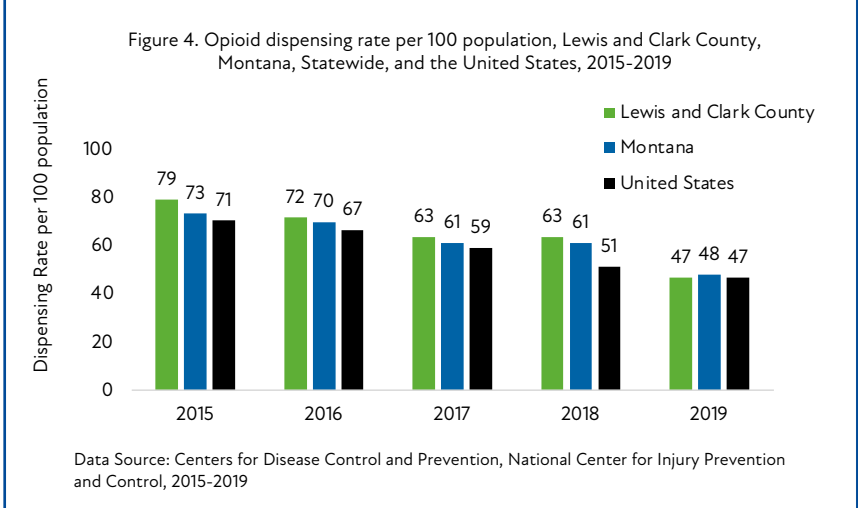
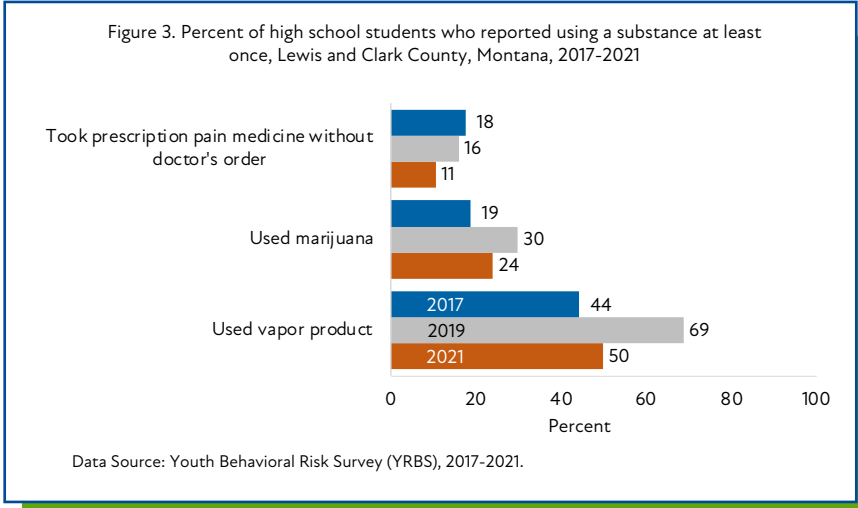
“There are very few Addiction Treatment Centers in the Helena or Montana area. Many people with addiction problems have no insurance and can't afford care. There are very few addiction specialists.”  
– Physician

“Vaping has become a very big thing in the teenager demographic.”  
– Social Service Provider

Source: Stakeholder Survey, St. Peter's Health, Lewis and Clark County, Montana, 2021



- The prevalence of Lewis and Clark County high school students who used a vapor product at least once increased 6 percentage points from 2017 (44%) to 2021 (50%) [Figure 3]. Students who said they used marijuana in the last 30 days increased from 19% to 24% during the same time.
- The overall Lewis and Clark County, State, and U.S. opioid dispensing rate declined from 2015 to 2019 [Figure 4]. In 2019, the dispensing rate had fallen to the lowest in 5 years, to 47 prescriptions per 100 residents of Lewis and Clark County.
- In 2018, Lewis and Clark County had 50 tobacco retailers [Map]. 60% of the tobacco retailers were located within half a mile of school building and 32% were within a 10-minute walking distance.
- Among Lewis and Clark County survey respondents, 2.4% said they, or someone in their household, utilized tobacco cessation services in 2020.<sup>76</sup>



### How is Lewis and Clark County engaged in addressing substance use?

Programs provide prevention, education, and guidance for substance abuse. Many of these programs focus on risk and protective factors to bring awareness to the issue and what we can do about it. Examples of these programs include:

- Tobacco cessation classes, counseling, and groups are offered at a variety of community locations. Certain classes focus on specific high-risk groups such as pregnant women, American Indians, LGBTQ, Veterans, and teens.
- The Lewis and Clark County DUI Task Force is a collaborative group of community organizations and partners that work together to reduce and prevent impaired driving.

Map. Data Source: Tobacco Retailer, Montana Department of Health and Human Services, 2018

# VACCINATION

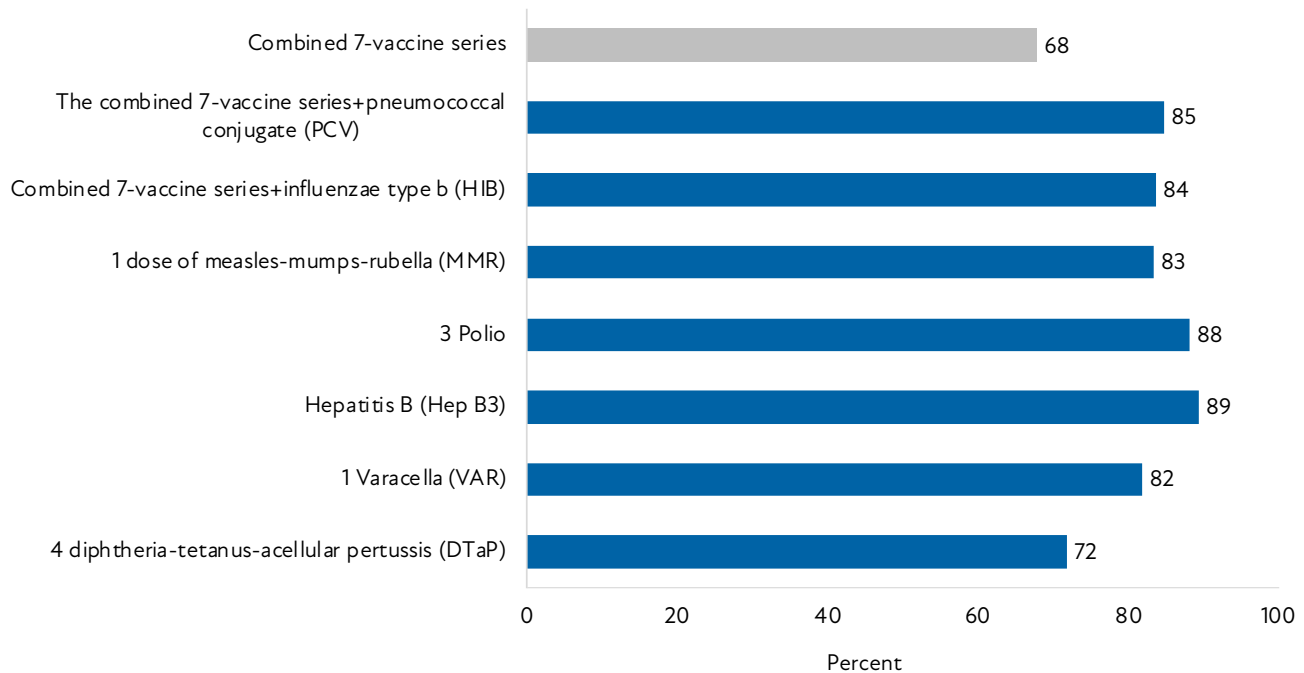
## What is vaccination?

Vaccination and immunization have different meanings. Vaccination is the act of getting a vaccine—usually a shot—to produce immunity to a specific disease. Immunization is the process of becoming immune or protected against a disease by receiving the vaccination.<sup>84</sup> A vaccine is the agent that contains the same germs that cause the disease, but they have been weakened or killed so that they cannot make an individual sick. Modern vaccine types, such as mRNA vaccines, do not use the weakened live virus and still protect against infectious diseases.

## Why is vaccination important?

Vaccine preventable diseases such as acute respiratory infections, including pneumonia and influenza, are the 9th leading cause of death in the United States.<sup>22</sup> Communities with low vaccination rates are at increased risk for outbreaks from vaccine preventable diseases.<sup>85</sup> Vaccination is an important public health tool in reducing illness, hospitalization, and death from vaccine preventable diseases.

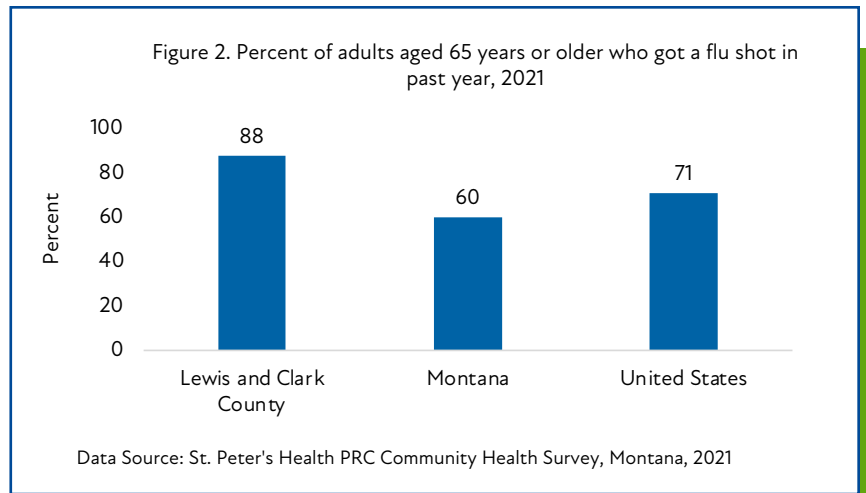
Figure 1. Vaccination coverage by 24 months of age, Lewis and Clark County Service Area\*, Montana, 2019



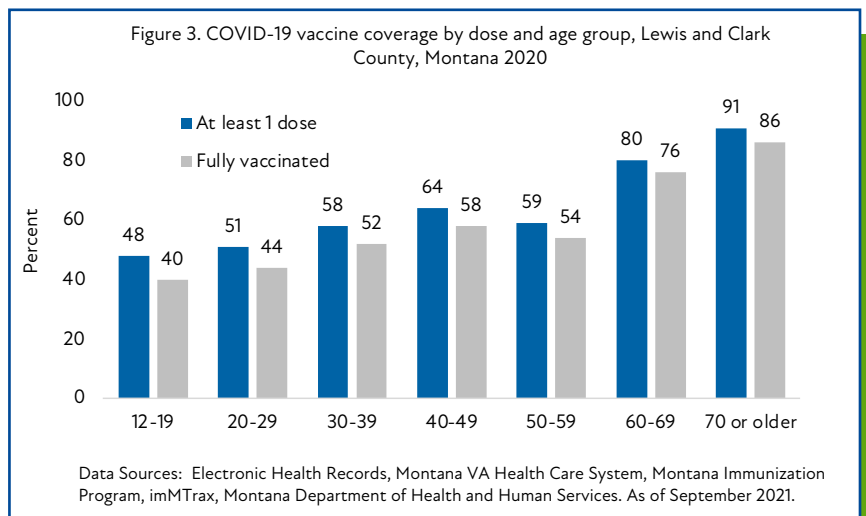
Data Source: MT imMTrax, Montana Department of Health and Human Services, data extracted on January, 2020. Published report by DPHHS.  
\*County of service where the patient received vaccine, not necessarily county of residence. Combined 7-vaccine series or UTD = 4 DTaP, 3 Polio, 1 MMR, UTD HIB, UTD Hep B, 1 Var, UTD PCV by 24 months of age. Each antigen is also evaluated by 24 months of age.

- In 2019, of vaccine administered in the Lewis and Clark County service area, 68% of children received the combined 7-vaccine series by 24-months of age as recommended by the Centers for Disease Control and Prevention [Figure 1].
- The Lewis and Clark County service area rate did not meet Healthy People 2030 target of 90.8% (IID-03) for 1 dose of measles-mumps-rubella; and the Healthy People target of 90.0% (IID-06) for 4 diphtheria-tetanus-acellular pertussis by 24-months of age [Figure 1].

- Close to 90% of Lewis and Clark County adults aged 65 years or older received a flu vaccine in 2019 [Figure 2]. The rate was higher compared to Montana’s (60%) and the United States (71%).
- Younger residents of Lewis and Clark County had lower COVID-19 vaccination rates compared to the older population [Figure 3]. Adults aged 50-59 years had a lower full vaccination series (54%) compared to adults aged 40-49 years (58%).
- In the 2018-2019 academic year, out of Lewis and Clark County kindergarten through 12<sup>th</sup> grade students, 0.2% had medical exemptions and 3% had religious exemptions for obtaining vaccine.<sup>86</sup>



Luanne Tangedal, RN, administers a vaccination. Photo from St. Peter's Health.



“[I got vaccinated] To support our community health, but more so I can visit my mom who resides in an assisted living facility”

“I wanted to protect myself, my community, my family, and my friends. I believe in our community and the science behind the vaccine.”

“[I got vaccinated] I did this to protect myself, my family, and my community. I work as a healthcare provider in family practice, and it is my duty to protect my health and yours.”

- Private Citizens

Source: Social media post, COVID-19 HUB, Lewis and Clark Public Health, Montana, 2021

## How is Lewis and Clark County engaged in addressing vaccination?

Services have been implemented within the county to offer vaccinations and to help prevent vaccine-preventable diseases among citizens throughout their lifespans. Community programs systematically look at how to reach the appropriate populations for each vaccine, to meet people where they are, and remove barriers. Examples of these programs within Lewis and Clark County include:

- Vaccines for Children (VFC) program provides vaccines to enrolled providers for immunizing eligible children at no cost.
- The COVID-19 vaccine team works with community partners to make vaccines easily accessible to everyone in the county.

