



Coordinated **Chronic Disease Prevention** and Health Promotion

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# Introduction

Chronic diseases are among the most common, costly and preventable of all health problems in the U.S. The Montana Department of Public Health and Human Services (DPHHS) programs address the prevention and control of chronic diseases within the Chronic Disease Prevention and Health Promotion (CDPHP) Bureau. The CDPHP Bureau is comprised of the following programs:

- Arthritis
- Asthma Control
- Cancer Control
  - Breast, Cervical and Colorectal Screening
  - Central Tumor Registry
  - Comprehensive Cancer Control
- Cardiovascular Health
- Diabetes Prevention and Control
- Disability and Health
- Emergency Medical Services and Trauma Systems
- Injury Prevention
- Nutrition and Physical Activity
- Tobacco Use Prevention

While chronic disease programs have collaborated on specific projects over the years, a need was identified to better coordinate and communicate chronic disease efforts within the CDPHP Bureau. Program coordination will increase efficiency, reduce duplication of work, expand the reach and maximize the impact of program activities. In the fall of 2011, CDPHP Bureau leadership

began making changes to internal functions to increase coordination opportunities. Work also began on the development of a chronic disease communication plan and the Montana Chronic Disease Plan.

The Montana Chronic Disease Plan is a guide for statewide activities over the next 5 years that aims to reduce the burden of chronic disease in Montana. It is representative of a statewide approach including governmental and non-governmental led activities. Successful implementation of the plan will require the leadership and effort of a diverse group of partners representing the many individuals and organizations in Montana. The plan serves as a framework for staff and partners to use to coordinate surveillance and evidence-based activities and work together to effectively prevent chronic disease and unintentional injury, and promote the health of all Montanans.

## Burden of Chronic Disease and Unintentional Injury in Montana

Chronic diseases, such as cardiovascular disease, cancer and diabetes, are among the most important public health concerns in the United States. Chronic diseases account for seven out of the ten leading causes of death across the country.<sup>1</sup> Furthermore, over 75% of total health care costs in the U.S. are due to chronic diseases.<sup>1</sup> Montanans have not fared any better than the rest of country. Fifty eight percent of Montana adults have at least one chronic condition and 33% have two or more. Hypertension and high cholesterol are the most common high risk conditions and arthritis is the most common chronic disease in Montana. While cancer, cardiovascular diseases and diabetes are not as prevalent as arthritis, these diseases account for a majority of chronic disease hospitalizations and deaths.

Unintentional injuries are also a major cause of morbidity and mortality across the United States. They are the fifth leading cause of death among all Americans and the leading cause of death for people ages 1 to 44 years.<sup>2</sup> Moreover, for every injury death there are approximately 163 more people seen in an emergency department for an injury and 16 more admitted to a hospital.<sup>3</sup> Unfortunately, Montanans are even more affected by injury than the rest of the nation. Unintentional injury death rates are much higher in Montana (age-adjusted rate of 61 deaths per 100,000 residents) compared to the total U.S. (37 deaths per 100,000

residents) and the gap between Montana and the U.S. has been widening in recent years.

Together, chronic diseases and unintentional injuries account for a significant proportion of Montana's health care burden and deaths.

### Chronic Disease Prevalence

- During 2011, 58% (95% CI: 56.2%-59.1%) of Montana adults reported having at least one and 33% (95% CI: 32.1%-34.7%) reported having at least two of the following diseases or related risk factors:
  - Stroke
  - Heart attack
  - Coronary heart disease
  - Diabetes
  - Chronic Obstructive Pulmonary Disease (COPD)
  - Chronic kidney disease
  - Asthma
  - Cancer (excluding skin cancer)
  - Arthritis
  - Hypertension
  - High cholesterol
- Among Montana adults that have ever had their blood cholesterol checked, more than one third (35%) have been told by a health care provider that their cholesterol was high (Figure1).
- Hypertension is also quite common, affecting 30% of Montana adults.
- Arthritis is the most common chronic disease, with 26% of Montana

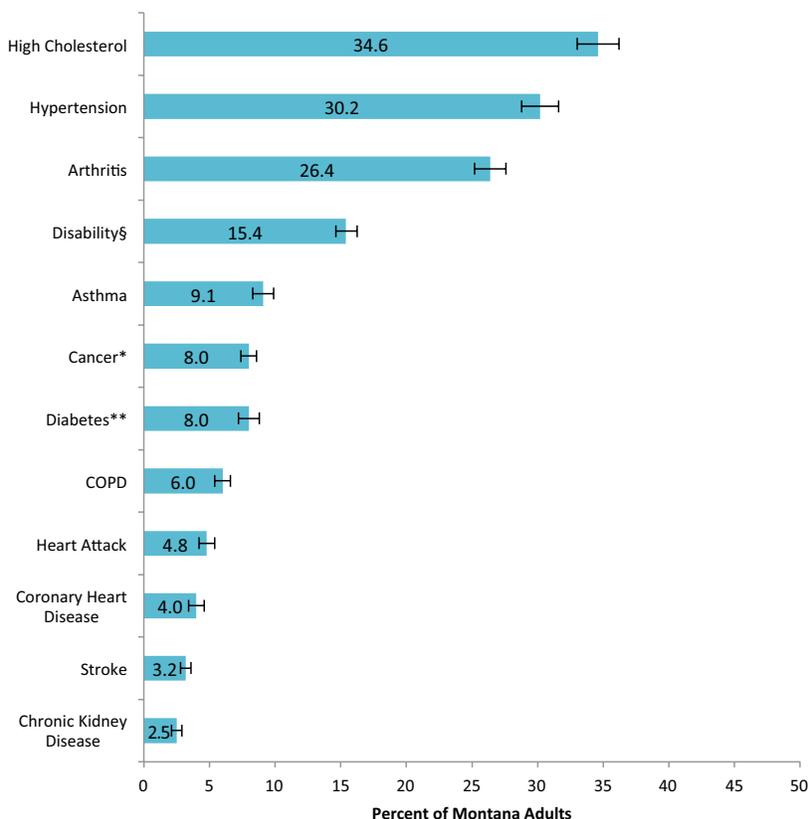
adults reporting being diagnosed with some form of arthritis.

- 9% of Montana adults have asthma and 6% of adults report having Chronic Obstructive Pulmonary Disease (COPD).
- 7% (95% CI: 5.4%-8.2%) of Montana children have asthma (data not shown).
- 8% of Montana adults report ever being diagnosed with cancer.
- 8% of Montana adults report having diabetes.

- Cardiovascular diseases (heart attack, stroke, and coronary heart disease) were among the least prevalent chronic diseases effecting 5%, 4% and 3% of Montana adults, respectively.
- 15% of Montana adults report having a disability, defined as having difficulty in at least one of the following areas:
  - Hearing
  - Vision
  - Cognition
  - Walking
  - Self-care
  - Independent living

Disease prevalence data is collected by the Behavioral Risk Factor Surveillance System (BRFSS), a random digit dialing telephone survey of Montana's non-institutionalized adult population.<sup>4</sup> Selected adults are interviewed and asked to report on various behavioral risk factors as well as diagnosis of 11 chronic diseases. These data are weighted to be generalizable to the total adult population. Disability information is collected by the American Community Survey, a survey conducted by the US Census Bureau that collects detailed information on housing and population characteristics across the country.<sup>5</sup>

**Figure 1.**  
**Prevalence of Selected Chronic Diseases, Chronic Disease Risk Factors, and Disability, BRFSS, Montana, 2011**



§ Data source: American Community Survey 2010 1-year estimates  
 \* Excludes diagnosis of skin cancer  
 \*\* Excludes women who were only diagnosed with gestational diabetes

Cancer incidence data are collected by the Montana Central Tumor Registry. Montana statute mandates that cancers diagnosed or treated in Montana be reported to the registry. The registry also collects data on Montana residents who are diagnosed or treated in other states. Site specific incidence rates include only invasive cancers and are calculated as an average over five years to account for random variation in rates over time. The incidence rate for all sites combined is reported as an annual rate as well as a five year aggregate rate. All cancer incidence rates are age-adjusted to the 2000 standard million population because cancer is highly associated with age.

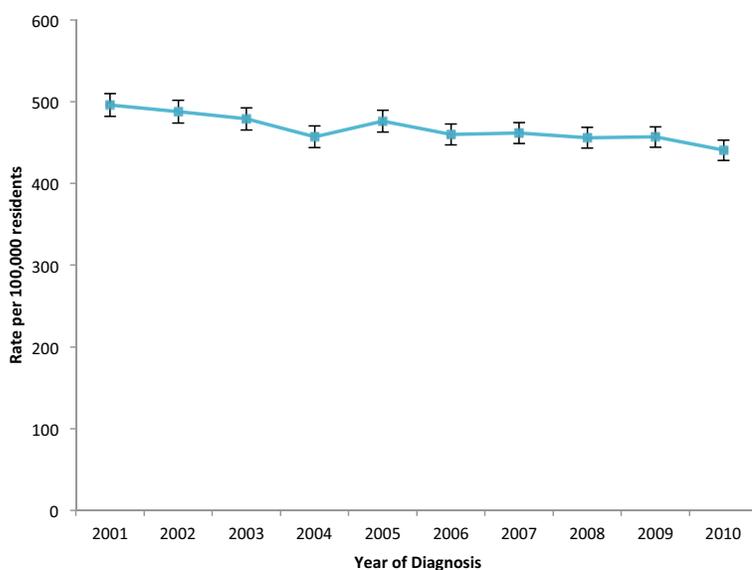
### Cancer Incidence

- Approximately 5,000 Montana residents are newly diagnosed with invasive cancer each year (data not shown).
- The most common cancer sites are prostate, breast (female), lung and bronchus, and colon and rectum (Table 1).
- All-site cancer incidence rates in Montana have decreased significantly in the past ten years, going from an age adjusted rate of 496 new cases per 100,000 residents in 2001 to 441 new cases per 100,000 residents in 2010 (Figure 2).

