

Colorado Department of Public Health and Environment

# Colorado Chronic Disease State Plan

*A Coordinated Approach to Chronic Disease  
Prevention & Control*



Colorado Department  
of Public Health  
and Environment

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## Introduction

The Colorado Department of Public Health and Environment (CDPHE), in conjunction with the Chronic Disease State Leadership Team (CDSLTL), present the 2013-2017 Chronic Disease State Plan. Working with partners from across Colorado, we have put together an ambitious, strategic and coordinated plan designed to prevent and control chronic disease.

Reducing the burden of chronic disease on Colorado citizens is a state public health priority. Colorado has a rich history of leading the nation in combating chronic disease and related risk factors. The unified approach presented in this plan provides leadership to our state and local, public and private partners engaged in chronic disease prevention.

The Chronic Disease State Plan provides a roadmap for all of us working together to reduce the burden of chronic disease in Colorado with the following goals:

- Develop a common vision and shared agenda for coordinated chronic disease prevention with state and local, public and private partners.
- Create a plan for aligned state and local approaches to coordinated chronic disease prevention.
- Ensure efficient and effective use of public resources.

## The Planning Process

We deliberately designed an inclusive process to engage a broad cross section of stakeholders and reflect the breadth of chronic disease work occurring in the state. This plan features many of Colorado's strengths:

- A statewide Chronic Disease Leadership Team (CDSLTL) that brings together experts and leaders from several disease-specific advisory councils to work strategically toward aligning chronic disease prevention and control resources and providing direction for state and local, public and private partners in chronic disease prevention and health promotion
- The Colorado Health Assessment and Planning System (CHAPS) that facilitates coordination between CDPHE and local public health agencies in setting common priorities, addressing disparities, and achieving improved health status across jurisdictions. CHAPS provides a framework for state and local public health to conduct community health assessments, capacity estimations, and to develop, implement and evaluate community-based public health improvement plans.
- Improved capacity of state and local partners to create policies, environments and systems that forge links between community-based prevention providers and support health in communities and health care settings.
- A statewide Colorado Prevention Alliance (CPA) that brings together leaders from major health plans, Medicaid, Medicare, state and local public health, business and advocacy organizations to build bridges between public and private health providers, identify shared goals and objectives, and find ways to leverage limited prevention resources.

- An integrated surveillance and evaluation system to assess and evaluate objectives across programs and domains.
- A commitment and ability to leverage data to change behavior and implement quality assurance processes in health systems.
- Partnerships with state and local public health agencies, the State Medicaid Program, the Governor's Office and many other statewide organizations optimize Medicaid matching funds, Center for Medicare/Medicaid Services requirements, and health care reform innovation grants. These partnerships provide statewide systematic support for evidence-based programs and initiatives such as Million Hearts, Diabetes Prevention Program, Tobacco Quitline, Stanford Chronic Disease Self-Management Program, school-based dental sealant programs, and community water fluoridation in Colorado. In addition, Colorado's State Health Innovation Plan (SIM plan) leverages the power of our public health system to support the delivery of clinical and behavioral health care and achieve broad population health goals.

## Plan Priorities

The Colorado Coordinated Chronic Disease Plan is organized into five priority areas, requiring leadership across multiple sectors locally and statewide:

- **Data and Evaluation** - Enhance coordinated chronic disease surveillance and evaluation efforts that inform planning of chronic disease prevention and control initiatives, including community-clinical linkages, health systems change, policy and environmental change, and health education and communication.
- **Policy and Environmental Approaches** - Support coordinated chronic disease prevention policies, practices, programming, and environmental change at the state and community levels.
- **Health Systems** - Establish of a comprehensive health system of prevention, early detection, treatment and management of chronic diseases.
- **Community-Clinical Linkages** - Ensure linkages between clinical or health care settings and effective, evidence-based community resources for people with chronic disease and those at risk for chronic disease.
- **Health Education and Communication** - Promote awareness and knowledge of chronic disease prevention, early detection, treatment and management among diverse key audiences.

This Chronic Disease State Plan highlights the burden of chronic disease, describes the collaboration process, outlines the methodology for evaluation and sets forth five priority areas for reducing the development and impact of chronic disease in Colorado. The Plan serves as a "Call to Action" for a network of state and local partners committed to preventing and controlling chronic disease in Colorado. With this team of partners working together to implement the strategies and reach the goals set out in this plan, we are confident we can actualize Colorado Gov. John Hickenlooper's vision to "*make Colorado the healthiest state.*"

## Background

In 2008, Colorado was selected as Centers for Chronic Disease and Prevention (CDC) Negotiated Agreement Pilot State (NAPS) for chronic disease integration demonstration pilot. A primary benefit of participation in the pilot was to align statewide efforts across disease areas to achieve important health outcomes. Colorado has learned valuable lessons in coordinated chronic disease prevention and control. NAPS provided CDPHE flexibility for organizing internal staff, work functions and categorical funding across the domains that serve as the cornerstone of this Chronic Disease State Plan. CDPHE is organized functionally across the four domains, resulting in streamlined business practices, enhanced coordination, collective thinking, innovation and a greater ability to address multiple risk factors to leverage resources. These domain areas also have served as a launching point for the development of Colorado's planning process and strategic investment in the goals of this plan.

### Establishment of Chronic Disease State Leadership Team

Colorado's Healthy Communities Coalition evolved into a partnership that developed a state response to the CDC's Community Transformation Grants. Following submission of the Community Transformation Grant, the coalition discussed continuing the public-private partnership to work together on coordinated chronic disease prevention and agreed to support the activities proposed in the Coordinated Chronic Disease Prevention and Health Promotion grant. Based on that discussion, coalition members formed a Chronic Disease State Leadership Team to provide input on the development of the Colorado Chronic Disease State Plan. Coalition membership provided the foundation for ensuring continuity and participation across public-private partnerships representing advocacy, public health, education, human services, higher education, health care, transportation, consumers, nonprofit organizations and minority groups.

### Community Engagement

In coordination with the Chronic Disease State Leadership team, CDPHE engaged communities and state-level partners by convening seven community forums with local health departments, their community partners and community members statewide. The purpose of these meetings was to develop a shared understanding and vision for a coordinated chronic disease approach in Colorado and solicit community input on a state plan. Engagement will continue throughout implementation.

Through these community forums, participants were better able to understand local opportunities, successes, obstacles and concerns in the implementation of a coordinated chronic disease approach.

The State Leadership Team used the information from these forums to drill down into goals and strategies within the domains of community-clinical linkages, health systems, policy and environmental change, health education, communication, and data and evaluation. They were able to gather the input needed to help draft a coordinated chronic disease framework.

Initially, a framework was developed to allow broad stakeholder engagement and support for implementation ([See Appendix A](#)). To begin to transform the tenants of the framework into a

working chronic disease plan, five domain workgroups were formed and charged with the task of crafting the five goal areas and corresponding work plan. The work plans outline the overall goal and criteria for success, plan objectives, and key partners.

## Evaluation

CDPHE used a collective impact approach by convening state and community leaders from categorical programs to explore how to develop a system based approach to address coordinated chronic disease. While CDPHE is serving as the lead organization, these high level partners are assisting in needed system level changes and implementation of the plan, therefore a number of evaluation methods will be blended to produce findings beneficial to partners and aimed at improving implementation. Assessment of the plan's success at achieving goals and objectives will be used to inform partners as we seek to align and refine our programs and target resources. As detailed in the Data and Evaluation domain, (Goal 1, Outcome 2), a variety of data sets and strategies will be used to determine success.