# VIOLENCE PREVENTION

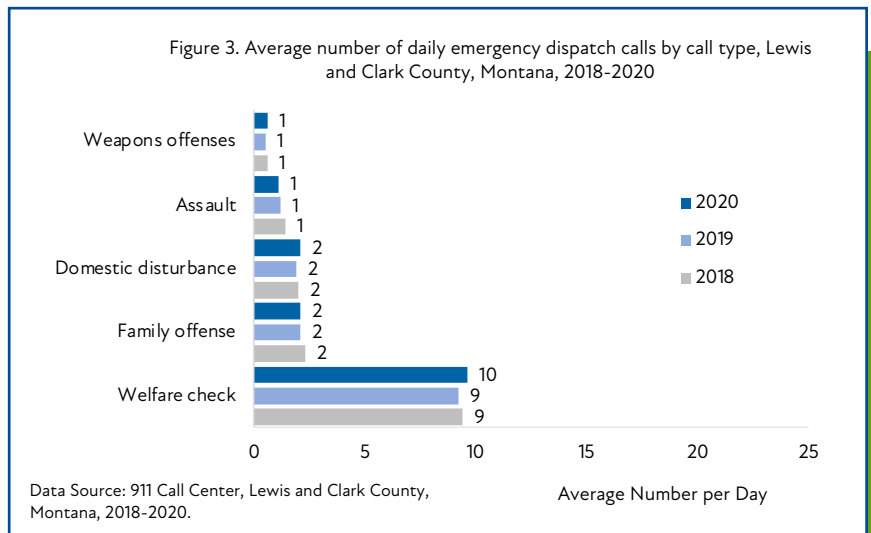
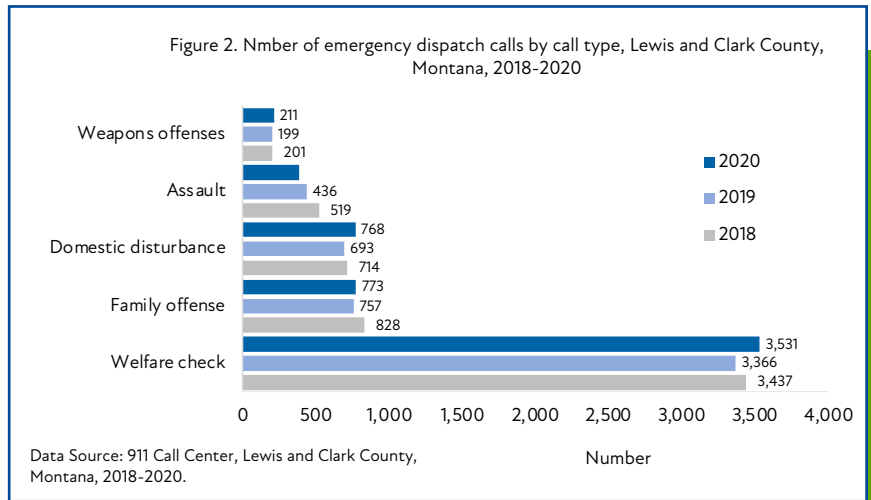
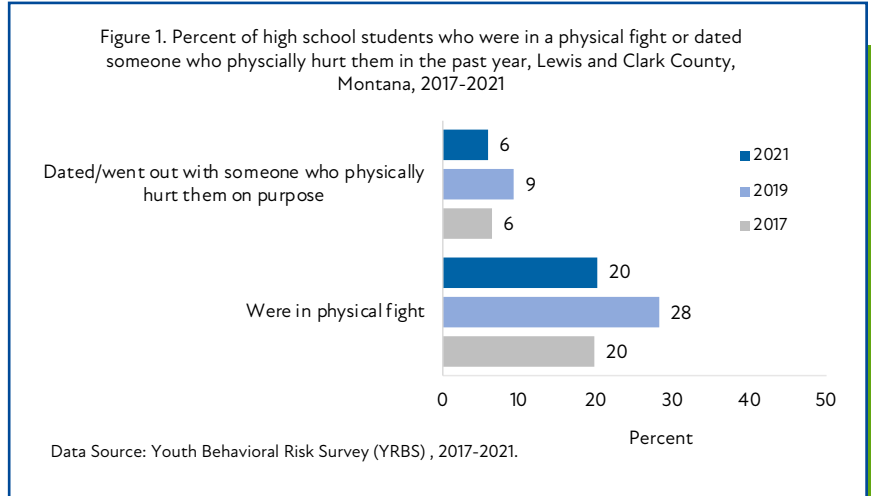
## What is violence prevention?

Violence is defined as the intentional use of physical force or power, threatened or act against self, someone else, a group or community resulting or the likelihood of resulting in psychological harm, injury, deprivation, or death.<sup>87</sup> There are three types of violence prevention: primary violence prevention refers to stopping violence before it begins, secondary prevention refers to an immediate response to violence such as emergency services or treatment, and tertiary prevention focuses on long-term care such as rehabilitation or reduction of long-term disability as a result of violence.<sup>88</sup>

## Why is violence prevention important?

The impact from violence extends beyond the victim, affecting family, friends, coworkers, employers, and communities. Victims of violence are at risk for long-term behavioral, mental health, and physical problems.<sup>88</sup> Beyond health consequences, violence has individual and economic impacts resulting in high medical costs, lost productivity, and other social environmental factors.<sup>89,90</sup>

- In 2019, 28% of Lewis and Clark County high school students reported being engaged in a physical fight and 9% said they dated or went out with someone who physically hurt them on purpose [Figure 1]. The percentage for both measures decreased in 2021.
- In 2019, the Lewis and Clark County 911 Call Center received a total of 1,399 crime offenses calls. Approximately 8% of these calls accounted for simple assault and 3% were related to aggravated assault.<sup>91</sup>
- From 2018 to 2020, the number of annual calls to the Lewis and Clark County 911 Call Center increased for domestic disturbances and welfare checks [Figure 2].
- In 2020, Lewis and Clark County 911 Call received, on average, 10 daily calls related to welfare checks and an average of 2 daily calls for domestic disturbances.<sup>91</sup>



## How is Lewis and Clark County engaged in addressing violence prevention?

Programs in the county work on preventing family and relationship violence. These help provide empowerment opportunities, create protective environments, support victims, and to teach skills to help prevent violence. Two examples of these programs include:

- The Friendship Center is a haven for those affected by domestic violence, sexual assault, and stalking and empowers our community to flourish in relationships free from violence.



**In 2021, 20% of Lewis and Clark County high school students reported being engaged in a physical fight<sup>56</sup>**

“

“Domestic violence, rape is rarely talked about but affects over 20% of our population. One of the leading causes of death for teens is alcohol related car crashes. A leading cause of death for kids is injury.”

- Provider

Source: Stakeholder Survey, St. Peter's Health, Lewis and Clark County, Montana, 2021

”



Ambulance rushing. Photo from Adobe Stock.



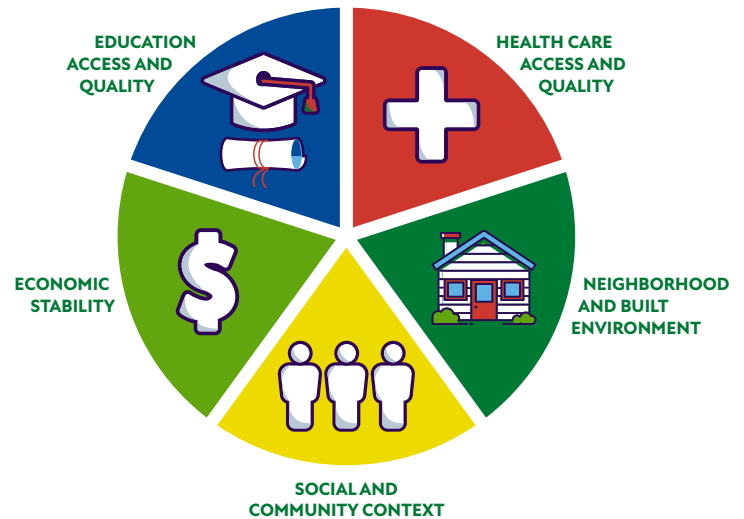
# SECTION IV: SETTINGS, SYSTEMS, AND DETERMINANTS OF HEALTH

The conditions in which people live, learn, work, and play, often referred to as social determinants of health (SDoH), can affect a wide range of health risks and outcomes.<sup>92</sup> For example, people can be faced with challenges, like unsafe neighborhoods, lack of a public transportation system, or limited access to healthy food. Helping populations getting the social support they need can improve their health and overall well-being.<sup>93</sup>

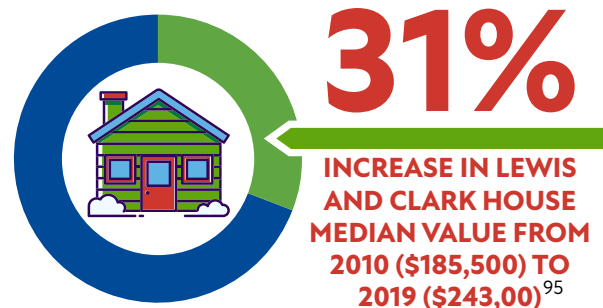
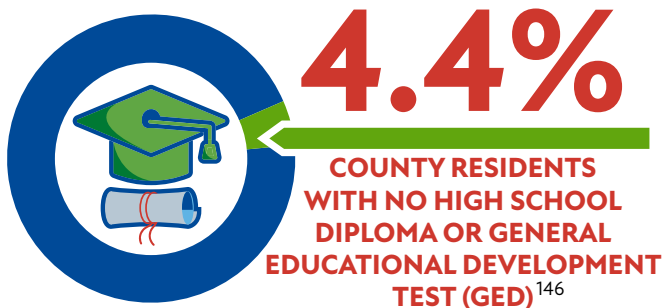
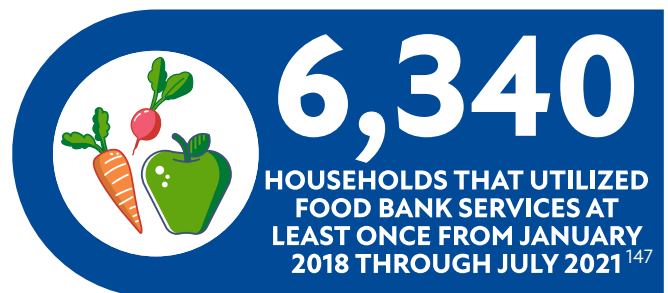
Both Healthy People 2020 and 2030 outline 5 key areas related to a population's physical and social environment, and how they affect health outcomes<sup>94</sup>:

1. **Economic Stability** is the connection between a person's financial circumstances, such as income and cost of living, and their health. Key issues are poverty, employment, food security, and housing affordability.
2. **Education Access and Quality** is the connection between a person's education and their health. Key considerations are high school graduation, literacy, and access to early childhood education.
3. **Health Care Access and Quality** is the connection between a person's access to health care and their health. Key issues are affordability, transportation, and health literacy.
4. **Neighborhood and Built Environment** is the connection between where people live and their health. Key issues are safe housing, interpersonal violence, and physical environmental conditions.
5. **Social Community Context** is the connection between a person's social support, family circumstances, community engagement, and their health. Key issues are community participation, incarceration of a family member, or discrimination.

## SOCIAL DETERMINANTS OF HEALTH

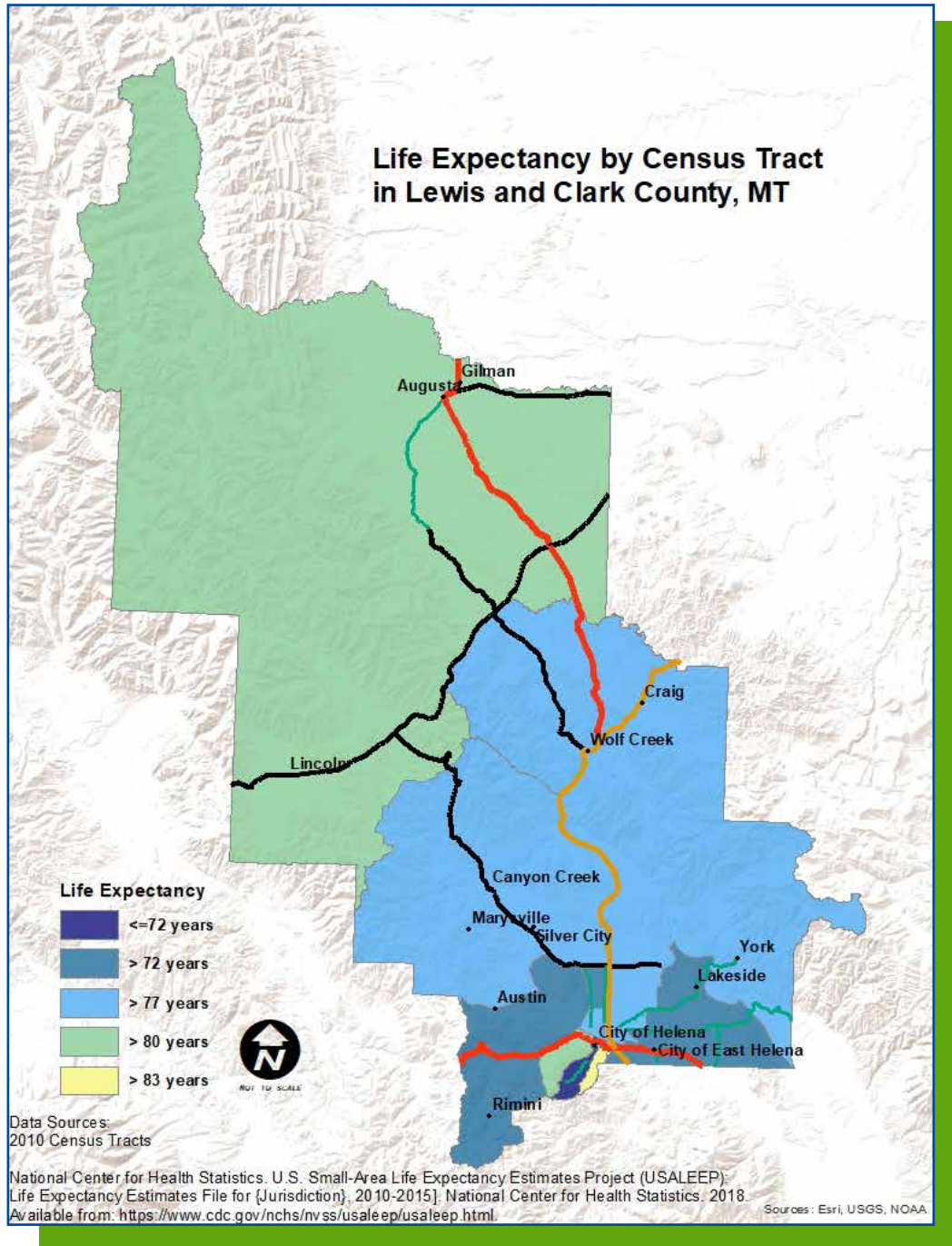


Data Source: U.S. Department of Health and Human Services



Research shows long-standing systemic health and social inequalities have contributed to an increased risk of getting or having a severe illness.<sup>139</sup> Differences in the rates of many risks and outcomes differ by geographic areas.