**Table 1:**  
**Age-Adjusted Cancer Incidence by Site, Montana, 2006-2010**

	Rate per 100,000 residents	95% CI
All Sites Combined	452.6	(446.9 - 458.2)
Prostate	157.7	(153.0 - 162.5)
Breast (female)	124.5	(120.3 - 128.6)
Lung and Bronchus	61.7	(59.6 - 63.8)
Colon and Rectum	44.7	(43.0 - 46.5)

**Figure 2.**  
**Age-Adjusted All Site Cancer Incidence,<sup>§</sup> Montana, 2001-2010**



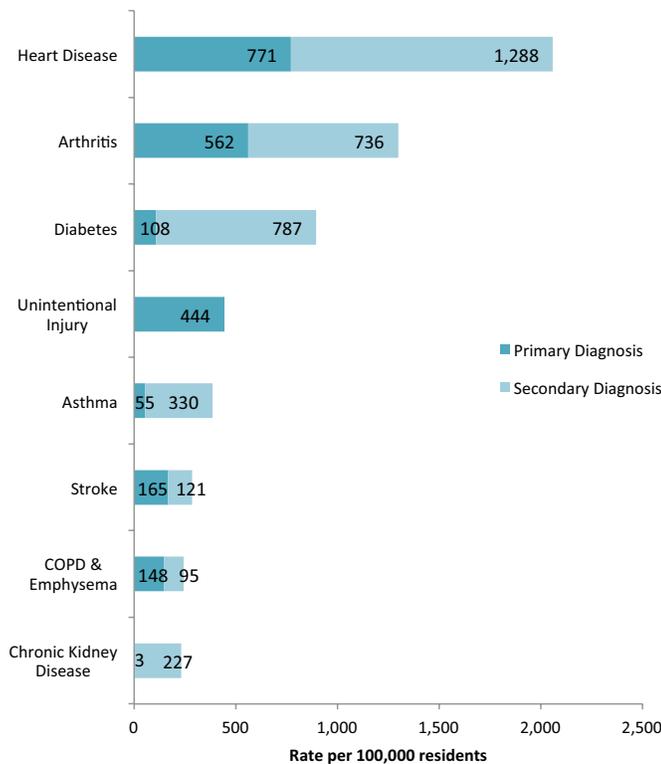
<sup>§</sup> Data Source: Montana Central Tumor Registry\*

### Hospitalization Rates

- Among chronic diseases, heart disease, arthritis and diabetes accounted for the most hospitalizations during 2010 (Figure 3).
- 444 hospitalizations for every 100,000 Montanans were primarily due to an unintentional injury.
- Asthma was the primary reason for 55 hospitalizations for every 100,000 Montanans and a contributing factor for the hospitalizations of an additional 330 per 100,000 Montanans.
- Hospitalization rates for stroke, COPD and emphysema, and chronic kidney disease were lower and each accounted for less than 300 hospitalizations for every 100,000 Montanans.

Hospitalization data are collected by the Montana Hospital Discharge Data System (MHDDS). The majority of Montana hospitals submit de-identified billing data on a voluntary basis to the Montana Hospital Association (MHA); the MHA then shares the aggregate data with MHDDS. Billing information includes ICD-9 codes for both the primary diagnosis, which is the main reason for admission, and up to eight secondary diagnoses, which are conditions that have contributed to the overall hospitalization but were not the most immediate or severe reason for admission. MHDDS data may include multiple hospitalizations for a single person in any given year. Hospitalization rates are calculated as hospitalizations per 100,000 Montana residents.

**Figure 3.**  
**Rate of Hospitalizations with any Diagnosis of Selected Chronic Diseases and Injury, § Montana, 2010**



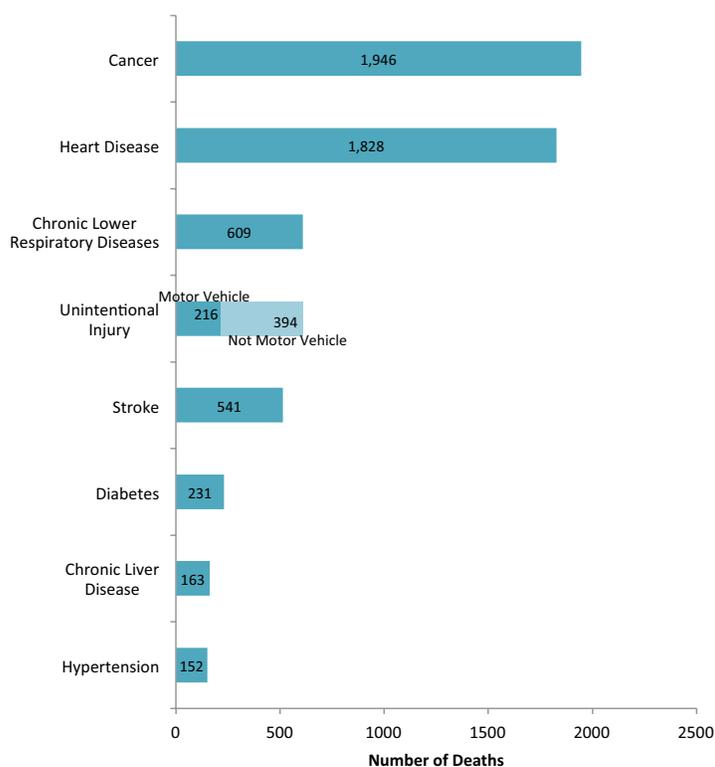
§ Data Source: Montana Hospital Discharge Data System

Mortality data are collected by the Montana Office of Vital Statistics. The numbers of deaths from selected causes among Montana residents are presented as a measure of the most frequent causes of death. The total years of potential life lost (YPLL) is also presented as a measure of which causes are responsible for the most premature deaths. Age-adjusted death rates were calculated using the 2000 standard million population in order to compare the rates of death due to unintentional injury among Montanans to the entire nation and over time.

### Mortality Rates

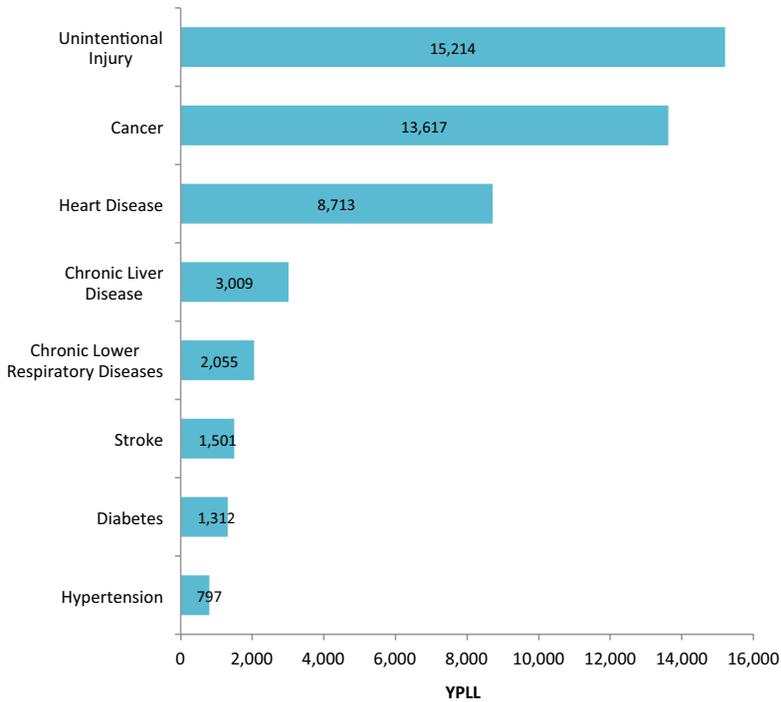
- During 2010, cancer was the leading cause of death among Montanans, causing almost 2,000 deaths.
- Heart disease caused nearly as many deaths as cancer in 2010.
- Chronic lower respiratory diseases, including COPD, asthma, and emphysema, caused more than 600 deaths among Montana residents during 2010.
- Unintentional injuries also caused more than 600 deaths among Montanans and over a third of those deaths were associated with motor vehicle crashes.
- Unintentional injuries caused the greatest loss of years of potential life. In 2010, over 15,000 years of Montanans' lives were lost due to unintentional injury (Figure 5).
- Cancer, heart disease and chronic liver disease were the next largest causes of lost years.
- In 2009, the unintentional injury death rate in Montana was over 60% higher than the national unintentional injury death rate (Figure 6).
- Unintentional death rates in Montana have been rising in recent years.

**Figure 4.**  
**Number of Deaths due to Selected Chronic Conditions and Injury, §**  
**Montana Residents, 2010**



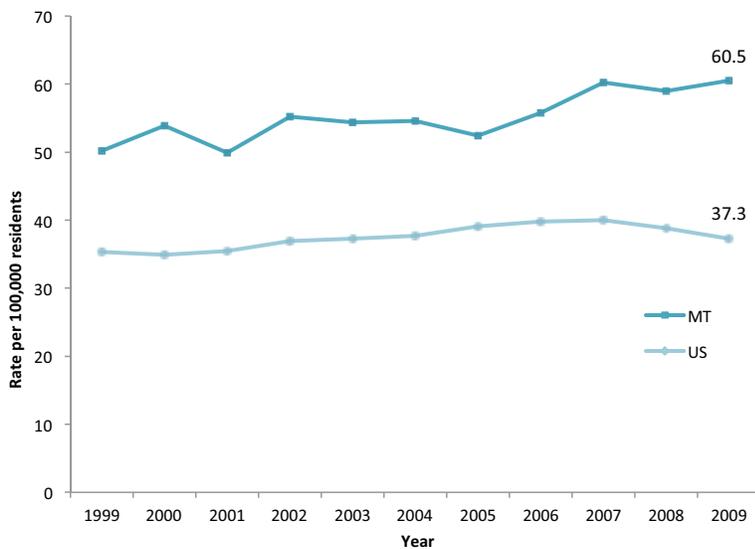
§ Data Source: Montana Office of Vital Statistics

**Figure 5.**  
**Years of Potential Life Lost (YPLL) due to Selected Chronic Conditions and Injury,<sup>§</sup> Montana Residents, 2010**



<sup>§</sup> Data Source: Montana Office of Vital Statistics"

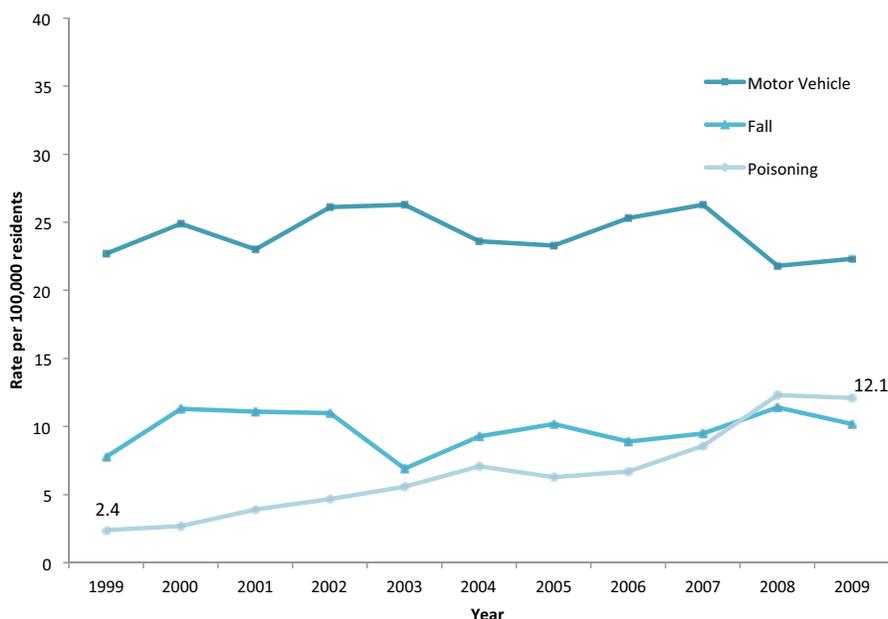
**Figure 6.**  
**Age-Adjusted Unintentional Injury Death Rates,<sup>§</sup> U.S. & Montana, 1999 -2009**



<sup>§</sup> Data Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2009 on CDC WONDER Online Database, released 2012.