## Foundation

CDPHE used existing plans and chronic disease prevention and control initiatives to further align existing state efforts into one comprehensive CD State Plan.

### ***Tobacco Education, Prevention, and Cessation Grant Program Strategic Plan, 2012-2020***

In February 2012, the Tobacco Review Committee designated an ad hoc planning group representing the broad expertise and interests of the Colorado tobacco prevention and control community to formulate a tobacco education, prevention and cessation plan. The tobacco planning group included staff from CDPHE, the American Heart Association, University of Colorado Cancer Center, U.S. Department of Health and Human Services and local public health agencies. The tobacco plan was developed through collaborative leadership and an integrated planning process to become the roadmap for Amendment 35 grant distribution and "guide the efforts of each entity working to address specific tobacco issues in every community throughout the state." Stakeholder and partner feedback were essential components in drafting this plan. It will be used to share best current and available data, evidence-based practices and the state's strategic focus to educate and inform those working on tobacco prevention and control.

[www.coprevent.org/2012/03/tobacco-education-prevention-and.html](http://www.coprevent.org/2012/03/tobacco-education-prevention-and.html)

### ***Colorado Cancer Plan 2010-2015***

In 2010, the Colorado Cancer Coalition (CCC) released this plan as a roadmap for reducing the cancer burden in Colorado. The CCC is a consortium of organizations and individuals committed to the prevention and control of cancer in Colorado. The goals of the Colorado Cancer Plan are to target risk factors and further reduce mortality.

In addition, they aim to lessen, and eventually eliminate, cancer disparities in Colorado.

Goal setting was completed by consensus among the CCC members working in taskforces and public comment. Goals and objectives are based on Colorado surveillance data, national objectives,

and issues unique to Colorado. Recommended strategies cover cancer mortality, health equity, primary prevention, secondary prevention, treatment, rehabilitation, quality of life and surveillance. [www.coloradocancerplan.org](http://www.coloradocancerplan.org)

### ***Colorado Oral Health Plan***

In 2012, the statewide dental coalition, Oral Health Colorado (OHC), brought a diverse group of oral health advocates together to collaborate on six agreed-upon focus areas and strategies to increase oral health outcomes for all Coloradans, known as the Colorado Oral Health Plan. The six focus areas include Workforce, Infrastructure, Financing, Systems of Care, Health Promotion, and Health Equity. Oral diseases, ranging from dental caries (cavities) to oral cancers, cause pain and disability for thousands of Coloradans which the plan seeks to alter by increasing access, and use, to patient-centered comprehensive oral health care and education. In addition Colorado's governor has designated children's oral health as one of the state's 10 winnable battles over the next five years. <http://www.oralhealthcolorado.org/wp-content/uploads/2012/10/OralHealthPlanWeb.pdf>

### ***Colorado Million Hearts (MH) Initiative***

In 2013, the Million Hearts Leadership Team developed a plan to reduce heart attack and strokes in Colorado. The Team includes partners such as the American Heart Association, Kaiser Permanente Colorado, Colorado Prevention Center, Walgreens, local public health agencies, Colorado Regional Health Information Organization (CORHIO), Colorado Foundation for Medical Care, University of Colorado Skaggs School of Pharmacy, Regis University School of Pharmacy, the American College of Cardiologists and other stakeholders. The Team developed six strategies focused on the goals of increasing awareness of hypertension and improving care and management of cardiovascular disease.

### ***Diabetes Prevention Program***

In March 2012, CDPHE invited the National Association of Chronic Disease Directors Policy State Technical Assistance Team (PSTAT) to provide training and skill development to address pre-diabetes-related policy issues. CDPHE organized a group of stakeholders, many of whom continue to participate in an advisory group to create and advance an action plan. This group includes the Colorado Department of Health Care Policy and Finance (Medicaid), health systems, the Governor's Office on Policy and Research, health plans, employers and community-based organizations. The PSTAT process resulted in the development of a five-year action plan for implementation by the members of the Colorado Advisory Group. The goals of this plan include achieving employer and health plan reimbursement for the Diabetes Prevention Program (DPP), increasing awareness and referrals to the DPP, and identifying and training appropriate community-based organizations to provide the DPP.

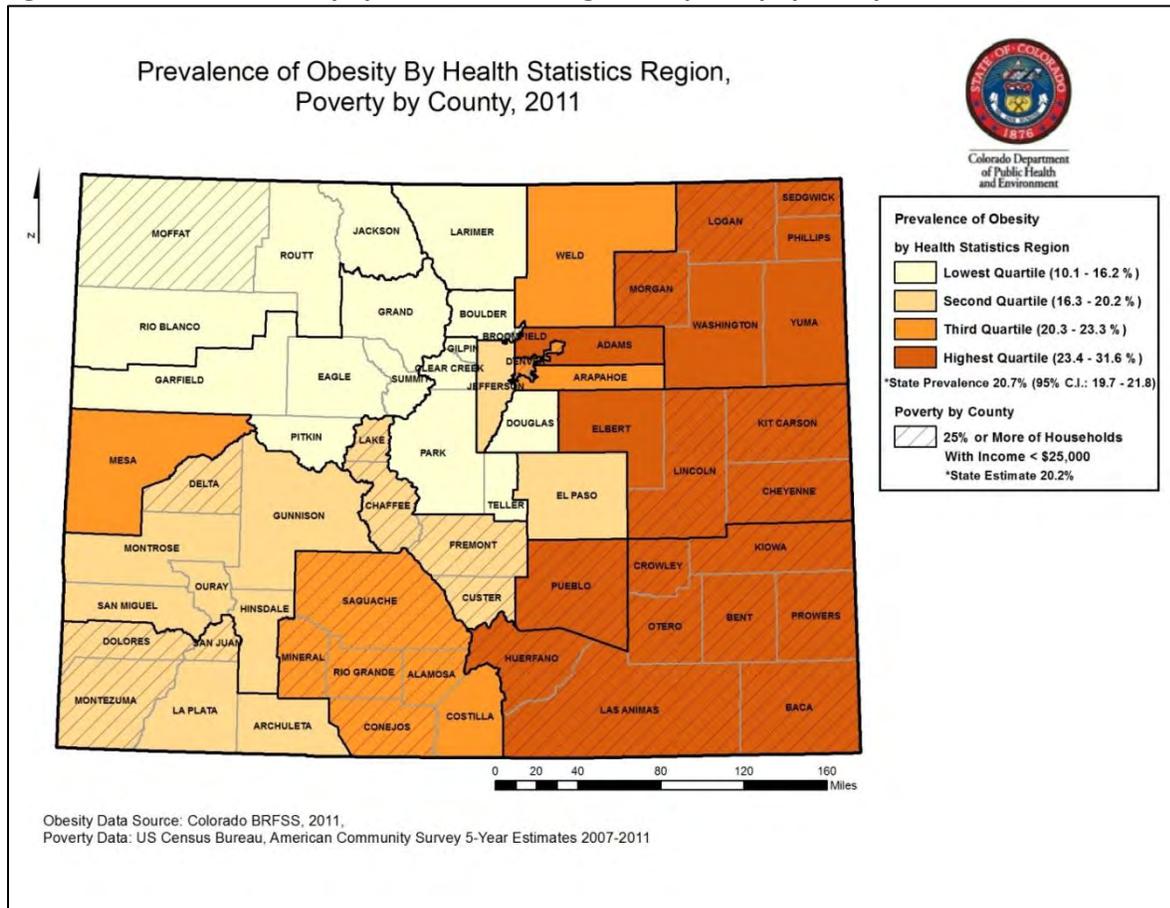
## The Burden of Chronic Disease in Colorado

Colorado faces healthy equity challenges in preventing and controlling chronic disease. The interplay of socio-economic, demographic, environmental and geographic factors affects the health and well-being of many Coloradans. These factors also influence program interventions, their delivery and coordination. The goal of ensuring health equity permeates this plan and forms the foundation for many proposed objectives and related key activities that will be implemented to achieve those objectives.