In Lewis and Clark County, geographic differences exist in life expectancy [Map]. For example, an 11-year life expectancy gap exists between the south part of the county (life expectancy of under 72 years, purple) compared to the neighborhood located just east of that community (life expectancy of 83 years or more, yellow).



**PUBLIC TRANSPORTATION IS ONLY AVAILABLE IN THE COUNTY'S MOST POPULATED CITIES OF HELENA AND EAST HELENA**<sup>148</sup>

Compared to neighboring communities, the county's community located in the south (dark blue) is also more vulnerable to emergency events such as disease outbreak, based on the demographic and socioeconomic characteristics where 20% of the population in that area lives below poverty level.<sup>149</sup>

# ACCESS TO HEALTH

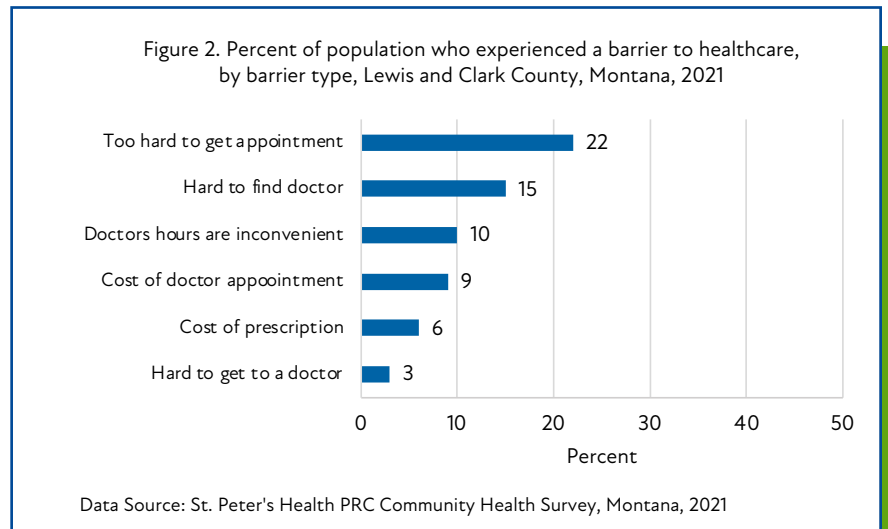
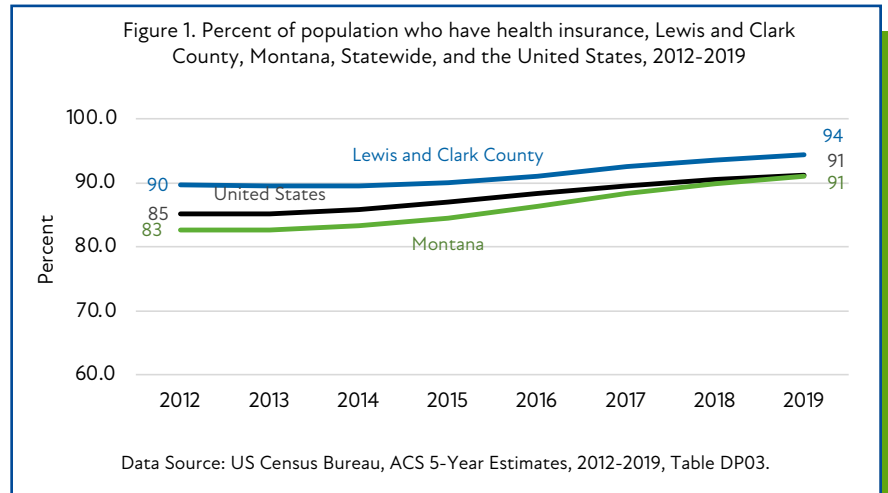
## What is access to health?

Access to health services is defined as “the timely use of personal health services to achieve the best health outcomes.”<sup>95</sup> Three steps are required for an individual to access healthcare services: gaining entry into the healthcare system usually through insurance coverage; accessing a location where needed healthcare services are provided such as geographic availability; finding a healthcare provider whom the patient trusts and can communicate with.<sup>96</sup>

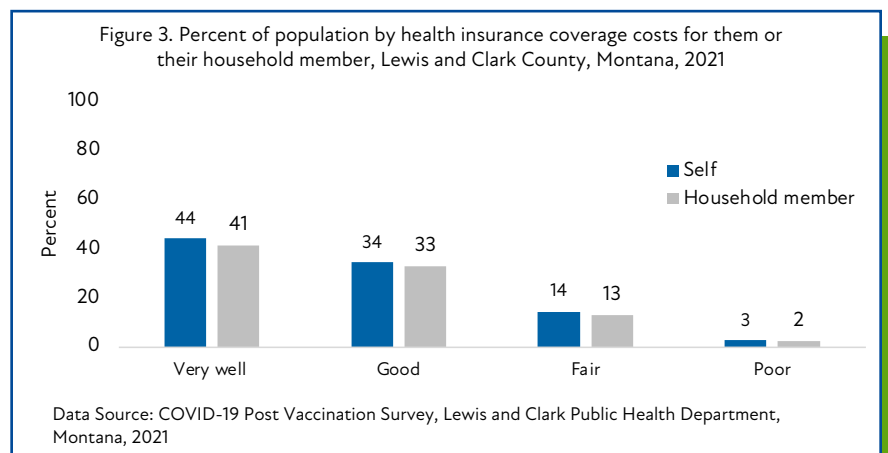
## Why is access to health important?

Limited availability and access to comprehensive health services can greatly impact an individual’s social, physical, and mental status and overall quality of life. Without accessible health services and health insurance coverage, individuals are less likely to seek preventative services and are at greater risk for serious health problems.<sup>97</sup>

- The percent of Lewis and Clark County residents who have health insurance increased from 90% in 2012 to 94% in 2019 [Figure 1]. The county’s health insurance coverage rate was higher compared to Montana’s and the United States.
- In 2021, the most common (22%) barrier to obtaining a health care for county residents was difficult in getting a medical appointment [Figure 2].
- In 2021, 44% of Lewis and Clark County survey respondents stated their health insurance coverage paid for their medical costs “very well,” and 33% said their household members had a “good” coverage in the same year [Figure 3].



**Lewis & Clark County residents who have a primary care physician** <sup>76</sup>



## How is Lewis and Clark County engaged in addressing access to health?

Access to healthcare is a vital component of the overall health of residents. Different programs and groups work together to reduce barriers to accessing care. Examples of these programs include:

- CONNECT is a bidirectional referral network that allows client contact information to be sent between service providers. The secure web-based system is available at no cost to approved organizations that make client referrals. The goal of CONNECT is to reduce common barriers for external referrals and increase client uptake in services.
- The Helena Health Improvement Coalition's goal is to promote and enhance care delivery and resource connection capabilities in the community. The coalition aims to improve and enhance quality of life through coordination and partnership alignment to serve the community.

“

“Any medical condition is a challenge in this community and the surrounding community due to a lack of health professionals with available time. Also, the quality of support seems to be reduced for medical services due to COVID concerns.”

- Social Services Provider

“Specific to mental health, professionals are booked, and limited amount of session frequency allowed by insurance is not helpful. As far as general health care, the care is so terribly expensive that it is often bypassed. Even when insurance is available, the out of pocket and deductibles make access to care troubling.”

-Community Leader

Source: Stakeholder Survey, St. Peter's Health, Lewis and Clark County, Montana, 2021

”



Dr. Abentroth, Surgery, in conversation with patient. Photo from St. Peter's Health.



# ADVERSE CHILDHOOD EXPERIENCE (ACEs)

## What are adverse childhood experiences?

Adverse childhood experiences, or ACEs, are traumatic events experienced by children aged 0-17 years. There are three types of ACEs: abuse, neglect, and household dysfunction.<sup>98</sup> These types of events may include a child's personal experience with violence, physical abuse, emotional neglect, exposure to violence in the home or community, and having family member attempt or die by suicide.<sup>99</sup>

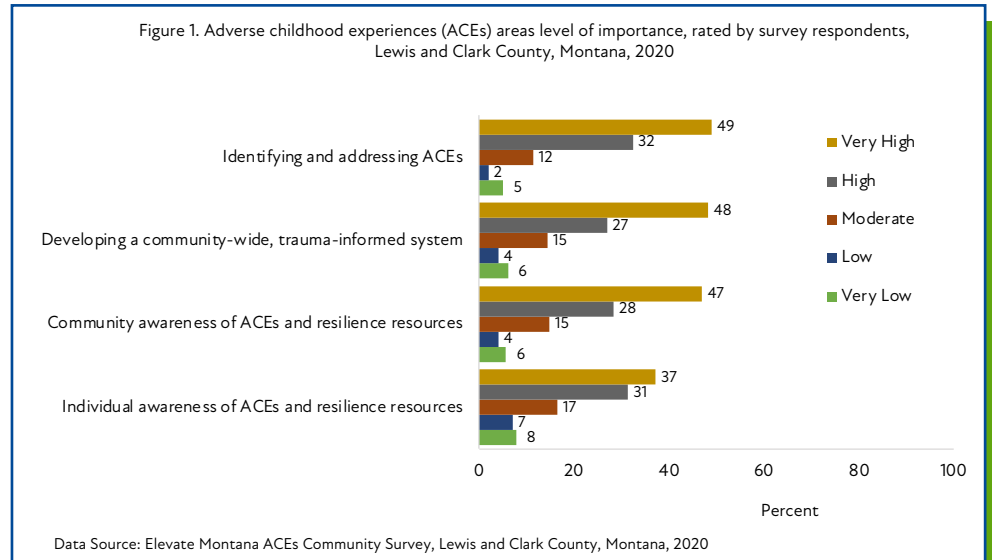
## Why are adverse childhood experience important?

Adults who report ACEs are at an increased risk for mortality, morbidity, and an impact on social economic wellbeing.<sup>103</sup> ACEs are associated with mental illness, substance use, and other chronic health problems. Individuals affected by ACEs can struggle with employment and education attainment.

Almost half of Lewis and Clark County survey respondents said that adverse childhood experiences were **very important**:

- o Identify and address ACEs awareness (49%),
  - o Develop a community-wide, trauma-informed system (48%), and
  - o Community awareness of ACEs and resilience resources (47%).
- In the past 3 years (2019-2021), a total of 23 ACEs presentations and 222 attendees were reached in Lewis and Clark County.<sup>100</sup>

Figure 1. Adverse childhood experiences (ACEs) areas level of importance, rated by survey respondents, Lewis and Clark County, Montana, 2020



## How is Lewis and Clark County engaged in addressing adverse childhood experiences?

Local resources aim to educate the community about ACEs to build resilient communities. Examples of these programs include:

- Elevate Montana is a statewide, grassroots movement dedicated to building resilient and connected communities throughout Montana. As the Helena affiliate, they strive to raise awareness about Adverse Childhood Experiences, their long-term health effects, the power of resiliency in overcoming ACEs and creating a more compassionate and connected community.
- The Circle of Security Parenting Classes and the Partnership for Home Visiting, which includes programs like Safe Care, Nurse Family Partnership, and Parents as Teachers provide parents the resources and support needed to be healthy and equipped parents.



“I believe that it is imperative to help individuals with childhood trauma as early as possible.”

“ACEs awareness and community action to address trauma related issues is going to be critical for our long-term community health and success.”

“I have had numerous ACEs trainings and used it in my work. It is the “aha” explanation for me to understand mental health and addiction in our community and country. The ACEs movement needs to happen in this community but there is a long way to go. All medical practitioners should be asking those questions to treat the person as a whole by understanding their health may be related to trauma. Every teacher should know about ACEs.”

Source: Elevate Montana ACEs Community Survey, Lewis and Clark County, Montana, 2020





# CHILD CARE

## What is child care?

Non-parental child care or preschool settings help to prepare children for school.<sup>101,102</sup> Child care can occur in three settings: child care centers (licensed non-residential buildings like day care centers), family, friends and neighbor care (relatives, friends, neighbors, or babysitter homes), and family child care homes (licensed residential homes).<sup>103</sup>

## Why is child care important?

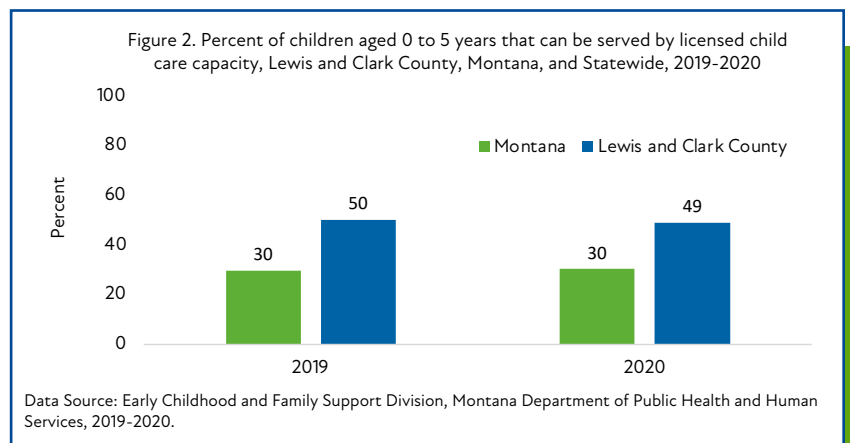
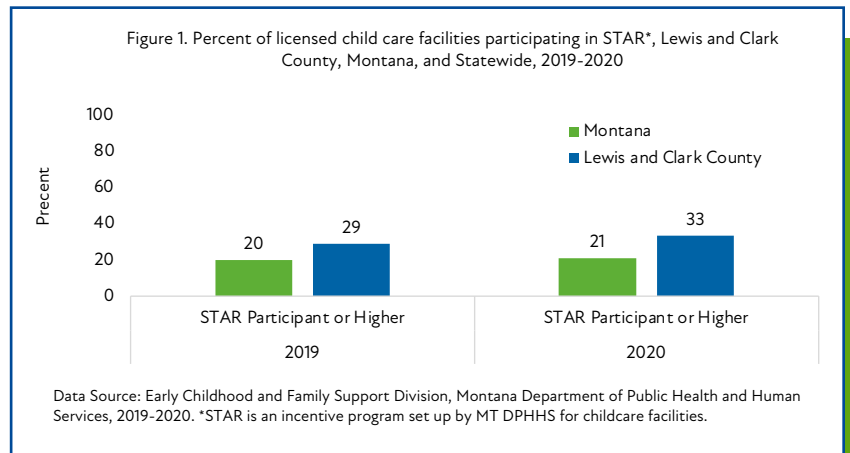
Financial burden, shortage, or closures of child care can have a great impact on economic hardship and negatively affect parents' and children's physical and mental well-being.<sup>104</sup> In result, parent's stress and mental health are frequently transferred to children. Children's prolonged exposure to stress is linked to poor development outcomes.<sup>105</sup>

- Lewis and Clark County's licensed child care facilities participating in the Best Beginnings STARS to Quality Program increased from 29% in 2019 to 33% in 2020 [Figure 1]. STARS goals are to incentivize workforce development, environmental quality, and administrative infrastructure. STARS-accredited facilities are eligible for funding and scholarships from the State Montana Department of Public Health and Human Services Program.
- The percent of children under 6 years of age in the county that could be served by licensed child care capacity slightly declined between 2019 (50%) and 2020 (49%), but the percent remained the same for the state (30%) [Figure 2].
- In 2020, the ratio was approximately 7 children to 1 childcare staff member in Lewis and Clark County. During the same year, the county had an average of 34 children per child care facility.<sup>106</sup>

## How is Lewis and Clark County engaged in addressing child care?

Services are provided to families within the community to receive care for their children and to assure children are getting the help needed for development. Coordinated services help provide resources and support to make sure the overall well-being of children is secure.