- The three most common mechanisms for unintentional injury deaths in Montana are motor vehicle crashes, falls and poisonings (Figure 7).
- The rates of death due to motor vehicle crashes (ranging from 22 to 26 deaths per 100,000 residents) and falls (ranging from 7 to 11 deaths per 100,000 residents) have not changed significantly since 1999.
- Poisoning death rates have risen substantially in the past ten years. The rate in 2009, 12.1 deaths per 100,000 residents, is almost 6 times higher than the rate in 1999, 2.4 deaths per 100,000 residents.

**Figure 7.**  
**Age-Adjusted Unintentional Injury Death Rates by Mechanism,<sup>§</sup> Montana, 1999-2009**



<sup>§</sup> Data Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2009 on CDC WONDER Online Database, released 2012.

# Behavioral Risk Factors for Chronic Disease and Unintentional Injury

Chronic diseases and injuries are largely preventable. Relatively few behavioral risk factors (tobacco use, excessive alcohol use, lack of physical activity, overweight and

obesity, lack of seat belt use and impaired driving) are responsible for the majority of the illness, disability, and death related to chronic disease and injury.

Behavioral risk factor data for adults is collected by the Behavioral Risk Factor Surveillance System (BRFSS), a random digit dialing telephone survey of Montana’s non-institutionalized adult population.<sup>4</sup> Selected adults are interviewed about various behavioral risk factors. The Youth Risk Behavior Survey (YRBS) collects behavioral risk factor data from high school students.<sup>6</sup> Every odd year, a random sample of Montana high schools is selected for participation in YRBS. For those schools, a sample of students from all grade levels is selected to complete the survey during class time. Data from BRFSS and YRBS are weighted to be generalizable to the total adult and high school populations, respectively.

**Table 2: Matrix of leading behavioral risk factors and the health conditions they are associated with.**

	Tobacco Use	Excessive Alcohol Use	Insufficient Physical Activity	Overweight or Obesity
Cardiovascular Disease*	X	X	X	X
High Cholesterol			X	X
Diabetes			X	X
Cancer	X	X	X	X
COPD, Emphysema	X			
Asthma	X			X
Arthritis			X	X
Unintentional Injury		X		

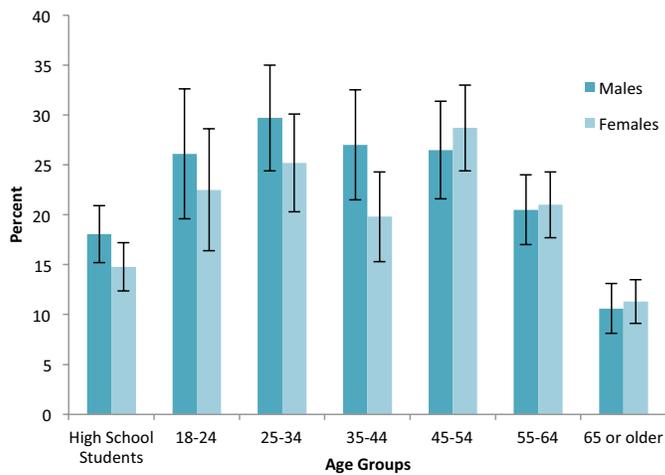
\*Cardiovascular diseases include coronary heart disease, heart attack, stroke and hypertension

## Tobacco Use

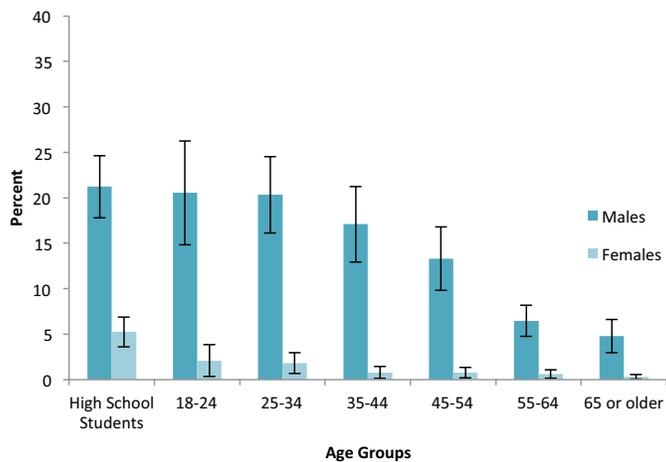
Tobacco use greatly increases the risk of cardiovascular disease, cancer and respiratory disease.<sup>7</sup> Tobacco use is the leading cause of preventable deaths in the United States. Each year, approximately 443,000 Americans die prematurely due to smoking or exposure to secondhand smoke.<sup>8</sup> Another 8.6 million Americans live with a serious illness caused by tobacco use.<sup>8</sup> In Montana, an estimated 1,400 deaths are due to tobacco use every year.<sup>9</sup>

- Cigarette smoking is common among Montana high school students with 18% of male students and 15% of female students reporting smoking at least one cigarette in the past 30 days (Figure 8).
- Smoking prevalence is also common among adults aged 18 to 54 years. However, significantly fewer adults aged 65 years or older reported current smoking.
- Smokeless tobacco use is far more common in males of all ages compared to females (Figure 9).
- 5% of high school girls reported smokeless tobacco use in the past 30 days, significantly more than women aged 25 years or older.
- More than 20% of male high school students and men aged 18 to 34 years reported currently using smokeless tobacco.

**Figure 8.**  
**Prevalence of Current Smoking by Age and Sex, BRFSS and YRBS, Montana, 2011**



**Figure 9.**  
**Prevalence of Current Smokeless Tobacco Use by Age and Sex, BRFSS and YRBS, Montana, 2011**



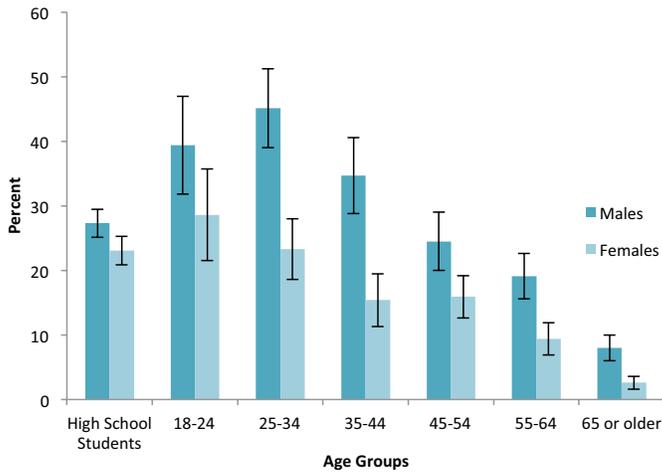
## Excessive Alcohol Use

Excessive alcohol use includes heavy drinking, binge drinking or both. For women, binge drinking is defined as having four or more drinks during a single occasion and heavy drinking is having more than one drink per day on average.<sup>10</sup> For men, binge drinking is defined as having five or more drinks during a single occasion and heavy drinking is having more than two drinks per day on average.<sup>10</sup> Any alcohol use among youth is problematic. However, since underage drinkers primarily binge drink this is the only measure of alcohol use among high school students assessed here. For high school students, binge drinking is defined as five or more drinks during a single occasion regardless of gender.<sup>11</sup> Binge drinking is a major risk factor for unintentional injuries including motor vehicle crashes, falls, drowning, burns and unintentional firearm injuries.<sup>12</sup> Long-term excessive alcohol use contributes to the development of

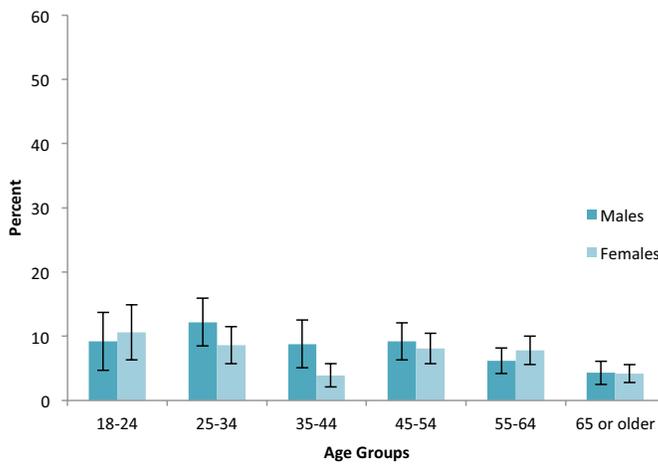
cardiovascular disease, cancer and liver disease.<sup>12</sup> Approximately 79,000 deaths are attributable to excessive alcohol use each year in the U.S.<sup>12</sup>

- Significantly more Montana males reported binge drinking in the past 30 days compared to females in all age groups except adults aged 18 to 24 years (Figure 10).
- Youth and adults aged 18 to 34 years reported binge drinking more frequently than adults aged 45 years or older.
- About 8% of Montana adults aged 18 to 64 years reported heavy drinking in 2011 (Figure 11).
- There was little variation in the rate of heavy drinking by age and sex. Only men and women ages 65 years and older reported heavy drinking significantly less often than younger adults.

**Figure 10.**  
**Prevalence of Binge Drinking in the Past 30 Days by Age and Sex,**  
**BRFSS and YRBS, Montana, 2011**



**Figure 11.**  
**Prevalence of Heavy Alcohol Use in the Past 30 Days by Age**  
**and Sex, BRFSS, Montana, 2011**

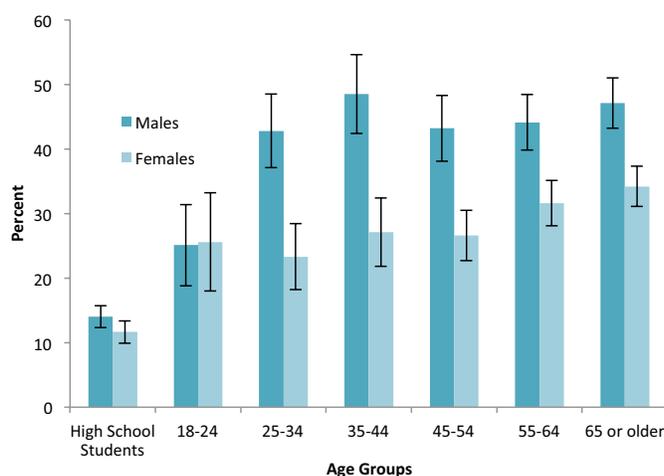


## Overweight and Obesity

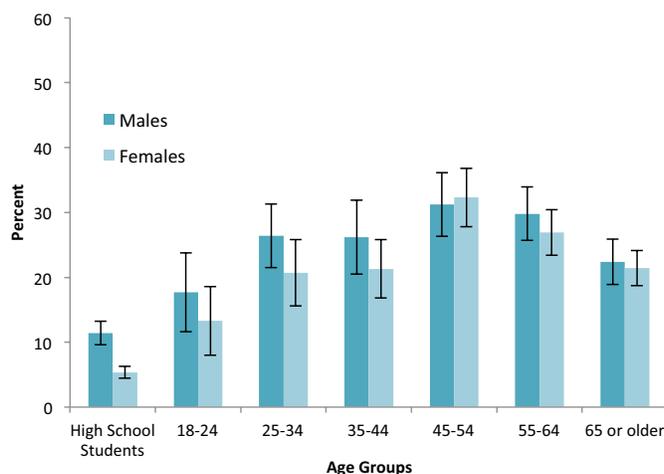
Being overweight (BMI between 25.0 and 29.9) or obese (BMI of 30.0 or more) increases the risk of developing cardiovascular disease, type 2 diabetes, cancer, hypertension, high cholesterol, liver and gallbladder diseases and osteoarthritis.<sup>13</sup> In 2008, the total cost of medical care due to obesity in the United States was about \$147 billion.<sup>14</sup> More than one-third of U.S. adults (36%) are obese.<sup>13</sup> Although Montana adults have significantly lower rates of obesity (24% of all Montana adults) compared to the total United States, unhealthy weight is still quite common.