Colorado is a geographically diverse state with 17 urban, 24 rural and 23 frontier counties spread over high plains and mountains. In 2010, 82 percent of the Colorado's 5 million residents lived along the central Front Range of the Rocky Mountains. To the west, the mountainous counties of ski resorts and recreation areas and the agricultural areas of the Western Slope have a population of varied income and education levels. To the east, flat and sparsely populated counties are primarily sustained on grain and livestock production, with a population that tends to be poorer, less educated and with higher prevalence of risk behaviors and chronic disease than the state in general.

The following map represents one example of these geographic variations in chronic disease risk factors and socioeconomic status. The prevalence of obesity in 2011 was highest among residents of the eastern regions of Colorado and was concurrent with high levels of poverty. Poverty is one of the social determinants of health, economic and social conditions in which people live that contribute to determining their health.

Figure 1. Prevalence of obesity by health statistics region and poverty by county — Colorado, 2011



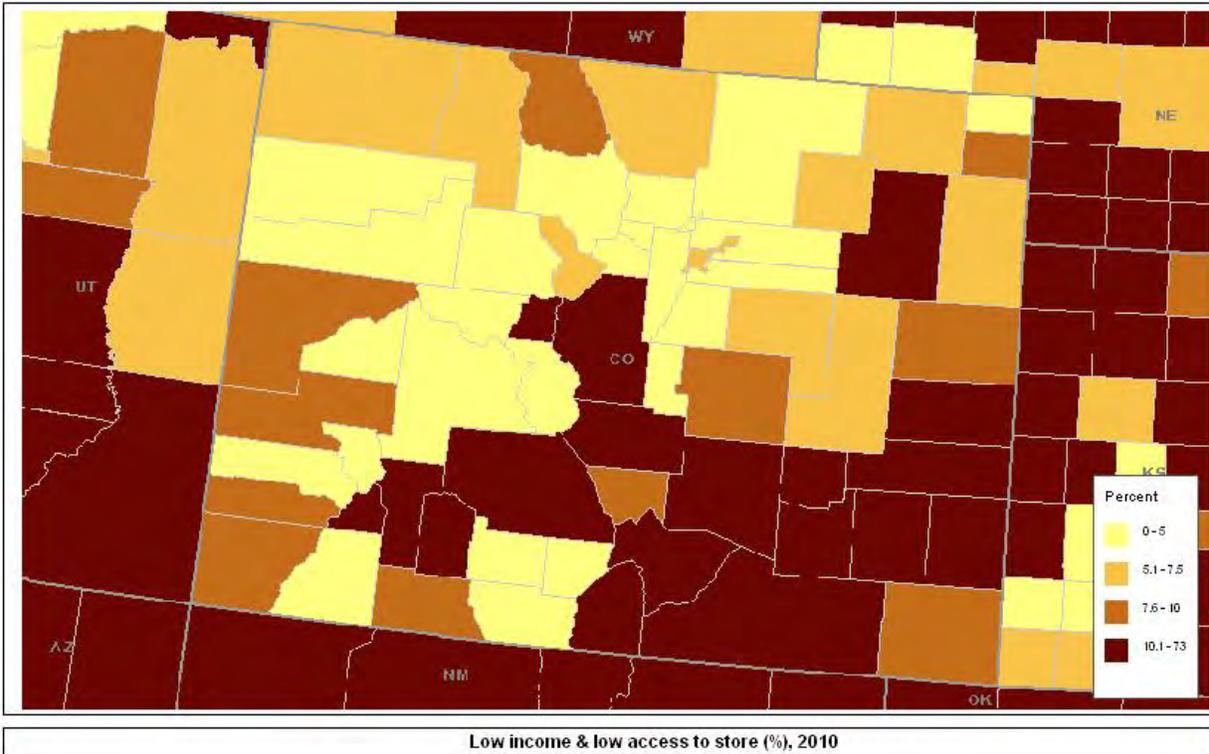
Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

The service environment (neighborhood resources for education, employment, transportation, health care, grocery shopping, recreation, and other services directly or indirectly tied to health) varies across Colorado counties and can influence health in many ways. Likewise, the physical and social environments (crime, safe parks, access to healthy food, pollution) can limit individual choice and access to resources. Households with fewer social and economic resources tend to have less access to those neighborhoods with health-promoting resources and environmental conditions. These differences can create and reinforce social disadvantages that create health disparities along socio-economic and racial/ ethnic lines.<sup>1</sup>

The following map is one example of geographic variation in neighborhood resources and socioeconomic factors at the county-level. The map shows the percentage of people in a county with annual family income of less than or equal to 200 percent of the federal poverty threshold who live more than one mile from a supermarket or large grocery store if in an urban area, or more than 10 miles from a supermarket or large grocery store in a rural area. In general, counties in southeastern Colorado had the highest prevalence of poverty and limited access to a grocery store in 2010.

<sup>1</sup> Robert Wood Johnson Foundation. "Neighborhoods and Health," Available at: [http://www.rwjf.org/content/dam/farm/reports/issue\\_briefs/2011/rwjf70450](http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2011/rwjf70450) [Accessed August 12, 2013]

Figure 2. Prevalence of low income and low access to a grocery store by county — Colorado, 2010



Data source: United States Department of Agriculture, Food Environment Atlas

The burden of chronic disease should be considered in the context of population factors such as the social determinants of health and place-based factors such as health-promoting resources and environmental conditions. The burden of chronic disease is typically measured in terms of mortality, morbidity, prevalence of risk factors and cost. These burdens vary by neighborhood, county or region, and by age, sex, race/ethnicity, poverty, income, education, disability and sexual orientation. Chronic disease prevalence data represent self-reported, doctor-diagnosed conditions. Undiagnosed illness is an individual-level and public health problem, especially for individuals with limited health and dental care access and for silent or stigmatizing conditions, such as high blood pressure, dental caries and depression.

Among adult Coloradans aged 45–84 years in 2011, 69 percent had at least one of 10 selected chronic conditions [arthritis, asthma, cancer (excluding skin cancer), COPD, depression, diabetes, coronary heart disease/angina, heart attack, high blood pressure, and stroke]. This prevalence was greater among those aged 65+ years (84.6 percent) or 55-64 years (70.2 percent) versus those aged 45–54 years (57.8 percent). It was greater among Blacks (79.6 percent) compared with Whites (68.3 percent), greater among females (71.7 percent) compared with males (66.7 percent), and greater among persons with low income (75.0 percent) compared with those with higher incomes (65.6 percent).

**Leading causes of death**

Chronic diseases accounted for seven of the top 10 causes of death in Colorado in 2011: 1) cancers, 2) heart disease, 3) unintentional injuries, 4) chronic lower respiratory diseases, 5) cerebrovascular disease, 6) Alzheimer’s disease, 7) suicide, 8) diabetes, 9) chronic liver disease and cirrhosis, and 10) influenza and pneumonia. Differences in the leading causes of death exist by race/ethnicity. For example, White Hispanics have a higher mortality rate from chronic liver disease and cirrhosis – their fourth leading cause of death – compared with all Coloradans; White Hispanics and Blacks have higher mortality rates from diabetes – their fifth leading cause of death – than the overall population.