- Child Care Connections, the Child Care Resource and Referral Agency in Lewis and Clark County, supports families and the local economy by encouraging quality childcare and safety.
- The Early Care and Education Task Force (ECETF) of the Early Childhood Coalition works to build partnerships between early childhood educators (age 0-8), families, and stakeholders, as well as bring public awareness to the positive effects that high quality early care and education brings to the development of children.



“Montana is considered a child care desert. Lewis and Clark County reports that only 57% of child care need is being met. Families and business are impacted deeply by the lack of access to child care. Child cares have had to close or decrease slots due to lack of workforce, making the lack of access even greater. Low pay and no benefits are a contributing factor to the lack of workforce.”

- Local Community Member

Source: Child Care Connections, Lewis and Clark County, Montana, 2021

# ECONOMIC STABILITY

## What is economic stability?

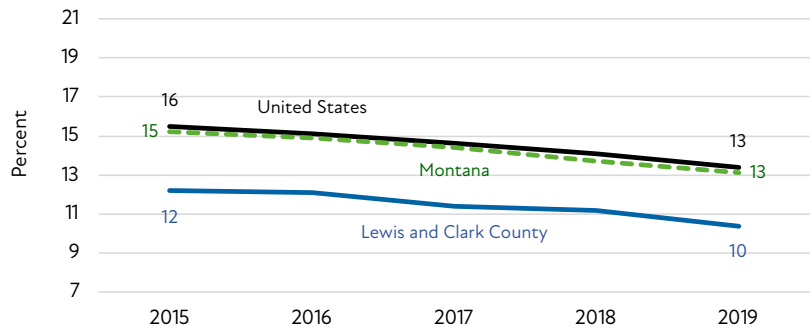
Economic stability allows individuals to obtain necessary resources like food, healthcare, and housing. Two key components of economic stability are employment and poverty. Steady employment with a living wage income is referred to as *fair, decent, or comfortable*.<sup>107</sup> For most of the country including Lewis and Clark County, the poverty guideline is \$21,960 annually for a family of three. This value is defined as the least amount of income to meet basic needs.<sup>108</sup>

## Why is economic stability important?

Individuals without steady employment and living in poverty often experience poorer housing conditions, have a lack of healthy foods, have minimal or no healthcare services, social needs, and have lower education. All of these have a major effect on an individual's health and well-being. These disparities are more likely to lead to premature death from preventable diseases.<sup>109</sup>

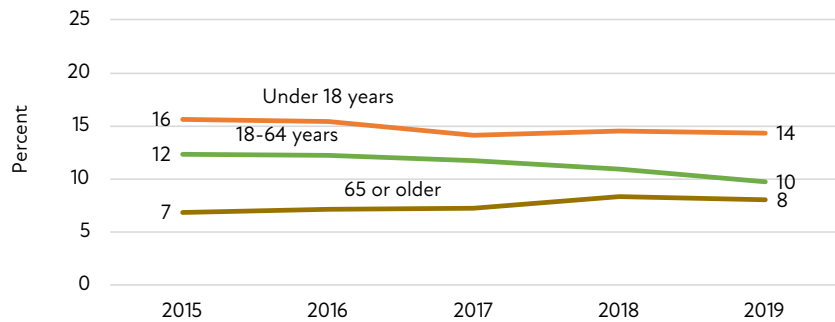
- The Lewis and Clark County annual poverty rate dropped from 12% in 2015 to 10% in 2019 [Figure 1]. Similar trends were reported for Montana and the United States.
- From 2015 to 2019, the county's annual poverty rate slightly increased for the population aged 65 year or older [Figure 2].
- The annual unemployment rate of 3% was stable over a 4-year period (2016-2019) but increased sharply from 3% in 2019 to 5% in 2020 for Lewis and Clark County [Figure 3].

Figure 1. Annual poverty rate, Lewis and Clark County, Montana, statewide, and the United States, 2015-2019



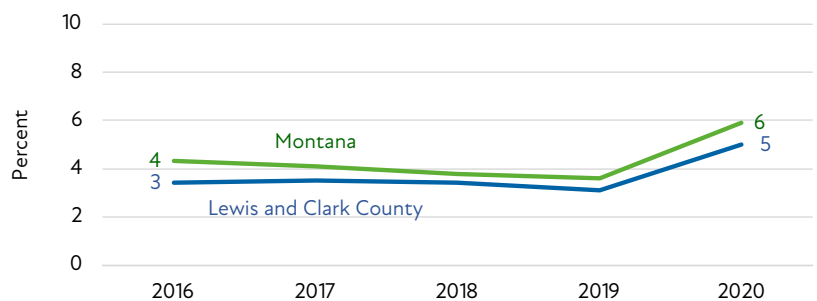
Data Source: US Census Bureau, 2015-2019, ACS 1-Year Estimate

Figure 2. Annual poverty level by age group, Lewis and Clark County, Montana, 2015-2019



Data Source: US Census Bureau, 2015-2019, ACS 1-Year Estimate

Figure 3. Annual unemployment rate, Lewis and Clark County, Montana and statewide, 2016-2020



Data Source: Montana Department of Labor and Industry Local Area Unemployment Statistics, 2016-2021

## How is Lewis and Clark County engaged in addressing economic stability?

Local organizations are working together to create programs and systems that help create jobs, job training, and help set up individuals to sustain economic stability.

- The Helena Resource Advocates is both an information sharing and an advocacy group. Member agencies and organizations share updates to keep each other informed of their projects and services, work on developing resource guides and a strong network of providers, and connecting on concerns regarding housing, access to services, and various other challenges being faced by our neighbors experiencing difficult circumstances.

“

“During this pandemic, Montana’s small business owners had to not only be resilient, but resourceful, and innovative in how they operated and kept their people employed. Now, businesses are facing new challenges like the lack of available workforce, supply chain issues, and competing with online jobs from around the world.

One of the key problems holding back Montanans from the workplace is a severe lack of housing. Our inventory is in short supply and the demand is high, which is driving housing prices even higher, while driving some from their homes altogether.”

– Local Community Member

Source: U.S. Small Business Association, Lewis and Clark County, Montana, 2021

”

“

“The Covid-19 Pandemic has impacted businesses greatly in ways that could not have been predicted. All businesses (large or small) have walked a thin line of trying to survive and yet be proactive in protecting the health and safety of their employees and customers/clients. It is important to keep the wheels of commerce turning with appropriate and yet manageable guidelines for the health of the community. Moving forward with the potential continuation of the spread of the virus and its variants, businesses need to be vigilant in measures to keep their employees and clients safe & healthy and yet, keep their business functioning at a high level in order to keep the economy of our community moving forward. Every business in Helena contributes to the overall economic stability and growth. Importance needs to continue to be placed on keeping all businesses “in business.”

–President/CEO

Source: Helena Area Chamber of Commerce

”



Overlooking portion of Downtown Helena. Photo from Adobe Stock.

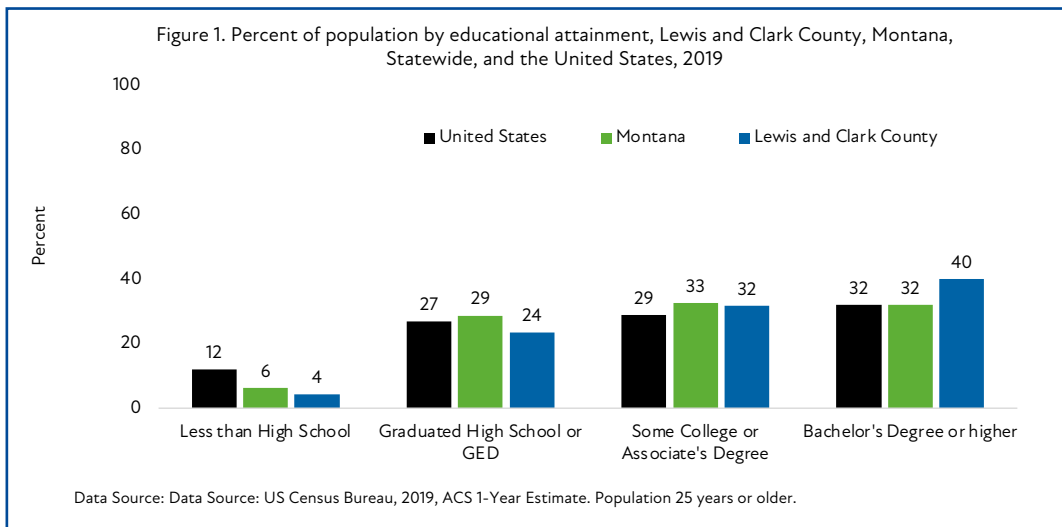
# EDUCATION

## What is education?

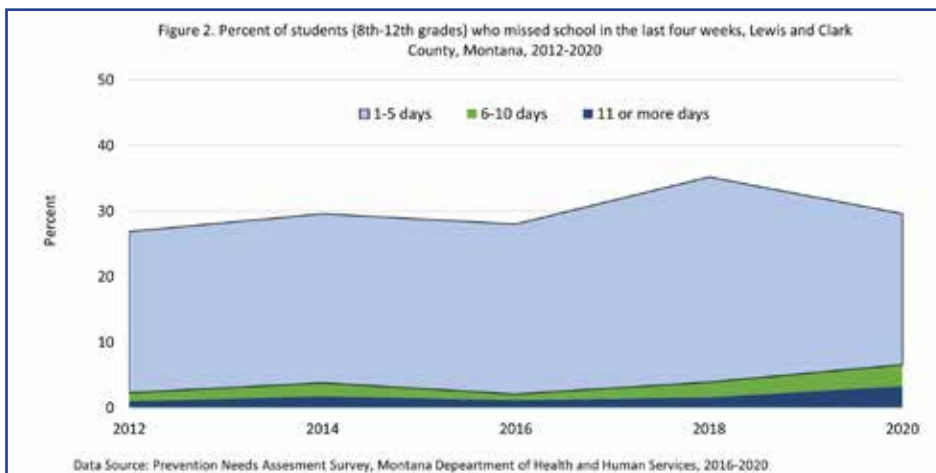
Formal education helps an individual acquire knowledge, skills, values, morals, beliefs, and habits.<sup>110</sup> Educational methods include teaching, training, storytelling, discussion and direct research. There are several education levels including elementary (kindergarten-5<sup>th</sup> grade), middle school (6<sup>th</sup>-8<sup>th</sup> grades), high school (9<sup>th</sup>-12<sup>th</sup> grades), upper secondary (10<sup>th</sup>-12<sup>th</sup> grades), and higher education (undergraduate, graduate, doctoral, or postdoctoral degrees).<sup>111</sup>

## Why is education important?

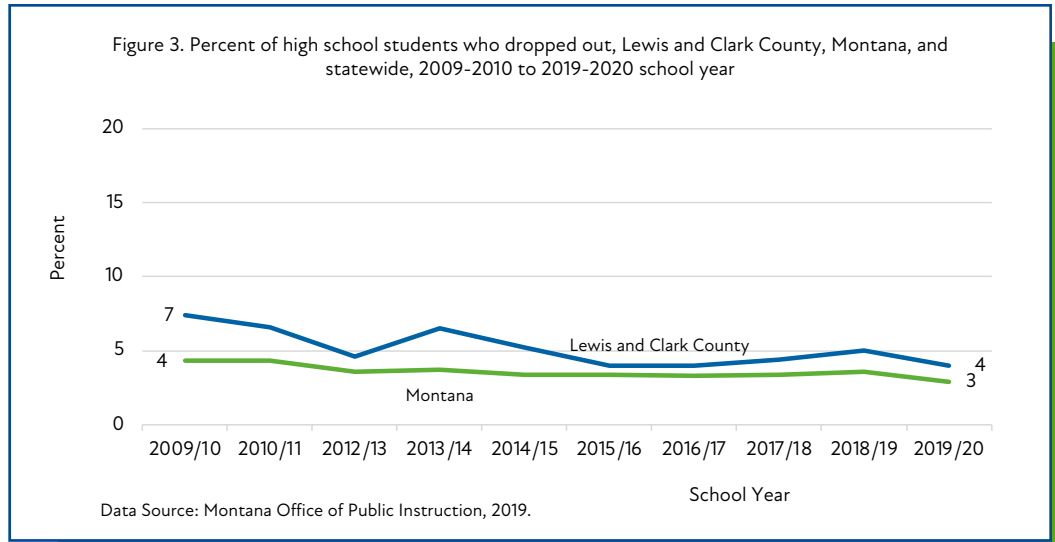
Education plays a critical role in promoting health and safety especially for young adults. Low education attainment has been associated with health risk behaviors such as early sexual initiation, violence, and substance use.<sup>112</sup> Less educated adults report worse overall health, more chronic health conditions, and have more functional limitations and disabilities.<sup>113, 114, 115, 116</sup>



- In 2019, Lewis and Clark County population aged 25 years or older had higher educational attainment (40%) compared to Montana or the United States [Figure 1].
- The percent of the population aged 25 years and older without a high school diploma, was approximately 3 times higher (12%) for the United States compared to the county (4%) [Figure 1].
- In 2018, just over 30% of Lewis and Clark County students in grades 8 through 12 missed 1 to 5 days of school in the previous month [Figure 2]. The percentage of students who missed 6-10 days, or at least 11 days in the last month, increased in 2020 from previous years.