- 14% of high school boys and 12% of high school girls were overweight in 2011 (Figure 12).
- Men ages 25 years or older had significantly higher prevalence of overweight compared to females in the same age groups. More than 40% of men compared to more than 20% of women were overweight.
- 11% of high school boys were obese, significantly more than high school girls (5%) (Figure 13).
- Montana adults aged 45 to 54 years had the highest prevalence of obesity (31% of both men and women).

**Figure 12.**  
Prevalence of Overweight by Age and Sex, BRFSS and YRBS, Montana, 2011



**Figure 13.**  
Prevalence of Obesity by Age and Sex, BRFSS and YRBS, Montana, 2011



# Physical Activity

Being physically active is important for maintaining a healthy weight and it offers other important health benefits. Regular moderate physical activity reduces the risk of premature death in general and reduces the risk of coronary heart disease, hypertension, colon cancer and diabetes.<sup>15</sup> Physical activity is also essential to overall muscle, bone and joint health.<sup>15</sup> People suffering from arthritis can experience significant relief from pain and stiffness and increased joint function with regular physical

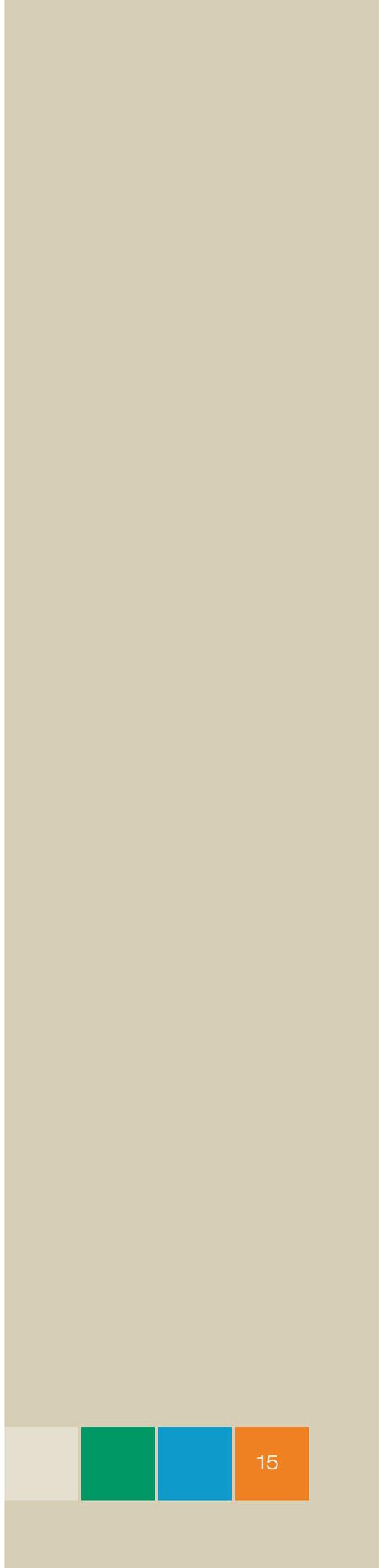
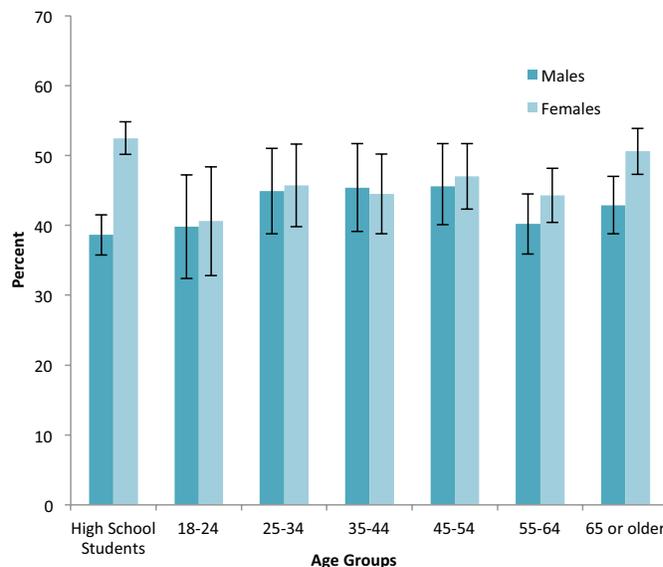
activity. Current physical activity recommendations for adults and children are outlined in Table 3. Many Montana adults and youth do not meet these recommendations.

- Over half (52%) of high school girls in Montana do not get enough physical activity, significantly more than high school boys (39%) (Figure 14).
- Between 41% and 50% of Montana adults did not get the recommended level of physical activity, with little variation by age and sex.

**Table 3: Minimum Physical Activity Recommendations for Adults and Children<sup>16</sup>**

Children	60 minutes of either moderate or vigorous intensity aerobic activity every day	AND	Muscle strengthening activity on 3 days per week
Adults	2 hours and 30 minutes of moderate intensity aerobic activity every week	OR	Muscle strengthening activity on 2 days per week
	1 hour and 15 minutes of vigorous intensity aerobic activity every week		

**Figure 14. Prevalence of Insufficient Physical Activity by Age and Sex, BRFSS and YRBS, Montana, 2011**



## Ensuring Health Equity in Montana

Racial minorities and people with low socio-economic status often experience health disparities. American Indians are Montana's largest minority group with 7.5% of the population identifying as American Indian alone or in combination with another race.<sup>17</sup> Other racial minorities such as African American or Asian make up 2.5% of Montana's population, and only 2.8% of Montana's residents are of Hispanic ethnicity.<sup>17</sup> Montana is one of the poorest states in the U.S., ranking 45th in 2010 with a median household income of \$41,467, 16% less than the national median.<sup>18</sup> Additionally, 15% of all Montanans and 20% of Montana children were living in poverty during 2010.<sup>19</sup> These segments of Montana's

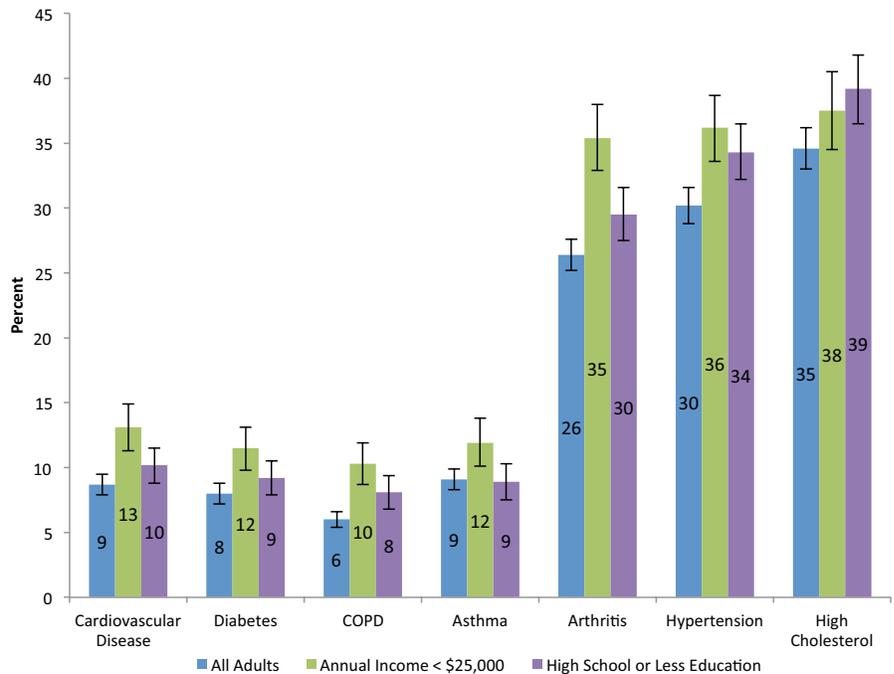
population have higher rates of risk behaviors, chronic diseases and unintentional injury.

### Disease Burden Disparities

#### **Low Household Income and Low Educational Attainment**

- Montana adults with an annual household income of less than \$25,000 reported significantly higher prevalence of cardiovascular disease, diabetes, COPD, asthma, arthritis and hypertension compared to all Montana adults (Figure 15).
- Montana adults with a high school degree or less education reported significantly higher rates of COPD, arthritis, hypertension and high cholesterol.

**Figure 15.**  
**Prevalence of Chronic Diseases Among Adults with Low Household Income and Low Educational Attainment, BRFSS, Montana, 2011**

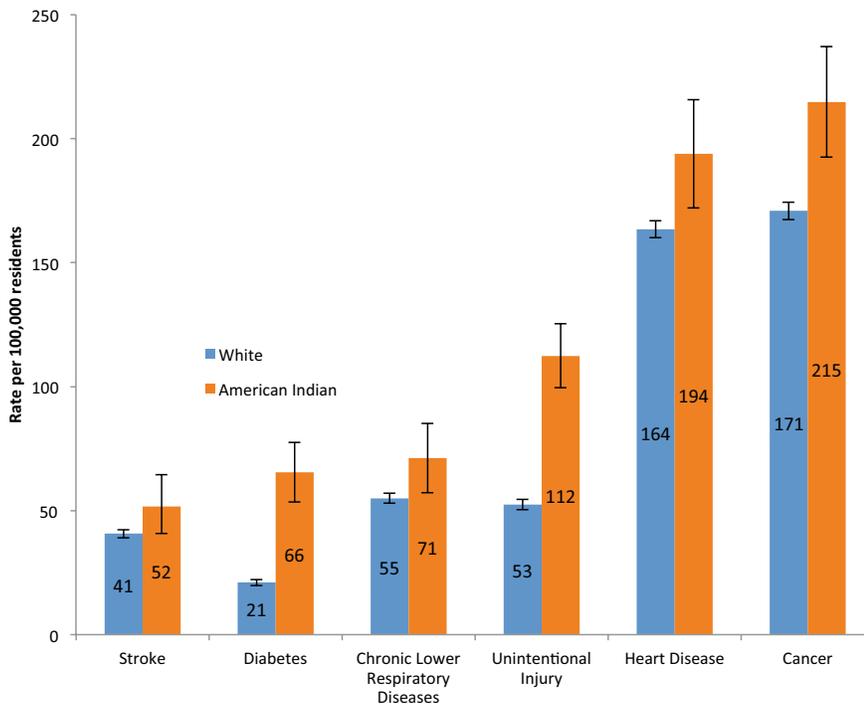


\*Cardiovascular disease includes a diagnosis of heart attack, coronary heart disease, or stroke

### American Indians

- American Indians in Montana experience higher rates of death due to cancer, heart disease, chronic lower respiratory disease, diabetes and unintentional injury than are experienced by White Montanans (Figure 16).
- Age-adjusted death rates due to diabetes are three times higher among American Indians than among Whites.
- Age-adjusted death rates due to unintentional injury are two times higher among American Indians than among Whites.