**Cancer**

More than 7,000 Coloradans died from cancer in 2011 (age-adjusted mortality rate: 143.6/100,000), representing nearly 22 percent of all deaths. More than 220,000 cancer survivors were living in Colorado in 2011, representing 4.3 percent of Colorado’s population.<sup>2</sup> The table below shows age-adjusted incidence and mortality rates for the most common and potentially preventable cancers.

**Figure 3. Age-adjusted incidence and mortality rates for common and potentially preventable cancers — Colorado, 2009**

Cancer	Age-adjusted incidence rate*			Age-adjusted mortality rate*		
	Total	Male	Female	Total	Male	Female
Breast	69.1	1.1	130.9	10.8	0.2	19.5
Cervical	n/a	n/a	6.0	n/a	n/a	1.1
Colorectal	35.9	40.5	32.0	13.9	15.9	12.6
Lung and bronchus	48.9	56.0	43.9	36.4	43.1	31.5
Melanoma of the skin	22.6	29.1	17.7	3.7	5.3	2.4
Oral cavity and pharynx	8.8	12.2	5.7	2.0	2.6	1.5
Prostate	n/a	135.7	n/a	n/a	22.5	n/a

\*Rates are per 100,000 population, age-adjusted to the 2000 United States standard population.

Data source: Colorado Central Cancer Registry, Colorado Department of Public Health and Environment

Early detection of cancer greatly increases chances of successful treatment. In 2010, 64.5 percent of adults aged 50-75 years met the U.S. Preventive Services Task Force (USPSTF) colorectal cancer screening recommendations, but only 55.7 percent of Hispanics and 52.4 percent of persons with low income met these recommendations. In 2010, 75.9 percent of women aged 50-74 years met USPSTF mammography recommendations, but only 65.1 percent of women with low income met

<sup>2</sup> These estimates do not include non-melanoma skin cancer survivors.

them. In 2010, 82.2 percent of women aged 21-65 years met USPSTF recommendations for cervical cancer screening, but only 76.2 percent of women with low income met them. The prevalence estimates for compliance with USPSTF colorectal cancer, breast cancer and cervical cancer screening recommendations have fallen short of Healthy People 2020 targets of 70.5 percent, 81.1 percent, and 93.0 percent, respectively.

### ***Cardiovascular disease***

More than 6,200 Coloradans died from heart disease (age-adjusted mortality rate: 131.2/100,000) and about 1,600 Coloradans died of cerebrovascular disease (age-adjusted mortality rate: 34.8/100,000) in 2011, contributing to a total of nearly 8,500 deaths due to cardiovascular disease – 26 percent of all deaths. Mortality rates due to heart disease and stroke in Colorado were lower than national rates, but still fall short of Healthy People 2020 goals. The age-adjusted hospital discharge rate for major cardiovascular diseases as the primary diagnosis was 785.8 per 100,000 population (38,825 hospital discharges) in 2011.

In 2011, 2.5 percent of adults had angina or coronary heart disease. This prevalence was higher among males (2.9 percent), Blacks (4.3 percent), persons aged 55–64 years (4.0 percent) and persons aged 65 years and older (9.2 percent). In 2011, 2.7 percent of adult Coloradans had previously had a heart attack. This prevalence was higher for males (3.5 percent), persons aged 55–64 years (4.5 percent), those aged 65 years and older (9.9 percent) and persons with low income (4.1 percent). In 2011, 2.0 percent of adult Coloradans had previously had a stroke. This prevalence was higher for persons aged 55–64 years (2.7 percent), aged 65 years and older (5.7 percent) and persons with low income (3.2 percent).

High blood pressure can lead to serious outcomes such as coronary heart disease, heart failure, stroke and kidney disease. The adult prevalence of high blood pressure awareness was 25.0 percent in 2011 and was higher among males (27.3 percent), Blacks (39.1 percent), and persons aged 55–64 years (39.3 percent) or 65 years and older (55.9 percent). Of those aware of having high blood pressure, 70.1 percent reported taking medication for high blood pressure. Males (63.2 percent), Hispanics (58.4 percent), and younger adults had a lower prevalence of taking medication for high blood pressure; adults aged 25–34 years (12.4 percent), 35–44 years (39.7 percent), 45–54 years (67.1 percent), and 55–64 years (80.5 percent) had a lower prevalence of taking medicine for their high blood pressure compared with adults aged 65+ years (91.3 percent).

High blood cholesterol can lead to serious health outcomes such as angina, heart attack and stroke. The prevalence of high blood cholesterol awareness was 34.1 percent in 2011 (among adults aged 20+ years who had cholesterol checked) and was higher among persons aged 55–64 years (35.3 percent) and those 65 years and older (47.3 percent). In 2011, 76.0 percent of adults aged 20+ years reported having their cholesterol checked in the past five years. Males (72.7 percent), Hispanics (60.5 percent), persons with low income (67.3 percent), and younger age groups had a lower prevalence of having their cholesterol checked in the past five years.

### ***Chronic lower respiratory disease (including asthma)***

Chronic lower respiratory disease contributed to 2,161 deaths in 2011 (age-adjusted mortality rate: 46.8/100,000), which represents 6.6 percent of all deaths. The age-adjusted hospital discharge rate

for asthma as the primary diagnosis was 84.6 per 100,000 population (4,224 hospital discharges) in 2011. The age-adjusted hospital discharge rate for all other chronic lower respiratory disease, excluding asthma, as the primary diagnosis was 114.1 per 100,000 population (5,661 hospital discharges) in 2011.

In 2011, the adult prevalence of current asthma was 8.3 percent and was higher among women (9.6 percent). In 2009, the prevalence of current asthma was 12.2 percent among high school students. In 2010, the prevalence of current asthma was 9.3 percent among children aged 1-14 years. In 2008–2010, childhood prevalence was higher among Blacks (26.4 percent) and children aged 12-14 years (13.1 percent). In 2011, the adult prevalence of chronic obstructive pulmonary disease (COPD), emphysema or chronic bronchitis was 4.6 percent and was higher among females (5.3 percent), Whites (5.0 percent), persons aged 55–64 years (6.1 percent) or 65 years and older (10.9 percent), and persons with low income (7.1 percent).

### ***Diabetes***

Diabetes contributed to nearly 800 deaths in 2011 (age-adjusted mortality rate: 16.4/100,000), which represents about 2 percent of all deaths. The age-adjusted hospital discharge rate for diabetes as the primary diagnosis was 109.9 per 100,000 population (5,697 hospital discharges) in 2011. The adult diabetes prevalence in 2011 was 7.2 percent and was higher among Blacks (10.3 percent), Hispanics (10.3 percent), persons aged 55–64 years (11.2 percent) or 65 years and older (17.1 percent), and persons with low income (9.5 percent).