- The percent of Lewis and Clark County high school students who dropped out of school decreased from 7% in 2009-2010 school year to 4% in 2019-2020 school year [Figure 3]. The high school dropout rate over time improved more for the county and remained about the same for the state.



“Home Visiting programs in Lewis and Clark County serves several young women who are pregnant and also trying to complete high school. The challenge is finding a balance between parenting and education and the need to obtain employment to provide for their basic needs. Young women feel like they have a lack of support from their parents or significant other. They also have the challenge of finding childcare and preschool. Even if they find preschool that they can afford, there is a lack of stable transportation for parents. Stress and anxiety of trying to manage everything at such a young age can take a toll on a woman’s health and mental health.”

-A Community Provider

Source: Lewis and Clark County, Montana, 2021

## How is Lewis and Clark County engaged in addressing education?

The K-12 school districts, Carroll College, Helena College, non-profits, and county organizations work together to create programs to ensure all residents have access to continuing education and learning opportunities.

- Helena Adult Learning Center focuses on preparing students for employment and/or college. The purpose of the Adult Learning Center is to provide for the literacy needs of adults in the community.
- Access to Success is a high school diploma completion program. This pathway serves as a model dropout recovery/reengagement program in the Helena community.



Color pencils lined up. Photo by Kelli Tungay on Unsplash.com.



# ENVIRONMENTAL HEALTH

## What is environmental health?

The World Health Organization describes environment, as it relates to health, as congregation of “all the physical, chemical and biological factors external to a person, and all the related behaviors, but excluding those natural environments that cannot reasonably be modified.”<sup>117</sup> The six environmental health components associated with an individual’s health include: outdoor air quality, water quality, toxic and waste, homes and communities, infrastructure and surveillance, and global environmental health.<sup>118</sup>

## Why is environmental health important?

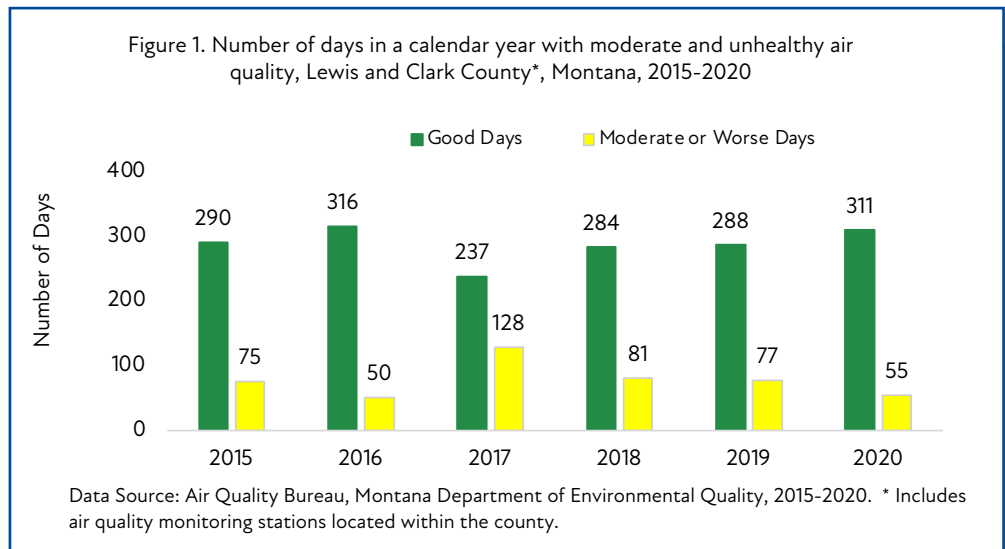
Environmental risk factors, including exposure to poor outdoor air quality triggered by wildfires, contaminated drinking or recreational water, toxic substances and hazardous waste exposure, or lead-based paint hazards can cause illness, injury, premature death and affect individual overall well-being.<sup>121</sup>

Table. Air Quality Levels based on 24-hour PM<sub>2.5</sub> Concentration

<b>Good</b>	No health impacts are expected when air quality is in this range.
<b>Moderate</b>	Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion.
<b>Unhealthy for Sensitive Groups</b>	Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion.
<b>Unhealthy</b>	Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion.
<b>Very Unhealthy</b>	Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion; everyone else, especially children, should limit outdoor exertion.
<b>Hazardous</b>	All children and adults should avoid or limit outdoor exertion.

Data Source: Montana Department of Environmental Quality

- Air pollution levels are monitored using ground level ozone and particulate matter 2.5 microns or less in diameter (PM<sub>2.5</sub>). Air quality classified other than being in a green level or “good” can impact the health of specific population groups based on their age or health conditions [Table].
- Since 2017 to 2019, the number of days with air quality “moderate to worse” has increased in Lewis and Clark County [Figure 1]. Between 2016 (50 days) and 2017 (128 days), there was a 150% increase in number of days with moderate to worse levels of air quality [Figure 1].

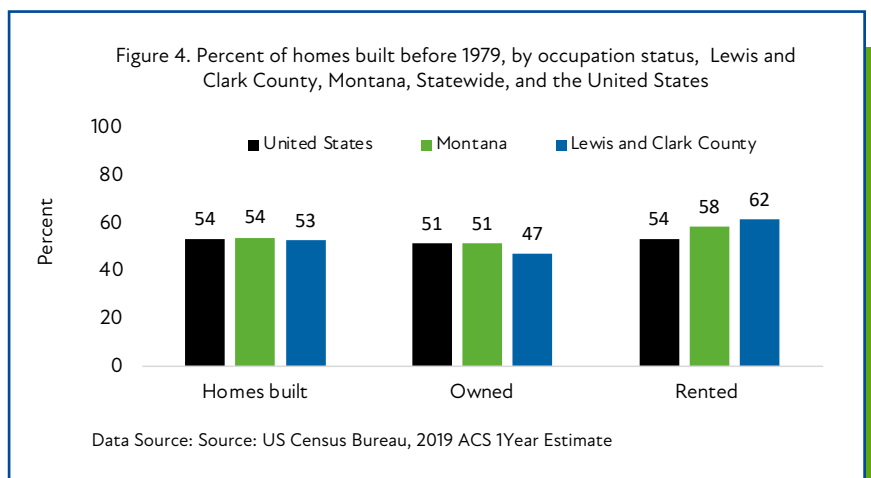
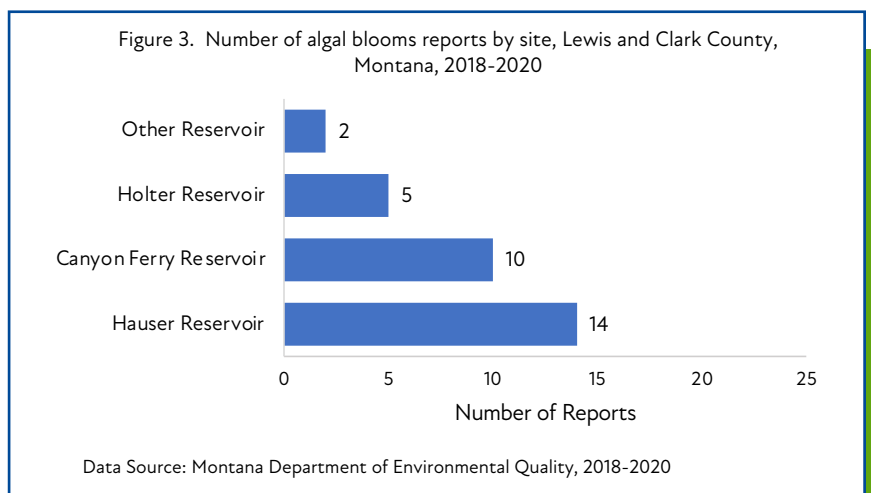
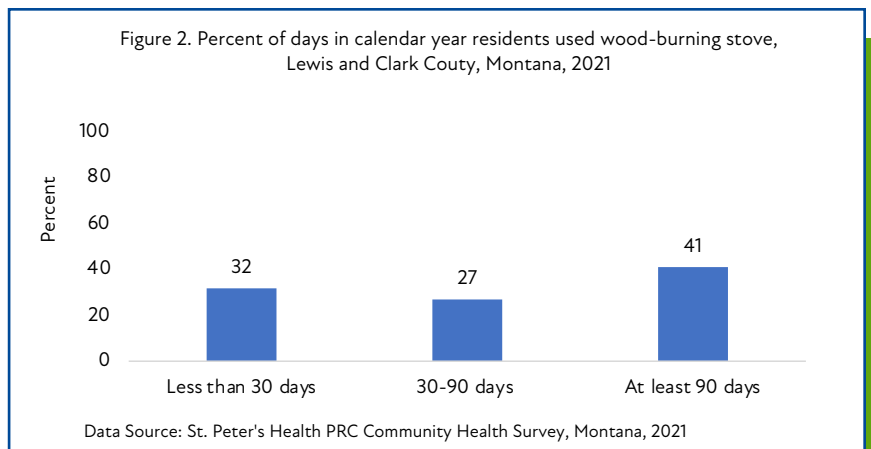


- So far during 2021, 41% of county residents reported using a wood-burning stove for more than 90 days [Figure 2].
- Algal blooms produce toxins that can be harmful to human and animal health. The presence of algal blooms has been recorded in at least 4 different locations in Lewis and Clark County [Figure 3]. In 2018-2020, 31 sightings were reported of algal blooms in the body of water.
- Lead-based paint officially entered the market in the 1960s. It was banned in 1978 when it was deemed dangerous to human health.
- Just over half (53%) of Lewis and Clark County homes were built before 1979 [Figure 4]. The percent is similar for Montana and the United States.
- Exposure to lead can be especially harmful to children by affecting their reasoning ability or IQ, ability to pay attention, and academic achievement.<sup>119</sup>
- In 2015-2020, in Lewis and Clark County on average every year, 4 children aged 6 years or younger tested positive for elevated blood lead levels that are considered high. During the same time, the annual average was twice the number of children (n=8) above 6 years of age with elevated lead levels.<sup>45</sup>

## How is Lewis and Clark County engaged in addressing environmental health?

Environmental health programs allow the county to ensure environmental factors meet national standards. They ensure the health of the community is protected from environmental factors, such as poor outdoor air quality and water quality. Some of these programs include:

- Montana Watershed Coordination Council – Their mission is to Unite and Support Montana’s community-based conservation networks to promote healthy and productive watersheds.
- Lake Helena Watershed Group – Their mission is improving the health of communities and landscapes by promoting and implementing conservation projects and educational events.



“Population with increasing diagnoses of respiratory diseases. Patterns of unhealthy air quality caused by drought, dust/allergens, and wildfires. Continued high use of tobacco products and vaping...”

– Community Leader

Source: Stakeholder Survey, St. Peter's Health, Lewis and Clark County, Montana, 2021

# FOOD INSECURITY

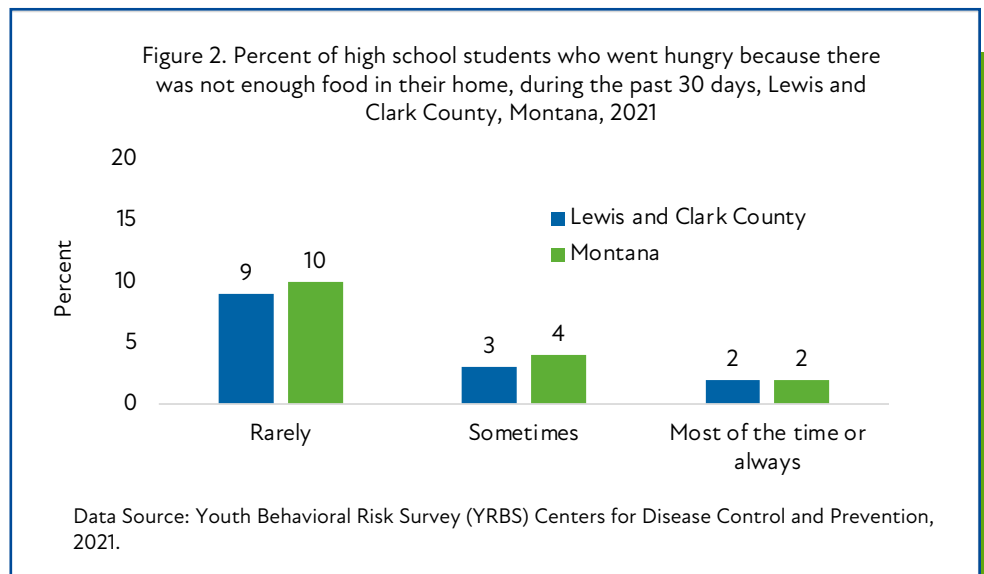
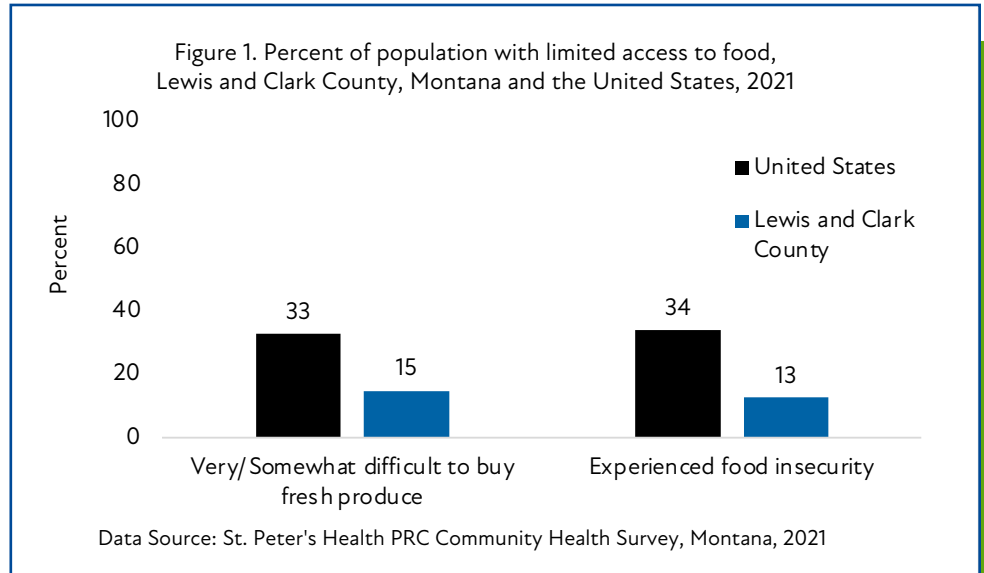
## What is food insecurity?