**Figure 16.**  
**Age-Adjusted Death Rates by Cause and Race<sup>§</sup>, Montana, 2005-2009**

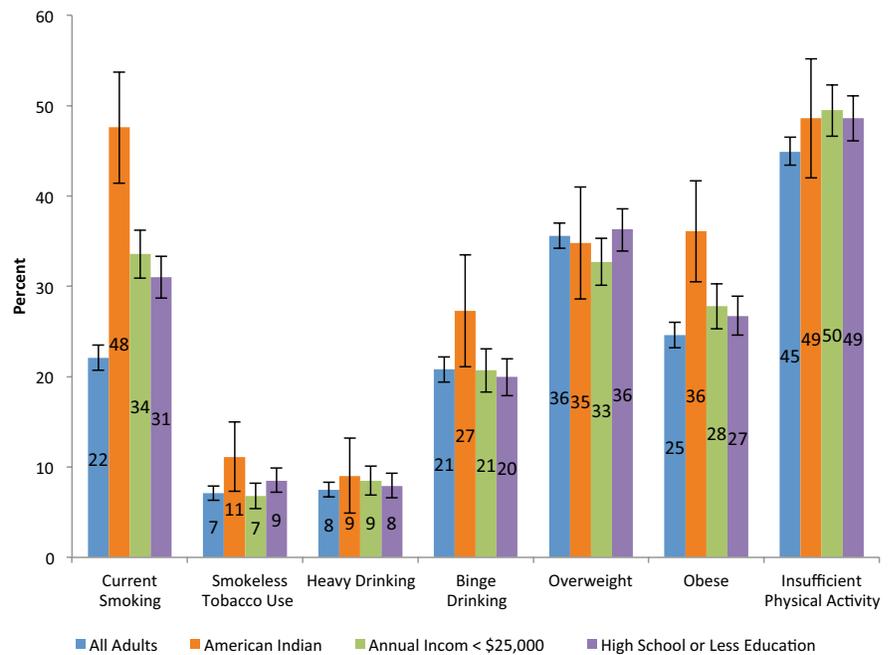


<sup>§</sup> Data Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 2005-2009 on CDC WONDER Online Database, released 2012.

### Behavioral Risk Disparities

- Prevalence of current cigarette smoking is more than twice as high among American Indians compared to all Montana Adults (Figure 17).
- Prevalence of current cigarette smoking is also significantly higher among adults with low income and low educational attainment.
- American Indians in Montana have significantly higher rates of obesity compared to all Montana adults.
- Montana adults with low household income and low educational attainment reported insufficient physical activity more often than all Montana adults.

**Figure 17.**  
**Prevalence of Behavioral Risk Factors Among Groups with Health Disparities, BRFSS, Montana, 2011**



## Strategies to Address Disparities

Addressing health equity is working to ensure that everyone has an equal opportunity to prosper and achieve full health. The Montana Chronic Disease Plan outlines strategies to address chronic disease and unintentional injury in a comprehensive and coordinated approach. These strategies will reduce the burden of chronic disease for the general population as well as specific sub-populations such as people with low household income and people of American Indian descent. Targeting identified sub-populations will require tailoring the outreach and delivery of the evidence-based strategies to fit the specific population. Every effort will be made to assure that intervention

outreach and delivery will be culturally appropriate accessible to people of all abilities, address education levels of sub-populations, are age appropriate, and are available in both urban and rural communities. The CDPHP Bureau programs have and will continue to work with partners across the state to implement targeted interventions based on the need identified by surveillance data. Examples of past interventions include tobacco cessation interventions targeted to people enrolled in Medicaid and targeted cancer screening outreach and education to American Indian people.

## Background

Coordination across chronic disease programs is critical for many reasons. The same risk factors, such as smoking or physical inactivity, cause multiple chronic diseases. The same populations who are at risk for one chronic disease are often at risk for other diseases. The same intervention strategies can address multiple chronic diseases and risk factors. Funding for chronic disease prevention and control has focused on addressing individual diseases and risk factors creating individual public health programs—a categorical approach to chronic disease. This approach has resulted in a better understanding of the individual chronic diseases and how to prevent and manage them. However, this categorical approach is not sufficient to address the nation’s leading health concern. Almost half of all U.S. adults have at least one chronic disease. Chronic diseases account for 7 out of the 10 leading causes of death and over 75% of the total health care costs in the U.S.<sup>1</sup>

The Centers for Disease Control (CDC) and Prevention awarded the Montana DPHHS funds in 2011 to build and strengthen state health department capacity and expertise to effectively prevent chronic disease and promote health. A key part of this capacity building is to actively facilitate coordination between individual programs. To aid in the coordination effort, CDC describes four key domains in which to categorize chronic disease practice:

Surveillance and Epidemiology; Health Systems Change; Community-Clinical Linkages; Evidence-Based Practice and Environmental Approaches. These domains organize the evidence-based activities we are currently working on in our individual chronic disease efforts around shared purpose and similar strategies rather than around a particular disease or risk factor.

The Chronic Disease Prevention and Health Promotion (CDPHP) Bureau within DPHHS is currently making changes to internal functions to facilitate this coordinated approach. An integrated process provides opportunities to work together, promotes collective thinking and problem solving, and supports working together in new ways so that the impact of all chronic disease programs is improved. CDPHP Bureau coordinated efforts include building capacity of staff and stakeholders to effectively implement chronic disease activities; increasing chronic disease leadership in cross-cutting skill areas and leveraging shared services; enhancing collaborative processes that establish shared ownership and responsibility; development of a chronic disease communication plan and the Montana Chronic Disease Plan.

## Plan Development

The CDPHP Bureau initiated work on the Montana Chronic Disease Plan in the fall of 2011. The CDPHP Bureau management team researched coordinated chronic disease plans produced by other states to inform the development of this plan. Each chronic disease program in the CDPHP Bureau has a categorical state plan that was informed by a broad perspective of partners and includes evidence-based activities to address a specific chronic disease or risk factor. Initial review of these statewide chronic disease activities revealed that the overall strategies employed by each program did not need to be altered but simply re-organized to promote coordination between programs. During the beginning stages of plan development the bureau was asked to participate in the development of a performance management system lead by the Office of Public Health System Improvement (PHSI) within our Public Health and Safety (PHS) Division. The performance management system offered a standard work plan format that emphasizes organizing program activities around common goals and promotes regular systematic review of performance measures. It was immediately apparent that the development of these work plans would also be instrumental in the development of this coordinated plan.

The PHSI staff assisted the chronic disease plan development by conducting operational planning sessions with each chronic disease

program to get a clear picture of programmatic priorities. Three operational planning sessions concluded with each chronic disease program developing standardized logic models and work plans based on identified core activities. The process provided the opportunity to conduct a focused review of the chronic disease programs targeted health outcomes, evidence-based activities and statewide partners. Commonalities between the programs were identified as well as opportunities for future collaborations. This information then became the content of the plan. The Montana Chronic Disease Plan is organized by settings, broad intervention sites, which include goals, strategies and intermediate and short-term objectives. Stakeholders and staff reviewed and provided input on the draft plan.

This plan is a living document and will evolve and change as circumstances in Montana call for creative responses to emerging issues. An annual review of the plan will take place including input from staff and stakeholders to determine progress and areas for change. Evaluation reports will be developed and disseminated to the CDC, the Montana DPHHS leadership, the CDPHP Bureau staff, and key stakeholders and partners.

## Plan Use

The Montana Chronic Disease Plan serves as a tool for staff and partners to coordinate evidence-based activities and work together to effectively prevent chronic disease and unintentional injury, and promote the health of all Montanans. It is intended to be used by governmental and non-governmental agencies, local and state level individuals and organizations, to plan, implement and evaluate chronic disease activities. The plan outlines opportunities for collaboration around similar strategies to reduce duplication of effort while still meeting the overarching goal to reduce the burden of chronic disease in Montana.

Programs in the CDPHP Bureau will work together to implement these strategies by coordinating work between programs and with partners across Montana. Each program has a group of stakeholders, various partners, a coalition or an advisory group that works on the categorical program activities. Collaboration across programs and between partner groups will be essential to successful implementation of plan strategies. Workgroups comprised of diverse

partners will be established for each setting outlined in the plan. Workgroup partners and program staff will use the plan to increase awareness of and support for chronic disease public health issues in Montana.

The CDPHP Bureau will provide training and technical assistance to workgroup members (staff and partners) to build the capacity of the workgroups to effectively implement the plan strategies. Implementation of the Montana Chronic Disease Plan will take the concerted effort of individuals, communities and organizations working together. By doing the work differently, through a coordinated process, resources will be saved where they are being expended redundantly and categorical work will be enhanced by doubling its impact.

## The Bigger Public Health Picture

The Montana Chronic Disease Plan represents just one part of the total public health effort in Montana and is driven by our state health improvement plan titled “Big Sky. New Horizons. A Healthier Montana.” The PHS Division’s Office of Public Health System Improvement is developing a Montana health improvement plan that outlines key strategies to improve the health of Montanans to the highest possible level. As with other state plans, achievement of these key strategies will involve a long-term, systematic collaboration between public health system partners. The process, thus far, to develop the health improvement plan included the implementation of a state health assessment and conducting surveys and focus groups with key stakeholders and the public. The results of the assessment and surveys are aligned with the chronic disease goals and strategies outlined here, in the Montana Chronic Disease Plan. As work is accomplished in the Montana Chronic Disease Plan, thereto work is accomplished in the Montana health improvement plan.

The Montana Chronic Disease Plan outlines broad strategies for addressing chronic disease and unintentional injury in Montana. Specific chronic disease & modifiable risk factor state plans outline evidenced-based objectives and strategies particular to each disease and risk factor category. The Montana Chronic Disease Plan links the categorical state plans together by

outlining the common evidence-based strategies to address chronic disease.

Each program in the CDPHP Bureau developed core activity work plans (Appendix A) to manage the daily work tied to each chronic disease activity identified. These work plans describe the work to be conducted over the course of one year in order to accomplish a set of desired long and short term outcomes. Programs use the work plans to plan future activities, identify resources needed to complete the work and achieve the desired outcomes, monitor and track progress, and evaluate whether the work was accomplished. It is a systematic approach to ensure sustained high performance by design as a part of the PHS Division goal for system improvement that meets one of the domains of public health accreditation.

These different plans serve functions that are essential to addressing chronic disease in Montana. Montana’s state health improvement plan lays the foundation of how to improve the health of all Montanans. The Montana Chronic Disease Plan provides the overarching approach to coordinating chronic disease activities. The disease and risk factor specific state plans provide a guide for programs and partners to implement their specific chronic disease prevention and management activities. And finally, the chronic disease programs core activity work plans provide the details of the daily work that needs to be accomplished to meet chronic disease goals.