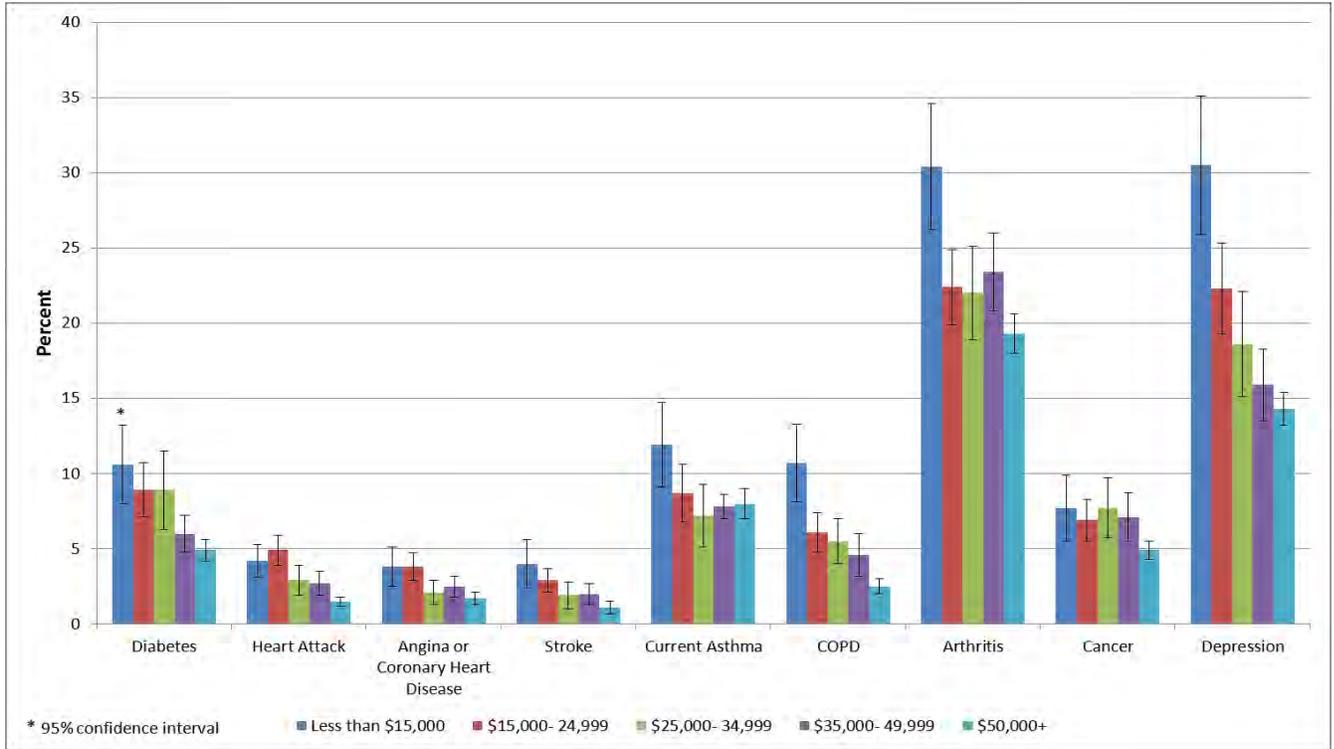
### ***Other chronic conditions that affect health behavior***

- In 2011, the adult prevalence of any form of arthritis was 21.8 percent and was higher among females (24.0 percent) and persons aged 55–64 years (36.1 percent) or 65 years and older (49.8 percent).
- The adult prevalence of ever being diagnosed with a depressive disorder was 17.6 percent in 2011 and was higher among females (22.4 percent), persons aged 55–64 years (22.2 percent), and persons with low income (22.0 percent).
- In 2011, the adult prevalence of kidney disease was 2.2 percent and was higher among persons aged 65 years and older (5.4 percent).
- The adult prevalence of vision impairment was 14.3 percent in 2011 and was higher among persons aged 45–54 years (12.9 percent), 55–64 years (15.9 percent), or 65+ years (29.0 percent) and those living in households with incomes of less than \$15,000 (20.8 percent) and \$15,000 – \$24,999 (18.2 percent).
- The prevalence of having lost all natural teeth among adults aged 65 years or older was 13.4 percent in 2010 and was higher among adults aged 75 years and older ( 17.5 percent) , Hispanics (22.4 percent) and those living in households with incomes of less than \$15,000 (27.7 percent) and \$15,000-\$24, 999 ( 23.6 percent).

**Disparities in chronic conditions by annual household income**

The following graph shows the prevalence of doctor-diagnosed chronic conditions by annual household income. The prevalence of each of these chronic conditions was higher among persons living in households with incomes less than \$15,000 compared with persons living in households with incomes of \$50,000 or more.

**Figure 4. Prevalence of chronic conditions by annual household income — Colorado, 2011**



Data source: 2011 Colorado Behavioral Risk Factor Surveillance System (BRFSS)

**Prevalence of chronic conditions among Medicare Fee for Service beneficiaries**

The prevalence of several chronic conditions – arthritis, cancer, kidney disease, COPD, diabetes, high blood pressure, and stroke – was higher in 2011 among the Medicare fee-for-service population than the general population of adult Coloradans, an expected finding given that the prevalence of these conditions tends to increase with age.

**Figure 5. Prevalence of chronic conditions among Medicare Fee for Service beneficiaries — Colorado, 2011**

Chronic Condition	Percent
Alzheimer’s/Dementia	10
Arthritis	27
Asthma	4
Atrial fibrillation	7

Chronic Condition	Percent
Cancer	8
Chronic kidney disease	13
COPD	10
Depression	14
Diabetes	19
Heart failure	11
High blood pressure	43
High cholesterol	33
Ischemic heart disease	21
Osteoporosis	7
Stroke	3

Data source: U.S. Centers for Medicare and Medicaid Services, <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Chronic-Conditions/CCStateReports.html>

### Multiple chronic conditions

As the number of chronic conditions increases, so does an individual’s risk for mortality, poor functional status, unnecessary hospitalizations, adverse drug events, duplicative tests and conflicting medical advice.<sup>3</sup>

In Colorado, 56 percent of Medicare Fee for Service (FFS) beneficiaries had fewer than two of 15 selected chronic conditions in 2011 [Alzheimer’s disease/dementia, arthritis, asthma, atrial fibrillation, cancer (breast, colorectal, lung, and prostate), chronic kidney disease, COPD, depression, diabetes, heart failure, high blood pressure, high cholesterol, ischemic heart disease, osteoporosis, and stroke]. Twenty-six percent of Medicare FFS beneficiaries with fewer than four chronic conditions incurred 63 percent of Medicare costs. Per capita costs per beneficiary increased with the number of chronic conditions, from \$2,230 for beneficiaries with 0–1 condition to \$31,524 for those with six conditions or more.