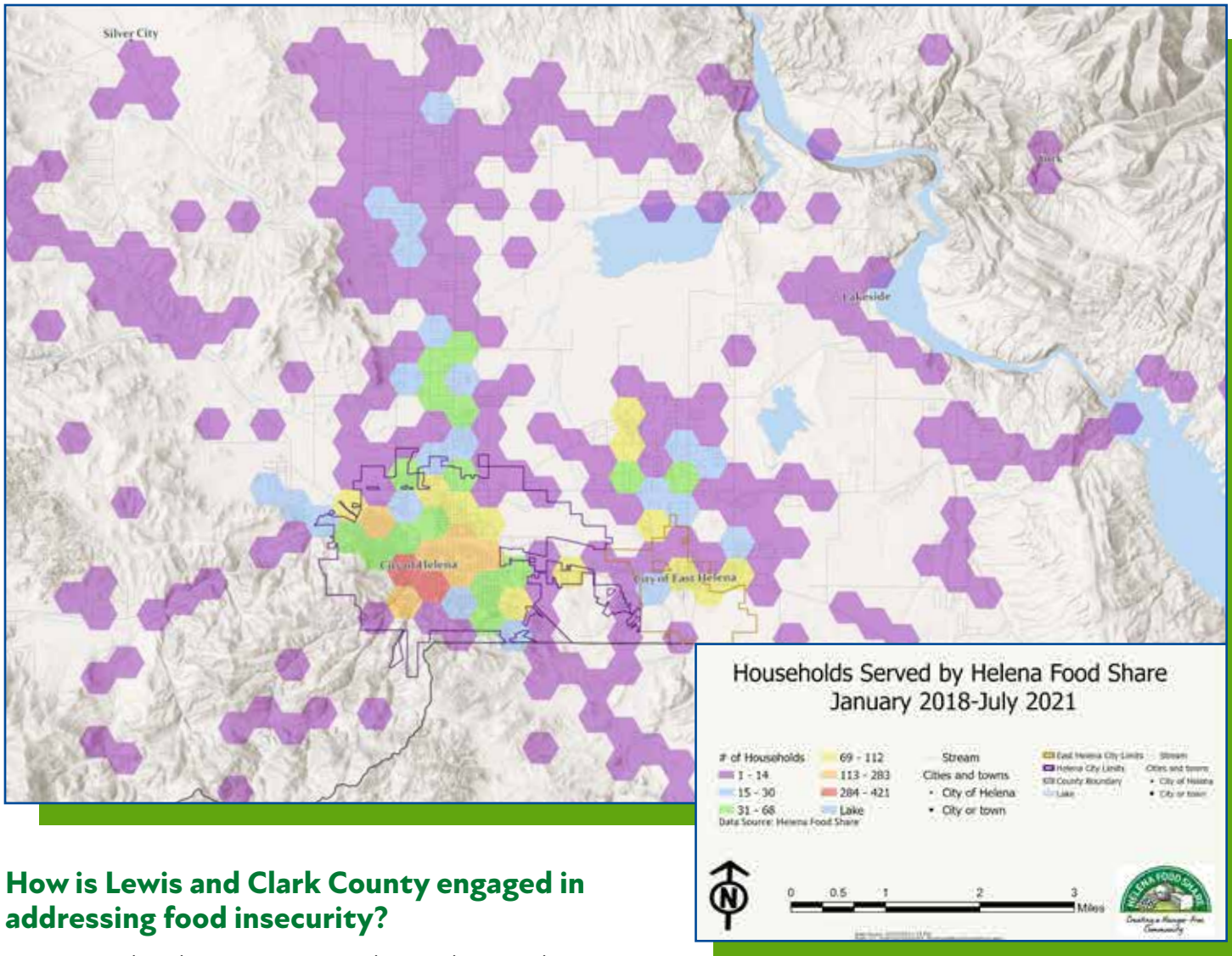
Food insecurity is defined as a household-level economic and social condition of limited or uncertain access to adequate food.<sup>120</sup> Hunger is when an individual experiences physical feeling that may result from food insecurity.

## Why is food insecurity important?

Food insecurity is associated with negative health outcomes in children and adults. Food insecurity can make individuals more susceptible to developing chronic disease or making the health conditions more difficult to manage.<sup>121</sup> Populations living in neighborhoods with low incomes, communities of color, and rural areas are less likely to have access to supermarkets and health food and tend to have a higher density of fast-food restaurants and other sources of unhealthy food such as convenience stores.<sup>122</sup>

- In 2021, the difficulty of buying fresh produce (15%) or experiencing food insecurity (13%) was less prevalent in Lewis and Clark County compared to the United States [Figure 1].
- In 2021, approximately 2% of high school students in the county and the state “most of the time or always” went hungry because there was not enough food in their home [Figure 2].
- From January 2018 through July 2021, the Helena Food Share served 6,340 households at least one time. These are primarily in the Helena Valley but also extend to outlying communities.<sup>96</sup>
- The highest concentration of households served by Helena Food Share are located close to downtown near the Upper West Side, the Lower West Side, the South Central and the Sixth Ward neighborhoods [Map].





## How is Lewis and Clark County engaged in addressing food insecurity?

Partners within the community work to make sure those that are food insecure are being provided assistance and guidance to receive food, or able to make purchases of low-cost food choices. Examples of interventions within Lewis and Clark County include:

- Helena Food Share’s vision is to create a hunger-free community. Their mission is serving neighbors in need by providing food in a respectful and dignified way and by working with others to eliminate hunger in the greater Helena area.
- Sodexo and the Helena School District provides free and reduced cost lunches as well as free summer meals to families in need.
- The Kids Hunger Coalition works with community partners to ensure nutrition security for youth. This active coalition works strategically and collaboratively to improve access to healthy foods through efforts such as, strengthening healthy school meals, expanding nutrition education, and exposing kids to local foods at school.

“Most of the food that is donated is highly processed food, high in sodium, sugar, and carbohydrates. All of this contributes to poor eating habits simply due to availability of healthy, fresh foods, places to make meals also contributes. Not having a facility to store homeless property causes ongoing theft, and ties homeless to packing around their property, which contributes to inability to get employment.”

- Social Services Provider

“Education on healthy eating, cooking and cost savings of preparing your own food. Helena has a lot of mediocre fast food restaurants.”

-Community Leader

Source: Stakeholder Survey, St. Peter’s Health, Lewis and Clark County, Montana, 2021

# HOUSING

## What is housing?

Housing is often defined by the term *shelter*. It creates the picture of safe and secure place providing privacy and protection from potentially harmful elements from the outside world.<sup>123</sup> Healthy housing supports the state of physical, mental, and social wellbeing.<sup>124</sup>

Homelessness in the United States is defined as “homeless individuals” lacking a fixed nighttime residence, and whose primary nighttime residence is a supervised temporary shelter, institution, temporary accommodation in another’s residence, or a place not ordinarily used for sleeping.”<sup>125</sup>

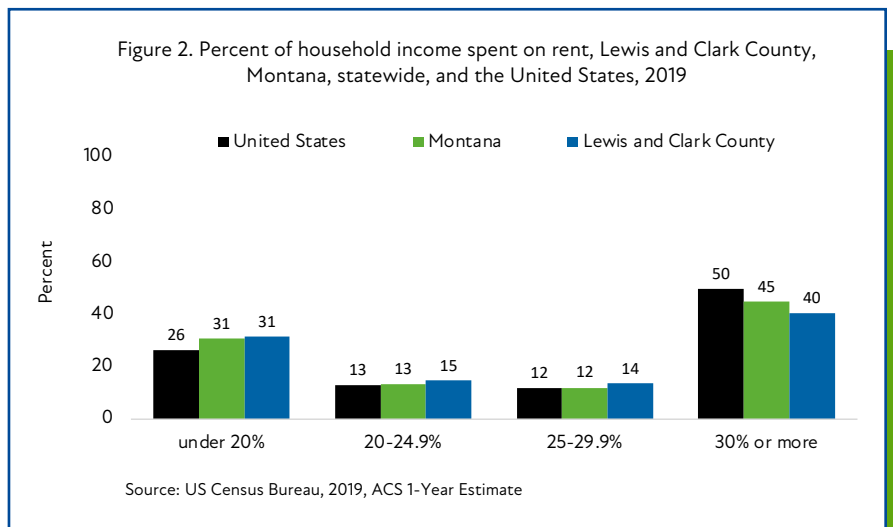
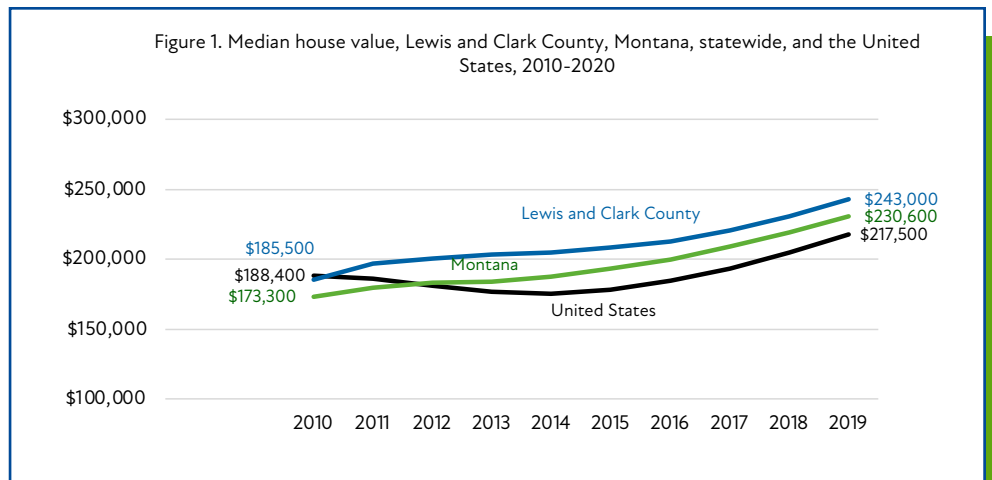
## Why is housing important?

There are four pathways that directly impact health: not having a stable home, conditions inside the home, financial burden resulting from high-cost housing, and neighborhood of environmental and social characteristics of where people live [Table].<sup>126</sup> Impacts of these pathways, including homelessness, can have profound effects on individuals and families resulting in poor health, higher hospitalization rates, shorter lifespan, and premature death.<sup>127, 128</sup>



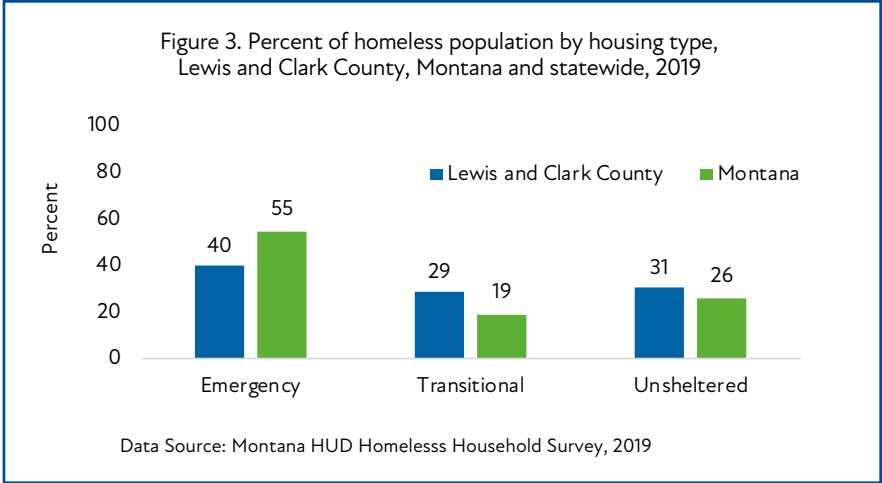
Table. Four pathways connecting housing and health (Taylor, 2018)

- In Lewis and Clark County, the median house value increased by 31% from 2010 (\$185,500) to 2019 (\$243,000) [Figure 1]. During the same time, Montana experienced a 33% increase and the United States had 15% increase.
- In 2019, approximately 40% of Lewis and Clark County residents spent at least 30% of their household income on rent [Figure 2]. The rent expense exceeded the recommended Health People 2030 target of 25.4%.
- In 2019, a total of 117 individuals experienced homeless in Lewis and Clark County and 1,009 in Montana.<sup>129</sup>





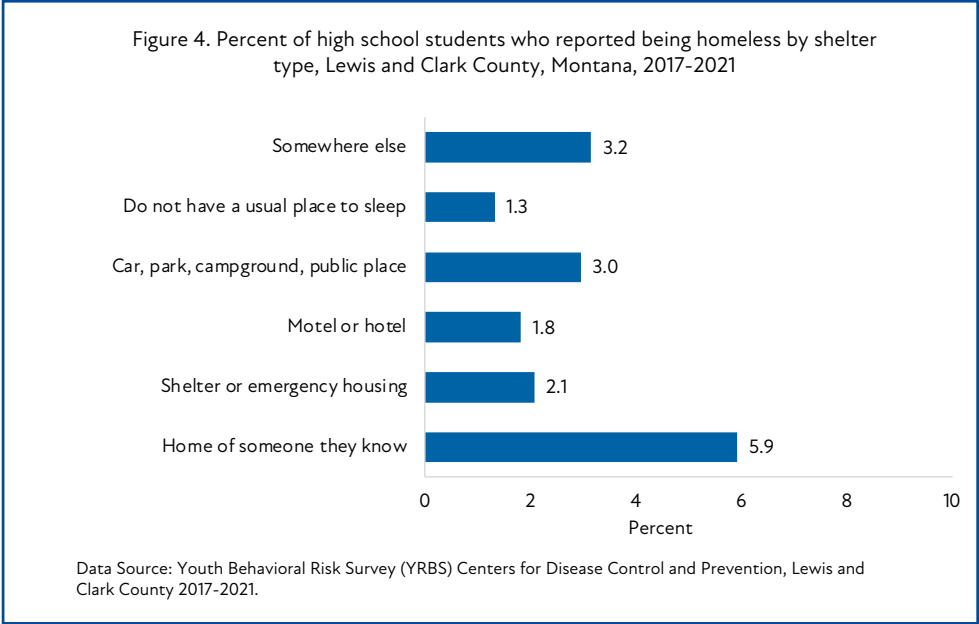
- In 2019, out of those in the county who experienced homeless, 40% stayed in emergency housing and 31% stayed in unsheltered places [Figure 3].
- In 2017-2021, almost 6% of Lewis and Clark County high school students who reported homelessness said they stayed with someone they knew [Figure 4]. 3% of the county’s high school students said they lived in a car, park, campground, or public place.