## Cross-Cutting Issues

In addition to the specific strategies outlined within this plan to address chronic disease in Montana, there are areas of work that encompass all chronic diseases and settings: Disability & Health; CDC Domains; Communications.

**Disability & Health** The CDPHP Bureau contracts with The University of Montana Rural Institute: Center for Excellence in Disability Education, Research and Service to manage The Montana Disability and Health (MTDH) Program. The MTDH Program is responsible for developing and implementing programs and services designed to prevent secondary conditions, promote health and reduce health disparities existing between Montanans with and without disabilities.

Disability is the result of a dynamic interaction between an individual's impairment and the accessibility of environment resources necessary to function and participate fully in society. For a variety of reasons, it is difficult to measure the prevalence of disability. Fifty-four million is a common estimate for the number of Americans experiencing disability.<sup>20</sup>

MTDH programmatic goal areas include 1) Capacity Building; 2) Support direct health promotion services and programs that meet the specific health promotion needs of people with disabilities; 3) Increase access to generic health promotion services, ensuring civil rights of people with disabilities; 4) Improve access to community environments, ensuring

civil rights of people with disabilities, and improving community planning to optimize resilience (Emergency Preparedness); and 5) Integrate disability and health agenda into public policies that influence the health of people with disabilities.

The MTDH Program provides assistance to the CDPHP Bureau programs to strengthen public health competencies for including people with disabilities in public health practice. The CDC is reviewing the following four competencies as core outcomes for such efforts. A public health workforce that reflects:

Competency 1: Know and be able to critically discuss the relationship between disability and public health programs and outcomes.

Competency 2: Be able to discuss and analyze the multiple definitions and experiences of disability across the lifespan.

Competency 3: Know and be able to include people who have disabilities in efforts to promote health, prevent disease and manage chronic and other health conditions.

Competency 4: Be able to critically discuss the methods and measurement of public health programs and outcomes for people with disabilities throughout the lifespan.

To develop and strengthen these competencies, the MTDH Program supports public health to conduct

the following activities across the strategies and settings outlined in this plan:

1. Include people with disabilities in public health program planning and design.

*e.g., Recruit and train persons with disabilities to serve as Disability Advisors on public health standing committees that shape public health plans, programs and policy.*

2. Use data to demonstrate the need for and impact of programs for people with disabilities.

*e.g., Include disability screener items in enrollment and monitoring public health data systems.<sup>21</sup> Analyze, report, and promote the use of data among public health and among disability policy and program developers.*

3. Identify policy changes to include people with disabilities in public health efforts.

*e.g., Recruit disability constituents and experts to review and revise draft policy for inclusion of people with disabilities and accessibility issues and evaluate policy outcomes for people with disabilities to ensure health equitable impacts.*

4. Support the inclusion of people living with disabilities in clinical preventive health services.

*e.g., Support Accessibility Ambassadors to conduct on-site evaluations of health care facilities*

*that inform accessibility improvement plans and the dissemination of relevant resource toolkits.*

5. Identify the most appropriate definition of disability to tailor public health efforts to the audience.

*e.g., Review and identify disability definitions and measures through forums involving public health and disability services administrators. Provide training to public health stakeholders.*

6. Identify and connect with key partners at various levels.

*e.g., Support the MTDH Core Management Team and the Montana Disability and Health Community Planning Group to develop, implement and monitor a state strategic plan to improve the health of Montanans.*

7. Network with non-traditional partners.

*e.g., Expand public health dissemination and distribution systems to include disability organizations.*

8. Engage community partners in support of lifestyle changes and supports.

*e.g., Provide training on evidence-based health promotion programs to disability service provider staff and support implementation and evaluation.*

9. Facilitate the coordination of disability surveillance methods and data.

*e.g., Identify and include public health data measures in disability service enrollment and monitoring data systems. Analyze, report and promote the use of these data by persons with disabilities, public health practitioners and disability service system administrators.*

10. Build evaluation into programmatic efforts.

*e.g., Support process evaluation of evidence-based public health programs with persons with disabilities. Support health outcomes as quality indicators of disability support services and systems.*

**CDC Domains** The Centers for Disease Control (CDC) and Prevention describes four key domains in which to categorize chronic disease practice: Surveillance and Epidemiology; Health Systems Change; Community-Clinical Linkages; Evidence-Based Practice and Environmental Approaches. Organizing chronic disease strategies into these domains focuses the work in areas that will make substantial progress toward reducing the burden of chronic disease while illustrating the commonalities to approaching chronic disease prevention and management.

Domain 1: Epidemiology and Surveillance. Across all the settings in the Montana Chronic Disease Plan, data will be used to plan, implement,

and evaluate activities to meet the stated strategies. Information and data will be used to report to the public and stakeholders the burden of and the public health impact of chronic disease and unintentional injury, and the effectiveness of chronic disease interventions. Coordinating chronic disease epidemiology and surveillance activities will enhance current efforts and offer a broader look at chronic disease in Montana identifying disparities and needs for services. More specific benefits to coordinating surveillance activities include: a collective thought process to identify new data sources and data communication strategies, sharing of resources and data sets and leveraging expertise across categorical program areas.

Domain 2: Evidence-based Practice and Environmental Approaches. Public health organizations have learned that not all public health activities are capable of producing significant results. Efforts need to focus limited resources on evidence-based practices that achieve significant change. Stakeholders and staff provided input on the Montana Chronic Disease Plan strategies to ensure they are evidence-based and feasible for implementation in Montana. The plan also addresses environmental approaches that include promoting health and supporting healthful behaviors statewide in schools, worksites and communities. The focus is on improving the surrounding social and physical environments that reach populations of

people rather than activities focused on one person at a time. These broad policy strategies require low resources and create high impact.

**Domain 3: Health Systems Change.** Health systems are major partners in the effort to reduce the burden of chronic disease. Prevention and management efforts across all chronic diseases focus on assisting health systems to improve the effective delivery and use of clinical services. Health system and quality improvement changes can encourage providers and health plans to focus on preventive services and assist people with chronic diseases to better manage their disease, ultimately, to improve health outcomes. The Montana Chronic Disease Plan dedicates an entire setting to focus on partnering with health systems to promote compliance with national prevention and treatment guidelines for all chronic diseases.

**Domain 4: Community-Clinical Linkages.** Community-clinical linkages help ensure that people with or at high risk of chronic diseases have access to community resources and support to prevent, delay or manage chronic diseases. Across the settings outlined within this plan, identified strategies support community-clinical linkages: statewide implementation of chronic disease resources and programs will increase access to these services; education and promotion about the resources will increase recommendations to the services; and, recommendations to patients,

employees, and health plan members to access these community resources will increase participation in these services. Community resources and programs are common across all chronic diseases addressing risk factors and prevention strategies associated with chronic disease, and management tools to improve quality of life after a diagnosis of chronic disease.

**Communications** An important piece of implementing the Montana Chronic Disease Plan is coordinating communication strategies. Communicating the plan as a whole will be essential to informing the public about the statewide effort, along with developing communication tools to support the work being implemented across the settings and strategies. A communication plan has been developed to assist with these needs. The communication plan includes external communication strategies for the CDPHP Bureau programs and partners to increase awareness of chronic disease activities, along with strategies to engage the public in coordinated chronic disease efforts. The internal communication strategies focus on CDPHP Bureau-specific functions to increase coordination between programs. Increasing communication efforts will support the work set forth in the Montana Chronic Disease Plan.

## Health Outcomes

Successful implementation of the activities outlined in this plan will lead to changes in the health status of all Montanans. The overarching goals for the Montana Chronic Disease Plan reflect the major changes we aim to achieve through coordinated implementation of the activities that lie herein. The long-term objectives are the measureable indicators linked to the goals.

### Overarching Goals

- Young people are prevented from developing chronic disease.
- Youth manage their chronic diseases with assistance from adults.
- Adults are prevented from developing chronic disease.
- Adults detect chronic disease early, and manage their chronic diseases to achieve improved quality of life.
- Unintentional injuries are prevented and treated to mitigate long-term impacts on functioning, participation and quality of life.
- People with disabilities and with special healthcare needs manage secondary conditions and comorbidities to achieve higher quality of life and have increased access to services.
- Deaths from chronic disease and unintentional injury are reduced.

## Long-term Objectives

<b>Decrease Unhealthy Behaviors</b>	From 2011 to 2017, decrease the prevalence of tobacco use among adolescents (grades 9 – 12) from 27.3% to 23%. Data source: Montana Youth Risk Behavior Survey
	From 2011 to 2017, decrease the proportion of Montana adults who engage in no leisure-time physical activity from 21% to 18%. Data source: Behavioral Risk Factor Surveillance System
	From 2011 to 2017, decrease the proportion of Montana youth (grades 9-12) who report being physically active for zero of the past seven days from 10% to 7%. Data source: Montana Youth Risk Behavior Survey
<b>Decrease Disease</b>	From 2011 to 2017, decrease asthma related hospitalization rate from 58.5 per 10,000 to 53.5 per 10,000 Montana residents. Data source: Montana Hospital Discharge Data System
	From 2010 to 2017, decrease the incidence of late-stage breast cancer in Montana from 43.7 per 100,000 women to 41.0 per 100,000 women. Data source: Montana Central Tumor Registry
	From 2010 to 2017, decrease the incidence of late-stage colorectal cancer in Montana from 31.2 per 100,000 people to 28.1 per 100,000 people. Data Source: Montana Central Tumor Registry
	From 2011 to 2017, maintain the prevalence of diabetes in Montana from 8.0% to 8.0%. Data Source: Behavioral Risk Factor Surveillance System
	From 2011 to 2017, decrease unintentional injury hospitalization rates in Montana from 44.4 per 10,000 residents to 39.1 per 10,000 residents. Data Source: Montana Hospital Discharge Data System
<b>Decrease Deaths</b>	From 2009 to 2017, decrease the age-adjusted rate of cardiovascular disease death associated with high blood pressure in Montana from 42.0 deaths per 100,000 residents to 39.4 deaths per 100,000 residents. Data source: National Center for Health Statistics, Multiple Cause of Death File
	From 2010 to 2017, decrease the age-adjusted rate of diabetes-related deaths in Montana from 22.8 deaths per 100,000 residents to 21.7 deaths per 100,000 residents. Data source: Montana Office of Vital Statistics
	From 2009 to 2017, decrease age- adjusted unintentional injury death rates from 60.5 per 100,000 residents to 53.0 per 100,000 residents. Data source: Montana Office of Vital Statistics
<b>Increase Access for Montanans with Disabilities</b>	From 2012 to 2017, increase by the number of Montanans with disabilities that participate in mainstream public health programs from X to X. Data source: Public health enrollment data?
	From 2011 to 2017, increase the number of Montana homes with at least one zero step entrance from 93,251 to 97,913. Data source: Behavioral Risk Factor Surveillance System

## Public Education Institutions

Educational institutions play an important role in the health of children, adolescents and young adults. Montana public schools have direct contact with more than 92 percent of Montana children aged 5–17 years, for approximately 6 hours a day, and for up to 13 critical years of their social, psychological, physical and intellectual development.<sup>22, 23</sup> Colleges and universities are not only educational institutions but are often a young adult's first home away from their family. The health of young people and their academic success are linked, each being the primary predictor of the other. Thus, helping all students stay healthy is an important aspect of the mission of educational institutions. Implementing the strategies listed below can aid schools, colleges and universities in this endeavor by promoting evidence-based environmental approaches to chronic disease management and prevention.