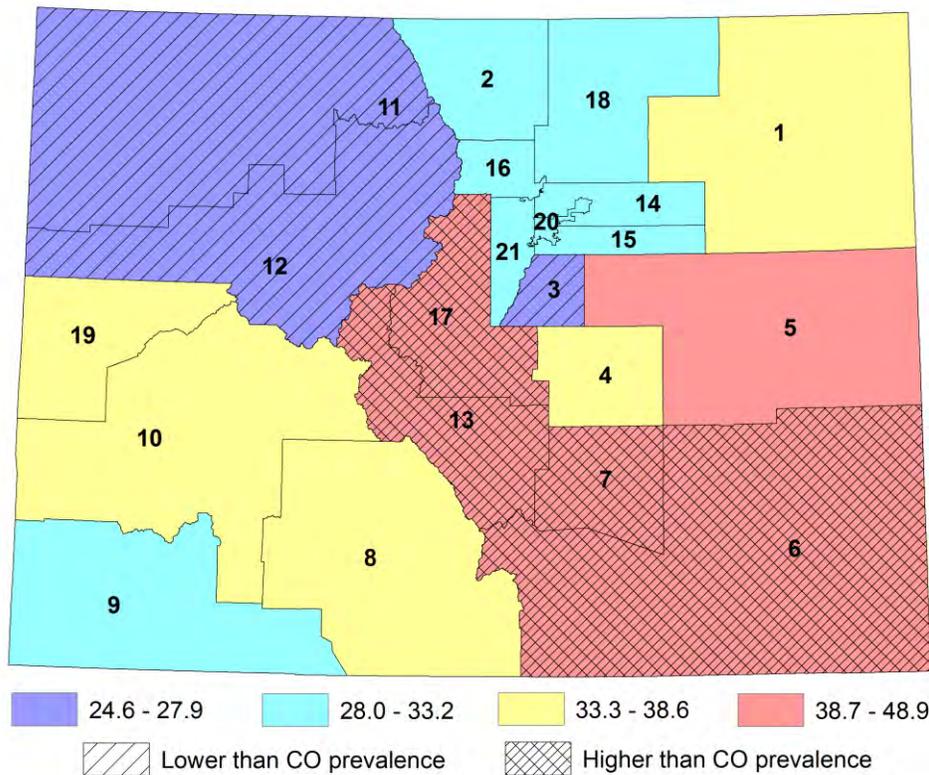
In Colorado, 33 percent of adult Coloradans had at least two of 11 selected chronic conditions in 2011 [any form of arthritis, current asthma, cancer (other than skin cancer), chronic obstructive pulmonary disease (COPD)/emphysema/chronic bronchitis, coronary heart disease or angina, depression, diabetes, high blood pressure, high cholesterol, kidney disease, or stroke]. The prevalence was higher among persons aged 45–64 years (44 percent) or 65+ years (70 percent)

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<sup>3</sup> U.S. Department of Health and Human Services. Multiple Chronic Conditions—A Strategic Framework: Optimum Health and Quality of Life for Individuals with Multiple Chronic Conditions. Washington, DC. December 2010.

and persons living in households with incomes less than \$50,000 (34–41 percent compared with 29 percent of persons living in household with incomes higher than \$50,000). By region of residence, the highest prevalence of multiple chronic conditions was in southeastern Colorado through the middle of the state – regions 6, 7, 13, and 17 – and the lowest prevalence was in northwestern Colorado – regions 11 and 12 as well as region 3.

**Figure 6. Adult prevalence of multiple chronic conditions\* by region — Colorado, 2011**



\* Two or more of the following 11 conditions: any form of arthritis, current asthma, cancer (other than skin cancer), chronic obstructive pulmonary disease (COPD)/emphysema/chronic bronchitis, coronary heart disease or angina, depression, diabetes, high blood pressure, high cholesterol, kidney disease, or stroke

Data source: 2011 Colorado Behavioral Risk Factor Surveillance System (BRFSS)

### Modifiable risk factors for chronic disease

Four health risk behaviors – tobacco use, poor diet, physical inactivity and alcohol consumption – increase an individual’s risk for many of the most prevalent chronic conditions. A study by Mokdad and colleagues found that about half of all deaths that occurred in the United States in 2000 could be attributed to a limited number of largely preventable behaviors and exposures. Of those, tobacco (435,000 deaths; 18.1% of total US deaths), poor diet and physical inactivity (400,000 deaths; 16.6%), and alcohol consumption (85,000 deaths; 3.5%) were the leading causes of death.<sup>4</sup> While there are other non-modifiable risk factors for chronic disease, such as age and genetics, these modifiable risk factors can be stopped, never started or changed to prevent chronic disease,

<sup>4</sup> Mokdad AH, Marks JS, Stroup DF, Gerberding JL. Actual causes of death in the United States, 2000. *JAMA*. 2004;291:1238-1245.

increase quality of life and reduce health care costs. In addition, recent studies link oral infection with diabetes, heart disease and stroke. Proper dental hygiene may support the prevention and management of some chronic diseases. Support for reducing health risk behaviors can be provided to individuals and communities by changing policies, systems and environments in such a way that the healthy choice becomes the easy choice.

### ***Adults***

In 2011, 18.3 percent of adult Coloradans were current smokers and 67.3 percent reported being exposed to secondhand smoke in their homes in the past 30 days. Additionally, 20.1 percent reported binge drinking and 38.2 percent did not meet physical activity recommendations. Adults reported consuming fruits 1.1 times per day and vegetables 1.7 times per day in 2011 (median number of times per day). In 2011, 38.0 percent of adults reported drinking one or more sugar-sweetened beverages per day. In terms of weight status, 35.4 percent of adult Coloradans were considered overweight and another 20.7 percent were obese in 2011, which has doubled from the 10.3 percent obesity prevalence in 1996 (56.1 percent overweight or obese in 1996). In 2010, 35.4% of adult Coloradans had lost a permanent tooth due to decay or gum disease.

Health disparities based on age, sex, race/ethnicity, poverty and income exist for most of these risk factors. For example, the adult prevalence of current smoking in 2011 increased as income level decreased, from 11.6 percent among persons living in households with incomes of \$50,000 or more to 31.8 percent among persons living in households with incomes less than \$15,000. The adult prevalence of obesity in 2011 was 34.2 percent among Blacks and 26.5 percent among Hispanics compared with 18.9 percent among Whites.

### ***High school students***

In 2011, 15.7 percent of Colorado high school students were current smokers, 22.3 percent reported binge drinking in the 30 days prior to being surveyed and 70.8 percent did not meet physical activity recommendations (i.e., did not get 60 minutes of physical activity daily during the previous week). Regarding screen time on an average school day, 21.2 percent watched television for three or more hours, and 24.1 percent played video games or used a computer for something that was not school work for three or more hours. High school students reported consuming fruits 0.6 times per day and vegetables 0.6 times per day in 2011 (median number of times per day). In 2011, 23.0 percent of high school students reported drinking one or more sodas per day. In terms of weight status, 10.7 percent of high school students were considered overweight and another 7.3 percent were obese in 2011 (18.0 percent overweight or obese).

Health disparities in weight status exist by race/ethnicity. The prevalence of overweight or obesity in 2011 was 32.3 percent among Hispanics compared with 12.6 percent among Whites. Hispanics (28.5 percent) were also more likely than Whites (17.3 percent) to watch television three or more hours per day on an average school day.

### ***Children***

In 2010, 30.9 percent of children aged 1–14 years who live with a smoker in the home were exposed to secondhand smoke in their home during the past seven days. In 2011, 51.1 percent of children aged 5–14 years did not meet physical activity recommendations (i.e., did not get 60

minutes of physical activity daily during the previous week). Among children aged 1–14 years in 2011, the prevalence of watching television or videos, played video games or played on a computer for two or more hours was 14.0 percent on a typical weekday and 51.3 percent on a typical weekend day. In 2011, 54.4 percent of children aged 1–14 years consumed fruits less than two times per day, and 56.8 percent consumed vegetables less than two times per day. In 2011, 21.9 percent of children aged 1–14 years drank one or more sugar-sweetened beverage per day. Women breastfed 43.8 percent of children aged 1–3 years at age 6 months. Food insecurity, defined as sometimes or often relying on only a few types of low-cost food because lack of money, was reported by 39.7 percent of parents of children aged 1–14 years in 2011. In terms of weight status, 15.1 percent of children aged 2–14 years were considered overweight and another 16.3 percent were obese in 2011 (31.4 percent overweight or obese). Regarding dental cavities, 39.7 percent of children in kindergarten and 55.2 percent of children in third grade had untreated dental decay and/or fillings (cavity experience); 13.8 percent of children in kindergarten and 14.4 percent of children in third grade had untreated dental decay (untreated cavities).