## How is Lewis and Clark County engaged in addressing housing?

Lewis and Clark County has programs and community engagement in place to help reduce or eliminate homelessness for individuals. Through certain programs they can provide health and wellness screenings, job training, a home, etc. Examples of these services include:

- The Housing Task Force is a voluntary committee focused on discussing housing matters and policies for Helena and surrounding areas. The group is a valuable sounding board for any initiatives and projects the city or other partners have proposed, including items such as the Housing Trust Fund and Community Development Block Grant proposals. The group has been essential in providing the feedback necessary for these projects to be useful and sustainable to the people they aim to serve.
- Other community entities involved in addressing housing are Good Samaritan Ministries, Family Promise, Salvation Army, God’s Love, United Way’s Greater Helena Area Housing First, Rocky Mountain Development Council, Helena Housing Authority, and Habitat for Humanity.



“Not having a facility to store homeless property causes ongoing theft, and ties homeless [persons] to packing around their property, which contributes to inability to get employment.”

– Social Services Provider

Source: Stakeholder Survey, St. Peter’s Health, Lewis and Clark County, Montana, 2021

# RACE, ETHNICITY, INDIVIDUAL AND SYSTEMIC RACISM

## What are race, ethnicity, individual, and systemic racism?

Race and ethnicity are related to human ancestry. Race is defined as “a social construct, a human-invented classification system. It was invented as a way to define physical differences between people but has more often been used as a tool for oppression and violence.”<sup>130</sup> The United States government classifies race into a minimum of five categories: White, Black or African American, Asian, Native Hawaiian or Other Pacific Islander.<sup>131</sup> “Ethnicity refers to “a membership in a culturally defined group, usually in the context of a larger dominant society, as is the case with immigrant groups or “minorities.”<sup>132</sup> The U.S. has defined those categories as Hispanic, Latino and Not Hispanic or Latino.

“Racism is a system of structuring opportunity and assigning value based on the social interpretation of how one looks (which is what we call “race”), that unfairly disadvantages some individuals and communities, unfairly advantages other individuals and communities, and saps the strength of the whole society through the waste of human resources.”  
-- APHA Past-President Camara Phyllis Jones, MD, MPH, PhD.<sup>133</sup>

There are two overarching levels of racism; 1. *Individual-level* racism which covers internalized racism and interpersonal racism, and 2. *Systemic-level* racism which includes institutional and structural racism. *Systemic-level* racism occurs within institutions and systems of power.

## INDIVIDUAL-LEVEL RACISM

**INTERNALIZED RACISM** lies within individuals. These are our private beliefs and biases about race and racism, influenced by our culture. Internalized racism can take many different forms including racial prejudice toward other people of a different race; internalized oppression, the negative beliefs about oneself by people of color; or internalized privilege, beliefs about superiority or entitlement by white people. An example is a belief that you or others are more or less intelligent, or beautiful, because of your race.

**INTERPERSONAL RACISM** occurs between individuals. These are biases that occur when individuals interact with others and their private racial beliefs affect their public interactions. Examples include racial slurs, bigotry, hate crimes, and racial violence.

## SYSTEMIC-LEVEL RACISM

**INSTITUTIONAL RACISM** occurs within institutions and systems of power. It is the unfair policies and discriminatory practices of particular institutions (schools, workplaces, etc.) that routinely produce racially inequitable outcomes for people of color and advantages for white people. Individuals within institutions take on the power of the institution when they reinforce racial inequities. An example is a school system that concentrates people of color in the most overcrowded schools, the least-challenging classes, and the least-qualified teachers, resulting in higher dropout rates and disciplinary rates compared with that of white students.

**STRUCTURAL RACISM** is racial bias among institutions and across society. It involves the cumulative and compounding effects of an array of societal factors including the history, culture, ideology, and interactions of institutions and policies that systematically privilege white people and disadvantage people of color. An example is the overwhelming number of depictions of people of color as criminals in mainstream media, which can influence how various institutions and individuals treat people of color with suspicion when they are shopping, traveling, or seeking housing and employment – all of which can result in discriminatory treatment and unequal outcomes.

(The Center for Racial Justice Innovation, January, 2014)

## Why are race, ethnicity, individual and systemic racism important?

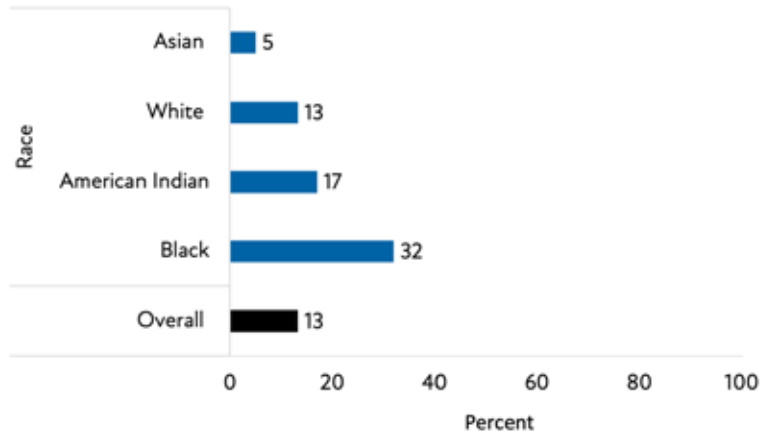
Race and ethnicity categories play an important role in an individual's life and a community. Racism weakens the overall health of our community by preventing some people the opportunity to reach their highest level of health.<sup>137</sup> Studies have found that dramatic differences among racial groups in health outcomes or health inequities exist in life expectancy, quality of life, rates of disease, disability, and death, severity of disease, and access to treatment.<sup>134, 135</sup>

- Non-White Lewis and Clark County residents had a higher rate of disabilities. 32% of Black or African American residents reported at least one disability type [Figure 1]. The rate was almost 3 times higher compared to White residents.
- In 2017-2019, the county's mortality (death) age-adjusted rate per 100,000 population for cardiovascular disease was almost 2 times higher for American Indians (321) compared to Whites (194) [Figure 2].

## How is Lewis and Clark County engaged in addressing race, ethnicity, individual and systemic racism?

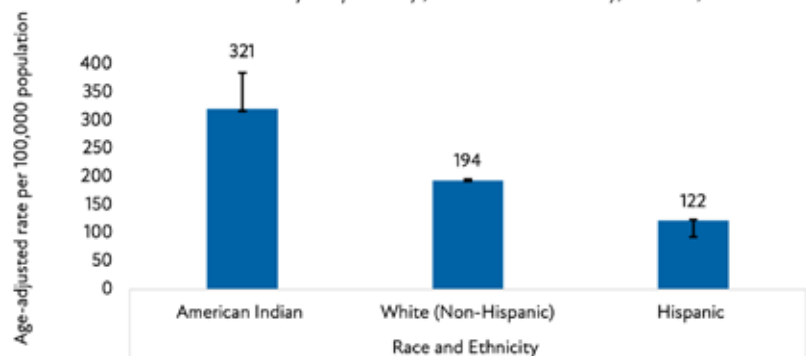
- The mission of the Montana Human Rights Network is to organize Montana residents to realize their power to create pluralism, justice, and equality in their communities. They challenge bigotry and discrimination, support marginalized people, and advocate for legislation that honors everyone's basic rights.
- The Inclusiveness Work Group at Lewis and Clark Public Health has a mission to review current practices and policies to determine how they can best serve people with disabilities and/or of underrepresented groups in the community. LCPH welcomes all people and is committed to creating an environment that supports full access and participation for each and every person. The workgroup works to educate staff and make changes so that LCPH continually improves a culture of inclusion in all of our activities, services, and facilities.

Figure 1. Percent of population with disability by race and overall, Lewis and Clark County, Montana, 2019



Data Source: U.S. Census Bureau, American Community Survey, 2019, 1-year estimate

Figure 2. Age-adjusted mortality (deaths) rate per 100,000 population for cardiovascular disease by race/ethnicity, Lewis and Clark County, Montana, 2017-2019



Data Source: National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention. | — indicates 95% confidence interval

“People are also often terrified to reach out for support when they want/need it because they are afraid of community judgment, losing kids, losing employment, losing housing, etc. The silence and the shame often work to perpetuate and escalate the issue, in addition to the demand outpacing capacity.”

– Social Services Provider

Source: Stakeholder Survey, St. Peter's Health, Lewis and Clark County, Montana, 2021

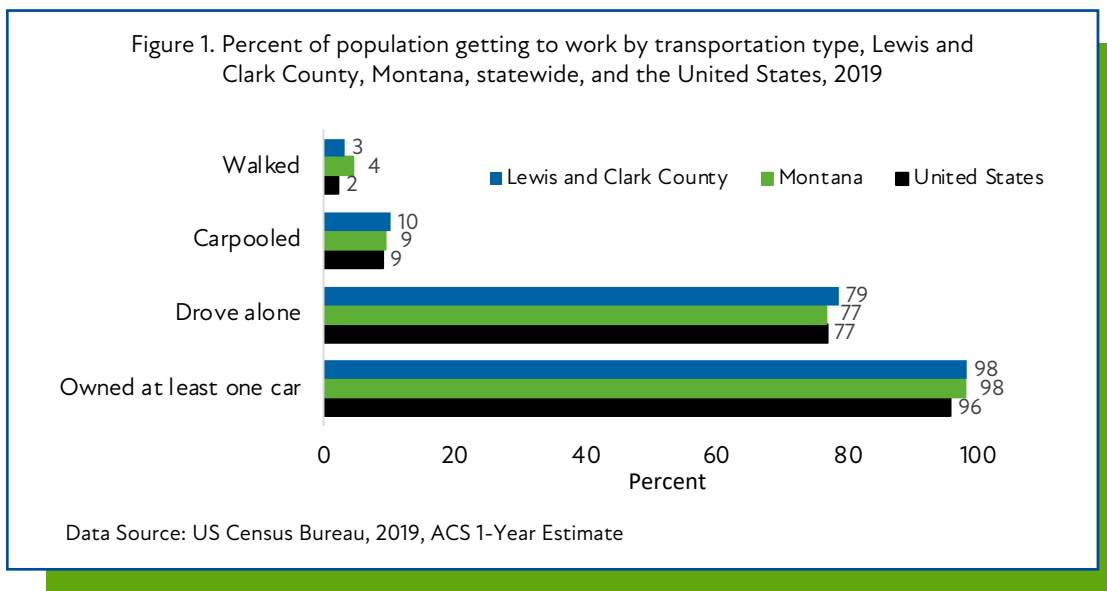
# TRANSPORTATION

## What is transportation?

Transportation helps individuals reach their jobs, schools, healthcare facilities, grocery stores and other points.<sup>136</sup> Transportation involves moving from one location to the next by motorized (powered by engine) and non-motorized (powered by human) vehicles. Motorized vehicles such as cars and non-motorized transportation includes walking, bicycling, or small-wheeled (skates, push scooters and hand carts) and wheelchair transport.<sup>137</sup> Public transportation options such as buses, light rail, or subways provide transportation that may require a fee.<sup>140</sup>

## Why is transportation important?

Transportation infrastructure focuses on motor vehicle travel and has limited support systems for other transportation options.<sup>138</sup> The lack of sidewalks, crosswalks, and bicycle facilities often prevents individuals to use non-motorized transportation as a mode of transportation. Physical inactivity is a major contributor to increased rates in obesity, heart disease, stroke, and other chronic health conditions. Motor vehicle crashes are the leading cause of injury-related deaths for many age groups. Lastly, motor vehicle emissions have greatly contributed to adverse respiratory and cardiovascular health effects.



- In 2019, 98% of employed Lewis and Clark County residents, owned at least one car [Figure 1.] The rate was the same as for Montana, but higher compared to the United States.
- In 2019, of the county’s population, approximately 10% carpooled and 3% walked to work [Figure 1].
- Lewis and Clark County Capital Public Transportation is mostly established in densely populated cities like Helena and East Helena [Map].
- In the 2018 fiscal year, Capital Public transit reported about 19 thousand trips, and Rocky Mountain Development Council provided just over 5 thousand trips to low-income populations.<sup>139</sup>
- Bike Walk Montana’s mission is to *make bicycling and walking safe and accessible for all*. The organization recorded over 50 thousand miles statewide as part of the commuter challenge, in 2017.<sup>140</sup>



Map of all coverage.  
Data Source: Capital Transit, Montana, 2021

## How is Lewis and Clark County engaged in addressing transportation?

Services such as public transportation aim to increase residents access around the community to spend time with family, shop, get to appointments, and enjoy life. Examples of these programs are:

- Transportation Coordinating Committee (TCC) includes membership from the Montana Department of Transportation, City of Helena, Lewis and Clark County, City of East Helena, Helena Citizens Council, Planning Board, and county and city residents. The committee works on policies and plans that relate to transportation.
- Bike Walk Helena is the local group of Bike Walk Montana. Montana is a bike-walk friendly state with innovative, safe and accessible active transportation choices for people of all ages and abilities. Walking and bicycling are well integrated into mainstream and safe transportation and recreation systems. Bike Walk focuses on creating safe and accessible biking options.
- The Non-Motorized Travel Advisory Council (NMTAC) suggests and evaluates proposed projects, makes recommendations to city staff, participates in walk audits, and helps shape policy and practices for the City of Helena. The NMTAC includes county health representatives, city engineering staff, a city commission member, and other interested parties.