*Content source: National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, Division of Adolescent and School Health and National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health*

**Goal:** Increase school systems' ability to promote chronic disease prevention and assist students to self-manage their chronic diseases.

### Strategies:

- Adopt and implement policies that support:
  - tobacco-free lifestyles and campuses<sup>24</sup>
  - healthy eating<sup>25</sup>
  - daily physical activity<sup>25</sup> including adaptive physical education
  - health management for students
- Provide education to school staff on assisting all students with chronic disease, regardless of having a disability or not, with self-management.
  - Trainings and resources provided to primary schools
  - Asthma self-management<sup>26</sup>
  - Diabetes self-management
  - Secondary conditions management
- Provide inclusive education on healthful behaviors<sup>27</sup>
  - Evidence-based health programs and curriculum for students of all abilities that includes teaching techniques for adapting educational activities to the unique needs of varying disabilities.
  - Healthy eating
  - Physical activity
  - Seatbelt use
  - Sun safety
  - Concussion and Traumatic Brain Injury Prevention (i.e., helmet use)

### **Intermediate Objectives:**

- By 2014, increase the percent of public middle schools and high schools that have a policy that prohibits tobacco use by students, staff and visitors in school buildings, on school grounds and at off-site school events, applicable 24 hours a day and seven days a week from 50% to 60%. Data Source: Montana Office of Public Instruction, School Health Profiles
- By 2014, decrease the percent of public middle schools and high schools in which students could purchase soda pop or fruit drinks that are not 100% fruit juice at the school from 43% to 40%. Data Source: Montana Office of Public Instruction, School Health Profiles
- By 2014, increase the percent of public middle and high schools that allow students to carry and self-administer asthma medications from 79% to 83%. Data Source: Montana Office of Public Instruction, School Health Profiles
- By 2014, increase the percent of students who report not seeing any other students, staff, or visitors use tobacco on school property during the past 30 days from 24% to X. Data Source: Prevention Needs Assessment
- By 2014, increase the completion rate of online school health training modules by school staff from 82% to 90%. Data Source: School Health Website Data

- By 2014, increase the number of Montana schools with no physical access barriers prohibiting attendance of students with disabilities from X to X. Data source: OPI?
- By 2014, increase the number of students with disabilities participating in mainstream health enhancement and physical education classes from X to X. Data source: ?

### **Short-term Objectives:**

- Annually increase the number of schools, school districts and colleges that partner with CDPHP on evidence-based school health approaches by X. Data Source: program records
- Annually increase number of school staff participation in health training provided by DPHHS by X. Data Source: program records
- Annually increase the number of hits to the school health website by X. Data Source: School Health Website Data

## Worksites

Faced with high healthcare costs, many employers are turning to worksite health programs to help employees lower their risk of developing costly chronic diseases while improving worker tenure and productivity. Worksite policies and programs may also help employees reduce other health risks and improve their quality of life. Worksite interventions can be delivered: at the worksite (e.g., health education classes), at other locations (e.g., gym membership discounts, weight management counseling), or through employee health benefits plans (e.g., flu shots, cancer screenings). Work force development programs (e.g., vocational rehabilitation (VR)) may also help Montanans prepare for work by promoting these interventions. Employers can create healthy work environments that make it easier for employees to make healthy choices. Maintaining a healthier workforce can lower direct costs such as insurance premiums and worker's compensation claims, and positively impact many indirect costs such as absenteeism and worker productivity. Implementing the following strategies can increase employers' awareness of the benefits of employee wellness policies and programs and promote evidence-based environmental approaches that will achieve those benefits.

*Content source: Division of Population Health, National Center for Chronic Disease Prevention and Health Promotion*

**Goal:** Increase capacity of employers to promote wellness and chronic disease self-management among their employees.

### Strategies:

- Adopt and implement inclusive policies that support:
  - Tobacco-free workplaces and outdoor spaces<sup>24</sup>
  - Tobacco cessation<sup>28</sup>
  - Healthy food and beverage choices<sup>29</sup>
  - Physical activity opportunities<sup>29</sup>
  - Breastfeeding mothers
  - Injury prevention
  - Secondary condition management
- Employee insurance options cover clinical preventive services and employers encourage use of these services. See Appendix B for a list of applicable services.<sup>30</sup>
- Implement or promote wellness programs that promote early detection, risk reduction and self-management of chronic diseases.<sup>31</sup>
  - Montana Tobacco Quit Line
  - Arthritis Walk With Ease Program
  - Seatbelt use
  - Limit sun exposure
  - Asthma self-management
  - Diabetes self-management
  - Diabetes Prevention Program
  - Arthritis self-management
  - Arthritis Foundation Exercise Program

- Stepping On fall prevention program
- Health Plans to Employment: A Health Risk Appraisal Program for VR Clients

### **Intermediate Objectives:**

- By 2014, increase the number of worksites that adopt at least one policy that supports tobacco-free workplaces and outdoor spaces, tobacco cessation, healthy food and beverage choices, or physical activity opportunities from X to X. Data Source: Large and Small Employer survey
- By 2014, increase the number of worksites that adopt at least three policies that supports tobacco-free workplaces and outdoor spaces, tobacco cessation, healthy food and beverage choices, or physical activity opportunities from X to X. Data Source: Large and Small Employer survey
- By 2014, increase the percent of all employees that use clinical preventive services in two pilot sites from X to X. Data Source: Claims data from pilot site insurance companies
- By 2014, increase percent of all employees participating in worksite

wellness programs from X to X. Data source: wellness program records

- By 2014, increase the percent of Quit Line callers that report being referred to the Quit Line by their employer from X to X. Data source: Quit Line records

### **Short-term Objectives:**

- Annually increase the number of worksites implementing worksite wellness programs by X. Data source: program records
- Annually increase the number of worksites implementing chronic disease management programs by X. Data source: program records
- Annually increase the number of worksites implementing tobacco cessation programs by X. Data source: program records
- Annually increase the number of evidence-based wellness programs with adaption strategies to include persons with disability that are offered for use by worksites by X. Data source: program records

## Healthcare

Health systems interventions improve the clinical environment to more effectively deliver quality preventive services and help patients more effectively use and benefit from those services. Some chronic diseases and conditions can be avoided completely, and others will be detected early, or managed better to avert complications and improve health outcomes.

Effective outreach to consumers and reducing barriers to accessing these services is essential. Implementing the strategies listed below will provide valuable tools to healthcare systems in order to promote compliance with national prevention and treatment guidelines. Ensuring access to quality healthcare will increase the health and quality of life for all Montanans.

*Content Source: CDC Chronic Disease Prevention and Health Promotion*

**Goal:** Increase healthcare systems ability to effectively prevent, diagnose and manage chronic disease.

### Strategies:

- Adopt and implement treatment protocols and quality improvement strategies that ensure the delivery of evidence-based clinical practices and improve patient compliance with clinical preventive and treatment guidelines.<sup>32</sup>
  - surveillance/data management systems<sup>33</sup>

- electronic health records with decision support tools and alerts that can be used for quality improvement<sup>34, 35</sup>
- healthcare provider feedback reports
- team-based care<sup>36</sup>
- systems to ensure adequate follow-up of abnormal screening tests and timely treatment<sup>37</sup>
- baby-friendly certification
- Provide training and resources to healthcare professionals in order to help them assist patients to prevent, detect early and manage chronic disease.
- Provide education on clinical preventive services and encourage patient use of these services.
- Implement community education programs that encourage breastfeeding, early detection, risk reduction and self-management of chronic disease.

### Intermediate Objectives:

- By 2014, increase the percentage of diabetes patients receiving treatment at primary care practices who have an A1C <7% from 53% to 54%.  
Data Source: Diabetes Quality Monitoring System Data
- By 2014, increase the percentage of asthma patients at Asthma Care Monitoring System (ACMS) clinics who received education on 3 out of 4 asthma self-management topics from 25% to 30%. Data Source: ACMS Data

- By 2014, increase the percentage of Cardiac Rehab patients, who reported using tobacco products one month prior to their event, receiving tobacco cessation referral from 65% to 70%. Data Source: Cardiac Rehab Outcomes Data
- By 2014, increase the proportion of women in Montana who are up-to-date with breast cancer screening based on the most recent guidelines from 73% to 77%. Data Source: Behavioral Risk Factor Surveillance System
- By 2014, increase the proportion of adults in Montana who are up-to-date with colorectal cancer screening based on the most recent guidelines from 57% to 63%. Data Source: Behavioral Risk Factor Surveillance System
- By 2014, increase the percentage of Montana tobacco users who report having a recommendation for cessation from their physician from X to X. Data Source: Adult Tobacco Survey
- By 2014, the number of hospitals that become Baby-Friendly Certified will increase from 1 to 8. Data Source: Montana NAPA Program records

### **Short-term Objectives:**

- Annually increase the number of healthcare systems implementing at least one treatment protocol or quality improvement strategy by X. Data source: program records
- Annually increase the number of healthcare professional trainings offered on chronic disease prevention and management by X. Data source: program records
- Annually increase the percentage of healthcare professionals participating in trainings by X. Data source: program records
- Annually increase the number of healthcare systems implementing at least two community education programs by X. Data source: program records
- Annually increase the number of healthcare systems receiving training on accessibility improvement. Data source: program records

## Community

Improving access to community-based resources will assist with effectively preventing chronic disease and maintaining the best possible health among persons living with chronic illnesses.

A community approach increases the opportunities for people to take charge of their health. CDC has identified at least four key elements that are essential to success in preventing chronic diseases and achieving health equity: 1) investing in communities, 2) providing a venue for communities to learn about effective strategies, particularly those related to policy, systems and environmental changes, 3) mobilizing networks for change, and 4) providing communities with tools to assist them as they mobilize to achieve health equity and prevent chronic diseases.

*Content source: Division of Community Health, National Center for Chronic Disease Prevention and Health Promotion*

**Goal 1:** Increase community clinical linkages to comprehensive, quality community-based programs designed to prevent disease and injury, improve health and enhance quality of life.