Weight-related health disparities have been seen among children – 22 percent of Black, 20 percent of Hispanic, and 11 percent of White children in Colorado were obese in 2008–2010. Health disparities based on race/ethnicity and poverty level exist for many additional risk factors, with the prevalence of risk factors generally being greater among Blacks, Hispanics and children living in households with low income.

### Multiple modifiable risk factors for chronic disease

Among adult Coloradans, 44 percent reported fewer than three modifiable risk factors for chronic diseases (high blood pressure, high cholesterol, diabetes, current smoking, overweight or obese, not meeting physical activity recommendations, and diet low in fruit/vegetables), and 8 percent reported none of these risk factors in 2007. The prevalence of multiple risk factors increased with age, from 24 percent among persons aged 18–24 years to 60 percent among persons aged 65 years or older; Blacks had a higher prevalence of multiple risk factors (59 percent) compared with Whites (43 percent) or Hispanics (47 percent). Persons with low income had a higher prevalence of multiple risk factors (49 percent) compared with those with higher incomes. About 33 percent of adults with high blood pressure were obese, and 65 percent of adults with diabetes had high blood pressure.

### Conclusion

Mortality, morbidity and prevalence of chronic disease-related risk factors in children, youth and adults, as well as the related health disparities, suggest concern for the burden of chronic disease in Colorado. A deeper exploration into social conditions that affect health is important. In Colorado, we are exploring health equity more deeply and investing in five domains that address disparities among segments of the population. Our Chronic Disease State Plan proposes policy and environmental approaches to create healthy environments for all communities, building a comprehensive health system, linking clinical services in communities, ensuring linkages between health and dental care settings and community resources, and coordinating chronic disease surveillance and evaluation efforts to inform planning and promoting awareness of chronic disease

among target audiences. Public health and health care partners will continue to enhance their work across sectors to improve the health of all Coloradans, particularly those who face the greatest obstacles, using evidence-based interventions.

## Data and Evaluation

Evidence-based public health practice involves making decisions based on the best available scientific evidence, using systematic data and information, applying program-planning frameworks, conducting sound evaluation and disseminating what is learned (Brownson 2009). This approach ensures the efficient and effective use of resources to meet plan goals. The “Data and Evaluation” priority area provides evidence-based public health components as well as related technical assistance to teams working within the other four domains. The goal of the “Data and Evaluation” priority is to enhance coordination of evidence-based chronic disease prevention and control efforts and practices among public health partners.

**Goal:** To develop enhanced coordinated chronic disease surveillance and evaluation efforts that inform planning for chronic disease prevention and control initiatives, including community and clinical linkages, health systems change, policy and environmental change, and health education and communication.

### Systems Coordination

**Outcome 1** - Colorado’s chronic disease surveillance system is coordinated across public health partners and integrated across chronic disease domains, chronic diseases and related risk factors.

*Criteria for success:* Public health partners in Colorado 1) use a common set of indicators to monitor chronic disease burden; 2) review progress on meeting indicator targets over time; 3) have increased access to relevant, timely data across disease, condition, and risk factor topics for public health program planning and evaluation; and 4) develop standard methods for assessing and monitoring health disparities.

**Objective 1.1** - By June 2014, develop and begin implementation of a data dissemination plan for coordinated and integrated chronic disease data and information.

**Objective 1.2** - By December 2014, 1) finalize and prioritize indicators for the integrated chronic disease surveillance system; 2) identify and plan to fill data gaps (such as statistically robust local level data); and 3) determine how health disparities will be monitored within the surveillance system.

Key partners: CDPHE, local public health agencies, HCPF, Colorado Health Institute, University of Colorado, Kaiser Permanente

**Outcome 2** - Chronic Disease State Plan evaluation needs are identified, planned and evaluation results are disseminated to make programmatic changes.

*Criteria for success:* Evaluation of Chronic Disease State Plan activities and initiatives is coordinated and strategic; evaluation results are disseminated widely to share lessons learned; and results are used to continue the cyclic evidence-based public health approach.

**Objective 2.1** - By December 2015, plan, conduct and complete an evaluation of the chronic disease and oral health surveillance system, disseminate results to key stakeholders and revise the system according to evaluation recommendations.

**Objective 2.2** - By December 2017, improve Chronic Disease State Plan activities by responding to evaluation findings and stakeholder feedback.

Key partners: CDPHE, all Colorado Chronic Disease State Plan domain teams, CEPEG, Colorado Health Institute

### Technical Assistance and Data and Evaluation Tools

**Outcome 3** - Resources and technical assistance are available for public health partners to use the evidence-based public health approach for planning chronic disease prevention and control initiatives.

*Criteria for success:* Public health partners 1) have a single source to go to for comprehensive information about chronic disease data sources and 2) have access to trainings, resources and technical assistance to help them make data-driven planning decisions using local level data.

*Example:* Through the CCPD grant program, CDPHE will partner with the University of Colorado Denver Health Sciences Center to build local capacity for monitoring, data collection and evaluation of chronic disease and health disparities work in Colorado. This will be achieved by providing training and technical assistance on surveillance and evaluation of selected pilots and programs addressing chronic disease and health disparities, analyzing data and contributing to funding support for the Healthy Kids Colorado Survey.

Key partners: CDPHE (including OPP, OHE, and CHEIS), local public health agencies, community groups and organizations, Colorado Health Institute, The Colorado Health Foundation

**Objective 3.1** - By December 2014, create and disseminate an online evidence-based public health resource inventory that includes chronic disease data and evaluation resources.

**Objective 3.2** - By December 2014, engage public health partners to determine data-related technical assistance needs and create and implement a plan to provide technical assistance to public health partners on surveillance and evidence-based public health approaches, including evaluation.

## Policy and Environmental Approaches

Policy and environmental strategies such as tobacco taxes and mandatory seatbelt laws have been proven to reduce disease, deaths, injuries and accidents in Colorado. Evidence shows that similar strategies can be used to prevent and control chronic disease by reducing the impact of associated risk factors such as tobacco use, physical inactivity and poor nutrition.

Many Coloradans confront a built environment that challenges their ability to make healthy lifestyle choices. They live in food deserts with easier access to low-priced, high-calorie foods than to fresh, healthy food or in neighborhoods with limited access to active transportation options that encourage physical activity. Healthy food and beverage policies and environmental changes make the healthy choice the default choice where people live, learn, work and play.

Across Colorado, there is a movement to support healthy choices. Schools and child care centers are engaging students and young children in physical activity and nutrition education. State and local health advocates are working to reduce tobacco sales to minors. Local communities are implementing policies to encourage active transportation, promote tobacco-free environments and support access to medical and dental homes. And hospitals, state and local governments are developing policies to support successful breast feeding and healthy food and beverage environments; corner stores are offering healthier food items; worksites are supporting their employees in healthy eating and active living; and state and local partners are redoubling their focus on policies and regulations to reduce youth and adult tobacco use and protect populations from second hand smoke. Through this plan, state and local public health will support community efforts to enhance policy and environmental change by developing model policies, practices and guidelines; coordinating resources, tools and data; and serving as a role model for healthy eating and active living.

**Goal:** To establish a system that supports coordinated chronic disease prevention policies, practices, programming and environmental change at the state and community levels, with a focus on health equity in all strategies.

### Physical Activity Policy Adoption

**Outcome 4** - CDPHE partners with local communities to develop policy and environmental strategies and best practices that focus on increased access to physical activity in the built environment to support chronic disease prevention and control.

*Criteria for Success:* 1) CDPHE provides technical assistance and resources on such policies to at least 20 local communities and local public health agencies; and 2) At least twenty communities adopt and implement policies that increase access to physical activity in the built environment.