“Transportation is an ongoing issue for women who are pregnant and/or have toddlers. Public transportation is not easily accessed. Women who are pregnant may not be able to walk far to get to a bus stop and if they have a toddler with them, it can be even harder especially in our harsh winters. The result is that women who are at highest risk do not receive the prenatal care necessary to ensure a healthy baby. Programs that provide transportation assistance for people with medical conditions to doctor appointments do not consider a high-risk pregnancy a medical condition. Mental health disorders are also not considered a medical condition requiring transportation.”

– Community Provider

Source: Lewis and Clark County, Montana, 2021



Person riding bicycle in the snow. Photo from Adobe Stock.



# VULNERABILITY TO DISASTER

## What is vulnerability to disaster?

*Vulnerability to disaster* is described as the susceptibility of people to injury as the result of a hazardous event, and the susceptibility of the things people value to damage as the result of a hazardous event.<sup>141</sup> Hazards or disasters can be human-made such as fire, natural disasters such as an earthquake, and disease outbreaks such as the COVID-19 pandemic. *Social vulnerability* is defined in terms of people’s “capacity to anticipate, cope with, resist and recover from the impacts of a natural hazard.”<sup>142</sup> The *social vulnerability index* is measured by 15 social factors including unemployment, minority status, and disability, and further groups them into four related themes by geographic census tract location.<sup>98</sup>

## Why is vulnerability to disaster important?

The conditions in which people live, work, learn, and play can impact a wide range of health risks and outcomes. Individuals can face different health and environmental challenges depending on where they are located.

The higher the numeric value of Social Vulnerability Index, the higher the community’s vulnerability to disasters.

- The Social Vulnerability Index (SVI) developed by the Centers for Disease Control (CDC) includes 15 social factors for each community. These factors include: socioeconomic status, household composition and disability, minority status, housing type and transportation [Table].
- Using these 15 social factors, SVI scores each community (a census tract geographic area) from 0 to 1. Higher values indicate greater community vulnerability and are illustrated on the map by darker color (blue) [Map].
- The SVI provides specific socially and spatially relevant information to assist public health officials and local planners to better prepare communities to respond to emergency events such as severe weather, floods, disease outbreaks, or chemical exposure.

- The census tract located in the south part of the Lewis and Clark County was the most vulnerable area in 2018 [Map]. The following characteristic made up the neighborhood:
  - Close to 5,000 residents lived in that area;
  - 2,117 households and 27% of housing structures had 10 or more units;
  - \$28,530 was the per capital income;
  - 20% of the population lived below poverty level;
  - 17% of the households had no vehicle available;
  - 15% of the population had at least one disability;
  - 13% of the population were a minority;
  - 12% of the residents were aged 65 years or older;
  - 8% of the residents were aged 25 years or older without high school diploma.

<b>OVERALL VULNERABILITY</b>	<b>SOCIOECONOMIC STATUS</b>	BELOW POVERTY
		UNEMPLOYED
		INCOME
		NO HIGH SCHOOL DIPLOMA
	<b>HOUSEHOLD COMPOSITION &amp; DISABILITY</b>	AGED 65 OR OLDER
		AGED 17 OR YOUNGER
		OLDER THAN AGE 5 WITH A DISABILITY
		SINGLE-PARENT HOUSEHOLDS
	<b>MINORITY STATUS &amp; LANGUAGE</b>	MINORITY
		SPEAKS ENGLISH “LESS THAN WELL”
	<b>HOUSING TYPE &amp; TRANSPORTATION</b>	MULTI-UNIT STRUCTURES
		MOBILE HOMES
		CROWDING
		NO VEHICLE

Table. Data Source: U.S. Census, American Community Survey (ACS), 2014-2018.



Map. Social Vulnerability Index Profile, Lewis and Clark County, Montana, 2018

## How is Lewis and Clark County engaged in addressing vulnerability to disaster?

In Lewis and Clark County, a variety of disasters, ranging from floods, fires, and pandemics, have led the community to plan how to act. Numerous community groups and organization groups work ahead of emergencies to plan and prepare, and then act as a disaster presents itself. Two examples of these groups include:

- The Local Emergency Preparedness Committee (LEPC) is a group of representatives from public and private agencies. The LEPC plans and coordinates responses to all hazards in the county.
- The Elkhorn COAD consists of faith-based, non-profit, and non-profit-eligible organizations active in disaster response and recovery of all types throughout Lewis and Clark County. The Elkhorn COAD’s role is to bring member organizations together with local Disaster and Emergency Services personnel and enable them to understand each other and work together during the four phases of Emergency Management: mitigation, preparedness, response, recovery.

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“Lewis and Clark County residents face a number of evolving threats from wildfires to floods, as well as the potential for earthquakes or severe winter weather and may not feel they are at risk until a disaster is already in progress. There is a general lack of individual preparedness such as adequate stores of food, water, and fuel as well as reunification plans for families that may be apart when disaster strikes. We are served well by the non-profit community that looks out for our unhoused, low income, and disabled community members. The COVID-19 public health emergency has shown us that no matter how prepared we may be individually, we must work together to address threats to our most vulnerable citizens.”

– Local Disaster and Emergency Services Representatives

“Success stories for individuals effected by disasters in L&C county. The success stories I see, is The American Red Cross provides timely respond needs to those individuals in the community. This would be services such as financially aid for destroyed single family homes to multi family homes, from fires, winter storms, wind storms, and flooding, to inhabitable housing for 48 hours. We also provide free services through our American Red Cross Disaster Mental Health, Disaster Health Services, Disaster Spiritual Care, to Disaster Care Condolences teams. We team up with local organizations to help in the recovery process. .... Our biggest challenge is education our community members on disasters. Have a plan, make a kit and be informed. One easy way is to you have working smoke detectors in your homes. Keep your home insurance and rental insurance up to date.”

–Local American Red Cross Representative

Source: Lewis and Clark County, Montana, 2021

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# ACKNOWLEDGEMENTS

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# DATA SOURCES

## United States Census: Decennial Census

Every 10 years since 1790, the U.S. census has counted every resident in the United States. Each home receives an invitation to respond to a short questionnaire—online, by phone, or by mail.

The data collection for the state and local finance survey is comprised of three modes to obtain data: mail canvass, Internet collection, and central collection from state sources. Collection methods vary by state and type of government.

## United States Census: American Community Survey

The American Community Survey (ACS) is an ongoing survey that provides data every year -- giving communities the current information they need to plan investments and services. The ACS covers a broad range of topics about social, economic, demographic, and housing characteristics of the U.S. population.

The 5-year estimates from the ACS are “period” estimates that represent data collected over a period of time. The primary advantage of using multiyear estimates is the increased statistical reliability of the data for less populated areas and small population subgroups.

## National Center for Health Statistics

The National Center for Health Statistics (NCHS) at the Centers for Disease Control and Prevention (CDC) provides statistical information for public-use data for U.S. births, deaths, and many other topics. These data collections are available as online databases, which provide public access to ad-hoc queries, summary statistics, maps, charts, and data extracts. Most of the data are updated annually; some collections are updated monthly or weekly.

## St. Peter’s Health PRC Community Health Survey

This survey was conducted by Professional Research Consultants (PRC) in 2021 and outlines how the St. Peter’s Health community scores on several public health indicators. The survey results included service area members from surrounding counties, but the results of this survey have been narrowed to give data specific to Lewis and Clark County. Survey respondents were asked about variety of health issues including, chronic disease, mental health and how we deal with accidents and safety. The data are weighted to represent county’s population.

## St. Peter’s Health Stakeholder’s Informant Survey

This survey collected data from telephone surveys of county residents as well as online surveys of key community stakeholders in fields such as medicine, mental health, and social work. The telephone survey asked specific, personal questions about health, ability to access medical care and daily self-care. The Stakeholder Survey sought expert opinions on the biggest needs in our community.

## Electronic Health Records, St. Peter’s Health

These data include primary and secondary International Classification of Diseases (ICD) ICD-10 Codes for hospital admissions and emergency department visits for Lewis and Clark County Residents.

## COVID-19 Post Vaccination Survey

This survey was given to COVID-19 vaccine recipients at the Lewis and Clark County mass vaccination drive-thru and mobile clinics in early 2021. The survey asked respondents about insurance coverage, access to healthcare, personal health and related topics. Final survey data are not weighted and has a sample of 2,265 respondents.

## Pride Parade Survey

This survey had the same questions as the COVID-19 post vaccination survey with additional questions included about mental health and social support. Final survey data are not weighted and has a sample of 46 respondents.

## Behavioral Risk Factor Surveillance System

The Behavioral Risk Factor Surveillance System (BRFSS) is a cross-sectional telephone survey conducted annually across the United States. It is co-sponsored by the Centers for Disease Control and Prevention and the Montana Department of Public Health and Human Services and has been administered throughout Montana since 1984. Noninstitutionalized adults are randomly selected using both cell phone and land line numbers.

The BRFSS collects prevalence data regarding health-related risk behaviors, chronic health conditions, and the use of preventive services. It collects information on various demographic factors, including age, gender, race, household income, educational attainment, and more. The survey utilizes core questions that are asked by all states. Montana collects additional data that are especially insightful of and beneficial to our residents and their health. The data gathered from the BRFSS survey are primarily utilized to obtain prevalence estimates that describe the health and health statuses of Montana residents. Aggregated level weighed data are also available on a county level.

## **Vital Statistics**

Information in the vital statistics system consists of six vital events that are required to be reported and maintained by law: live births, deaths, fetal deaths, induced abortions, marriages, divorces.

The electronic registration system collects identifying information, demographic data, and relevant medical information for all births and deaths that occur in Montana or occur to a Montana resident living out of state.

## **Prevention Needs Assessment**

The Montana Prevention Needs Assessment (MPNA) is conducted bi-annually on even number years in school districts across the state. For schools agreeing to participate in the Montana survey, all students in grades 8, 10, and 12 are asked to complete the survey. Schools also have the option to have all students in grades 7, 9, and 11 participate if they so choose. The MPNA collects data on risky behaviors associated with the use of alcohol, tobacco, and other drugs, as well as school dropout, delinquency, and violence.

## **Youth Risk Behavior Survey**

The Youth Risk Behavior Survey (YRBS) is administered by the Montana Office of Public Instruction through a cooperative agreement with the U.S. Centers for Disease Control and Prevention (CDC). The YRBS is a self-reporting student survey conducted biennially in Montana high schools, middle schools and non-public accredited and alternative high schools. The Montana YRBS dataset is obtained through a two-stage random sampling of public high schools and selected classes. Montana has attained weighted data YRBS results; however, the county level data are not weighted.

The Youth Risk Behavior Survey (YRBS) monitors six categories of priority health behaviors among youth and young adults, as well as the prevalence of obesity, asthma, and other priority health behaviors. Data reports are provided for several student sub-populations.

## **Montana Infectious Disease Information System**

Montana statutes require the reporting of conditions and communicable diseases of public health significance to local and state public health authorities. The Montana Infectious Disease Information System (MIDIS), is a nationally developed application for the secure receipt and storage of information submitted to local and state public health authorities. The systems contain records for all communicable diseases reportable in the state of Montana. Case reports are entered into each system by state and local health departments and supplemented electronically by laboratory reports. Systems are accessible only by selected local and state public health staff. Both systems transmit limited information to the US Centers for Disease Control and Prevention for analysis. MIDIS includes information detailing diagnosis and laboratory testing, geographic and demographic information, and details related to case investigations, including risk factors/behaviors for HIV, STDs, and approximately 70 other reportable conditions.

## **Montana Homeless Survey**

The Montana Homeless Survey, administered by the Montana Continuum of Care Coalition, local providers of homeless services, and many volunteers who canvassed areas where the homeless are often found (points of service such as food banks, transitional housing programs, shelters, streets, parks, campgrounds, etc.). To guard against repeated surveys of the same respondent, the respondent's initials and birthday were used to find potential duplicates. For homeless individuals who were accompanied by child family members, only the head of household was asked to fill out the survey; except for total population counts, ages, and school enrollment status, data on the accompanying family members are inferred from the head of household's responses.



# TERMS

**Age-Adjusted Rate:** Rate calculated to control for the effect of age which allows for comparison of rates across populations in different geographic regions (e.g. Montana compared to the U.S.). An age-adjusted rate is a weighted average of the age-specific rates.

**Case:** Countable instance in the population or study group of a particular disease, health disorder, or condition under investigation. Sometimes, an individual with the disease.

**Crude Rate:** Total number of events that has occurred in specific geographic area. A rate that has not been adjusted for any factor, such as age.

**Demographic Information:** Characteristics—age, sex, race, and occupation—of descriptive epidemiology used to characterize the populations at risk.

**Health:** State of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.

**Healthy People 2030:** The U.S. Department of Health and Human Services provides science-based, 10- year national objectives for improving the health of all Americans; these current objectives are called Healthy People 2030. Healthy People 2030 establishes targets that are measurable, achievable, and applicable at the national, state, and local levels.

**Incidence:** Occurrence of new cases of disease among a population at risk of disease over a period of time. Incidence is often reported as a number or rate.

**Injury:** Harm to the body produced by energy exchanges or deprivations resulting in relatively sudden discernible effects. In public health, the topic of injury includes trauma, poisoning, fire and chemical burns, drowning, bites/stings, and more.

**Life Expectancy:** Average number of years of life a person can expect to live.

**Morbidity:** Sick, sickness due to particular health condition or disease.

**Mortality:** Death due to a particular cause among a population over a period of time. Mortality is often reported as a number or a rate.

**Premature Death:** Death which occurs before a person's life expectancy. In the U.S., premature death is dying before the age of 75.

**Prevalence:** Existing cases of a disease at a point in time or over a period of time. Prevalence is often reported as a number or a percentage.

**Principal Diagnosis:** Condition, after study, which caused admission to a hospital.

**Rate:** A measure of the number of events that occur in a defined population with respect to time. A rate may or may not be a proportion.

**Risk Factor:** Anything that makes it more likely, is the reason for, or increases the chance of a person or group of people getting sick, hurt, or dying.

**Secondary Diagnosis:** Conditions that coexist at the time of admission to a hospital, that develop subsequently, or that affect the treatment received and/or length of stay. Diagnoses that relate to an earlier episode which have no bearing on the current inpatient admission are not secondary diagnosis.

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A community partnership to improve health,  
spearheaded by these local organizations



of the Lewis and Clark Area