### Strategies:

- Implement evidence-based programs through community organizations.
  - Working Well with a Disability<sup>38, 39</sup> & Living Well with Disability<sup>40</sup>
  - Diabetes Prevention Program<sup>41</sup>

- Arthritis Self-Management Program<sup>42</sup>
- Arthritis Foundation Exercise Program<sup>43</sup>
- Quit Line tobacco cessation program<sup>44</sup>
- Stepping On fall prevention program<sup>45</sup>
- MENU-AIDDS
- Provide education on evidence-based programs addressing chronic disease
  - Trainings and resources provided to community organizations
  - Indian Health Service and Community Health Representatives trained
  - Centers for Independent Living staff trained
  - Local health department staff trained
- Community organizations such as worksites, aging services, disability service providers, healthcare providers and schools promote and provide recommendations to local evidence-based chronic disease programs.
- Support local health departments to provide evidence-based public health programs addressing chronic disease in the local communities.
  - Cancer prevention and control, including recruiting clients to the cancer screening program.
  - Tobacco prevention activities that promote a tobacco-free social norm.
  - Nutrition and Physical Activity

### **Intermediate Objectives:**

- By 2014, decrease the percent of adults reporting exposure to second-hand smoke from X to X. Data Source: ATS
- By 2014, increase the percent of adults with diabetes that report receiving education on diabetes self-management from 63% to 66%. Data Source: Behavioral Risk Factor Surveillance System
- By 2015, decrease the percent of adults with arthritis who report arthritis related limitations from 50% to X. Data Source: Behavioral Risk Factor Surveillance System
- By 2014, decrease the percent of adults aged 60 years or older who report falling in the last 3 months from 19% to 17%. Data Source: Behavioral Risk Factor Surveillance System
- By 2015, increase the number of evidence-based program staff with certifications or continuing education on strategies for including people with disabilities. Data source:
- By 2015, increase the percent of evidence-based programs that regularly collect and report data on disability status of participants from X% to 100%. Data source: Program records

### **Short-term Objectives:**

- Annually increase the number of programs implemented statewide from X to Y. Data Source: Program records
- Annually increase the number of trainings offered on evidence-based programs by X. Data Source: Program records
- Annually increase the percentage of evidence-based program staff participating in trainings by X. Data Source: Program records
- By 2015, increase the number of state-based train-the-trainer sessions and training offered during the project period that aims to maximize the health of people with disabilities from X to X. Data Source: Program records

**Goal 2:** Support healthy homes and neighborhoods through home visiting programs and evidence-based environmental approaches.

### **Strategies:**

- Implement public health home visiting to provide home environmental assessment, medical care coordination, chronic disease self-management education and make appropriate referrals to health care providers and local, state and regional resources.<sup>46</sup>

- Adopt and enforce organizational and local policies that support healthy behaviors and protect Montanans from unhealthy influences.<sup>47</sup>
  - Design of the built environment — the structures, transportation, land use and zoning — that promotes the inclusion, health and well-being of its residents and visitors regardless of disability status.
  - Smoke-free policies in all public places and in multi-unit housing
- By 2015, increase the number of Montana cities with a visitable housing ordinance requiring all new homes to have at least one zero step entrance, all main floor interior passages have 32 inches of clear space, and a half or full bathroom with basic maneuvering space on the main level from 0 to 1. Data Source: Disability and Health Program records

**Intermediate Objectives:**

- By 2014, increase the percentage of renters in multi-unit housing that report having a tobacco-free/smoke-free policy in their complex from X to X. Data Source: Adult Tobacco Survey
- By 2014, increase the number of communities with active living/ active transportation standards in place from 4 to 20. Data Source: NAPA program records
- Through 2014, increase by three points the mean Asthma Control Test score from baseline to program completion for Montana Asthma home visiting Program participants. Data Source: Asthma Program records.
- Annually increase the number of people who receive home visits by X. Data Source: Program records
- Annually increase the number of communities that engage in healthy environment policy development by X. Data Source: Program records

**Short-term Objectives:**

## Statewide

Implementing a statewide approach to prevention and management of chronic disease will focus on health communication. Health communication is defined as the study and use of communication strategies to inform and influence individual and community decisions that enhance health (NCI 2001). The scope of health communication includes disease prevention, health promotion, health care policy and enhancement of the quality of life and health of individuals within the community. Health communication considers a variety of channels to deliver its targeted or tailored messages to specific segments among varied audiences, including individuals, communities, health professionals, special groups and policy makers.

*Content source: Guide to Community Preventive Services. Health communication & social marketing*

**Goal:** Increase opportunities to educate Montanans about chronic disease and create healthy environments.

### Strategies:

- Disseminate awareness and education messages that promote prevention, early detection and management of chronic diseases.<sup>48</sup> Examples include:
  - Tobacco use prevention and Montana Tobacco Quit Line cessation media campaigns
  - Stroke signs and symptoms media campaign
  - Seat belt use for injury prevention

- Arthritis physical activity media campaign
- Housing related health hazards education
- Sugar sweetened beverages media campaign
- Right To Know breast screening campaign

### Intermediate Objectives:

- By 2014, increase the monthly average number of intake calls to the Montana Tobacco Quit Line from X to X. Data Source: Quit Line records
- By 2014, increase the percent of Montana adults reporting always using a seat belt from 68% to 75%. Data Source: Behavioral Risk Factor Surveillance System
- By 2015, increase the percent of Montana adults who can correctly identify four of more stroke symptoms from 83% to 85%. Data Source: Behavioral Risk Factor Surveillance System

### Short-term Objectives:

- Annually increase the number of earned and paid media spots that further chronic disease and injury prevention in Montana by X. Data Source: Program records
- Annually increase the number of communication tools developed by X. Data Source: Program records
- Annually increase the number of communication tools that are available in accessible alternative formats by X. Data Source: Program records.

## References

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## Resources

Agency for Healthcare Research and Quality (AHRQ)

**<http://www.ahrq.gov>**

Centers for Disease Control and Prevention (CDC)

**<http://www.cdc.gov>**

Centers for Disease Control and Prevention Chronic Disease Prevention and Health Promotion

**<http://www.cdc.gov/chronicdisease/overview/index.htm>**

The Guide to Community Preventive Services

**<http://www.thecommunityguide.org/index.html>**

HealthCare.gov

**<http://www.healthcare.gov/index.html>**

Healthy People 2020

**<http://www.healthypeople.gov>**

Partners for Prevention

**<http://www.prevent.org>**

Montana Behavioral Risk Factor Surveillance System

**<http://www.brfss.mt.gov>**

Montana Public Health and Safety Division of the Department of Public Health and Human Services

**<http://www.dphhs.mt.gov/publichealth/index.shtml>**

National Association of Chronic Disease Directors

**<http://www.chronicdisease.org/>**

Youth Risk Behavior Surveillance System

**<http://www.cdc.gov/HealthyYouth/yrbs/index.htm>**

# Appendix A

## List of Chronic Disease Related Clinical Preventive Services

**Alcohol Misuse** screening and counseling

**Blood Pressure** screening for all adults

**Cholesterol** screening for adults of certain ages or at higher risk

**Colorectal Cancer** screening for adults over 50

**Type 2 Diabetes** screening for adults with high blood pressure

**Diet** counseling for adults at higher risk for chronic disease

**Obesity** screening and counseling for all adults

**Tobacco Use** screening for all adults and cessation interventions for tobacco users, and expanded counseling for pregnant tobacco users

**BRCA** counseling about genetic testing for women at higher risk

**Breast Cancer Mammography** screenings every 1 to 2 years for women over 40

**Breast Cancer Chemoprevention** counseling for women at higher risk

**Breastfeeding** comprehensive support and counseling from trained providers, as well as access to breastfeeding supplies, for pregnant and nursing women

**Cervical Cancer** screening for sexually active women

## Appendix B

### EXAMPLE Activity Work Plan FY12-13

**Activity:** Asthma Care Monitoring System (ACMS) **Approved Amount:** \$130,500

**Manager:** Jeanne Cannon

**Mission:** Implement software in provider clinics that tracks patient symptoms and care to aid providers in making evidence-based decisions and consistently use evidence-based practices.

#### Desired Outcomes

- Clinics follow the EPR-3 guidelines in their clinical care
- Clinics provide asthma self-management education (ASME)

#### Supported Strategic Plan Goals, Strategies, and Objectives

Strategic Plan Healthcare Interventions Objective 1: Support delivery of evidence-based healthcare in the primary setting

CDC Year 3 work plan objective 4.1: Increase the number of clinics implementing ACMS Quality Improvement Software from 5 to 7

#### Intermediate Performance Measures\*

Metric	Period Actual	Period Target	Status	Target FY 12-13
Quarterly, percent of active patients receiving education on at least 3 of the 4 ASME topics in the last year.	25%	85%		60% of sites meet period target goal
Quarterly, percent of active patients that have a written asthma action plan received and reviewed at the last visit.	19%	85%		60% of sites meet period target goal
Quarterly, percent of people with not well controlled or very poorly controlled asthma who are on an ICS.	26%	75%		60% of sites meet period target goal
Quarterly, percent of active patients who have had an influenza vaccine in the last year.	11%	75%		60% of sites meet period target goal
Quarterly, percent of active patients who have had at least 2 office visits for their asthma in the last year.	5%	80%		60% of sites meet period target goal

\* All outcome measures are calculated for sites that are active for that quarter

#### Process Performance Measures

Metric	Period Actual	Period Target	Status	Target FY 12-13
Percent of sites that receive a presentation who go on to implement ACMS.	0	40%		40%
Percent of implemented sites that are active.	22%	80%		80%
Number of new sites enrolled annually.		2		2
Percent of quarterly data submissions received.	100%	100%		100%
Percent of active sites that have done at least 1 quality improvement project in the last year.	22%	85%		85%
Quarterly, increase in the number of asthma patients managed with ACMS.	16	50		200

## Appendix B continued

### Action Plan

Task	Assigned Employee	Assigned Date	Due Date	Completed Date
Recruit clinics to implement ACMS	Jeanne Cannon	1/1/2011	Ongoing	
Contract with EERC to update software	Jeanne Cannon	6/1/2008	Annually	
Work with programmers at EERC to direct and prioritize software updates	Jeanne Cannon	6/1/2008	Ongoing	
Contract with IT vendor to create 'patch' for EMR compatibility	Jeanne Cannon	9/1/2011	Annually	
At recruited sites, provide technical assistance and training to implement the software	Jeanne Cannon	1/1/2011	Ongoing	
At recruited sites complete chart review to upload patients into registry	Jeanne Cannon	1/1/2011	Ongoing	
Provide technical assistance to implemented sites to trouble shoot any problems with the software	Jeanne Cannon	1/1/2011	Ongoing	
Recruit sites who will pilot use of EMR patch and link to IT contractor	Jeanne Cannon	9/1/11	Ongoing	
Analyze quarterly reports and provide feedback to sites	Jeanne Cannon Jessie Frazier	1/1/2011	Quarterly	
Assist clinics in the implementation of quality improvement initiatives	Jeanne Cannon	1/1/2012	Annually	
Write letters to integrate into ACMS to recall patients for spirometry	Jeanne Cannon	1/1/2012	August 31, 2012	

### Partner Organizations

Partnership Community Health Center - Missoula  
 Target Pharmacy – Missoula  
 Curry Student Health Center Pharmacy – Missoula  
 Community Medical Center Pharmacy – Missoula  
 Florence Community Pharmacy - Florence  
 Family Pharmacy - Stevensville

Provider Office Sites:  
 South Hills Internal Medicine  
 Ruby Valley Medical Center  
 Pondera Medical Center Clinic

### Personnel

Employee	Allocation
Jeanne Cannon	0.3
Katie Loveland	0.05
Jessie Frazier	0.05