*Examples:* Technical assistance may include *Policy and Needs Assessment of Active Living Initiatives in Colorado* and associated maps; model policy language; health impact assessment implementation; data and evidence-based research on the link between chronic disease prevention and the built environment; and local health statistics.

**Objective 4.1** - By December 2014, at least five Colorado communities adopt and implement policies to increase access to physical activity in the built environment to reduce chronic disease risk factors.

**Objective 4.2** - By December 2017, partner with at least 20 Colorado communities to adopt and implement policies to increase access to physical activity in the built environment to reduce chronic disease risk factors.

Key Partners: CDPHE, local public health agencies (LPHAs), local government agencies, LiveWell Colorado, HEAL Cities Campaign, the Colorado Health Foundation, Kaiser Permanente and elected officials

**Outcome 5** - Work completed with local public health and other partners to decrease the incidence of childhood obesity and diet-related chronic diseases.

*Criteria for success:* Childhood overweight and obesity in Colorado declines.

**Objective 5.1** - By December 2015, support “Baby Friendly” initiatives, including Cavity Free at Three Training, in 15 Colorado hospitals by providing technical assistance and financial support for the Baby Friendly Hospital Collaborative and technical assistance to Colorado workplaces about compliance with federal lactation accommodation law.

Key partners: CDPHE, CSPH, Denver Public Health, LPHAs, ASTHO

**Objective 5.2** - By December 2016, 1) Expand “I am Moving; I am Learning” (IMIL) training of trainers statewide to reach at least 100 additional early child education center providers and expand number of Spanish speaking IMIL trainers; and 2) Expand IMIL program to low SES counties.

Key partners: CDPHE

**Objective 5.3** - By December 2016, develop, implement and evaluate comprehensive school physical activity programs (CSPAP). Provide technical assistance to at least 15 school districts for updating and implementing policies for physical education and activities, including new state Physical Education Standards.

Key partners: CDPHE, Colorado Department of Education (CDE)

**Objective 5.4** - By December 2017, expand the “We Can!” program piloted in Mesa County to 20 medical practices or facilities where children gather, with a focus on low SES communities. Use expansion of this evidence-based weekly program to help overweight or obese children and their parents reach healthy weight through improved nutrition and physical activity in a family centered, medical model of care.

Key partners: CDPHE, Rocky Mountain Health Plans Foundation, Primary Care Partners, Mesa County Health Department, Mesa County Partnership for Children and Families, and Colorado West Mental Health.

**Objective 5.5** - By October 2014, assist ECEs in Colorado in exceeding the requirements of the basic USDA Meal Pattern. The Colorado Child and Adult Care Food Program (CACFP) will develop four new nutrition standards for ECEs that reduce added sugar, sodium, solid and trans fats; and increase fruit, vegetables and fiber consumption.

**Objective 5.6** - By December 2017, promote the adoption and implementation of food service guidelines and nutrition and physical activity standards in ECE programs throughout Colorado.

**Objective 5.7** - By December 2017, provide continuous technical assistance and support to ECE providers across the state in meeting improved nutrition guidelines. Increase cooking skill competency, culinary literacy and support for the new standards from teachers, administrators and parents.

Key partners: CDPHE Child & Adult Care Food Program

**Objective 5.8** - By December 2015, at least three Denver metro area Local Public Health Agencies (LPHAs) will have launched healthy beverage efforts with their cities and towns, as part of the implementation of their Community Health Improvement Plans (CHIP).

Key partners: Denver Public Health, Jefferson County Public Health, Tri-County Public Health, Boulder Public Health and CDPHE.

**Objective 5.9** - Incorporate oral health as a component of Coordinated School Health.

Key partners: CDPHE, OHCO, CDE

**Objective 5.10** - Ensure that local public health agencies have available patient education resources/tools on oral health including impact of oral health on physical health.

Key partners: CDHPE, LPHAs, OHCO

**Outcome 6** - Strengthen, support and provide assistance to Colorado health care facilities in developing and implementing model nutrition guidelines and food and beverage procurement, service and sales policies.

*Criteria for Success:* By January 2015, at least 15 Colorado health care facilities will gain membership to the Colorado Healthy Hospital Compact, with a commitment to adopt nutrition and procurement policies for hospital cafeterias, vending and patient meals. By December 2017, a total of 35 health care settings are participating in the Compact and the Compact is a regional and national model for the implementation of healthy food and beverage standards in health care.

**Objective 6.1** - By August 2014, organize a statewide conference of hospitals and health care organizations to share best practices in Colorado and nationally, and to recruit hospitals for participation in Colorado Healthy Hospital Compact.

Key Partners: CDPHE and the Healthy Beverages State Team, which includes Live Well Colorado, Colorado Health Foundation, Robert Wood Johnson Foundation, Kaiser Permanente, The Children's

Hospital, Denver Public Health, HEAL Hospital Forum, Centura Health, Exempla Lutheran Health, Denver Public Health, Jefferson County Public Health, and Tri-County Public Health.

**Objective 6.2** - By December 2014, provide technical assistance to 10 hospitals on the development and implementation of nutrition standards, healthy product procurement, healthy product placement, pricing strategies, healthy food and beverage procurement, and communication and marketing strategies.

Key Partner: CDPHE

**Objective 6.3** - By December 2017, 35 hospitals are members of the Colorado Healthy Hospital Compact. Compact membership recruitment efforts will be focused in rural and underserved areas to address health disparities.

Key partners: CDPHE and the Healthy Beverages State Team

**Outcome 7** - There will be more healthy food and beverage retail in Colorado rural and underserved communities.

*Criteria for success:* Frontier, rural and low-income, low-SES communities in Colorado have access to corner stores and small retail venues that provide options for fresh, healthy and nutritious foods and beverages.

**Objective 7.1** - By December 2017, leverage funding from the Colorado Fresh Food Financing Fund and state and federal sources to support the addition of healthy foods and beverages in small retail venues located in low-SES, urban, rural and frontier communities in Colorado.

**Objective 7.2** - By October 2014, survey food retail environment in 10 small Weld County retailers from low-income census tracts to participate in a healthy food retail reform effort. Launch healthy food retail pilot in the 10 venues.

**Objective 7.3** - By December 2017, healthy food retail projects are launched in five additional rural counties with low SES populations.

Key partners: CDPHE, Weld County Department of Public Health & Environment

### Tobacco Education, Prevention and Control Policy

**Outcome 8** - CDPHE will support the development, implementation and dissemination of model policies, pricing incentives and regulations to reduce youth and adult use of and access to tobacco and protect populations from secondhand smoke exposure. We will work with communities to adopt such policies, incentives and regulations.

*Criteria for Success:* Communities adopt, implement and enforce effective tobacco policies and regulations on youth access, advertising and marketing, pricing, point-of sale advertising and second hand smoke reduction in low SES populations, workplaces and communities.

**Objective 8.1** - By December 2017, a majority of Coloradans live, learn, work and play in communities that have effective policies and regulations that reduce youth and adult use and access to tobacco. As measured by number of local policies that expand the protection from second hand smoke and youth access.

**Objective 8.2** - By December 2017, exposure to secondhand smoke in low SES populations decreases by 30 percent from its current baseline.

**Objective 8.3** - By December 2017, the majority of Colorado localities adopt tobacco pricing incentive regulations and Colorado is among the 10 states with the highest price for tobacco products.

Key partners: CDPHE, Local Public Health Agencies (LPHAs)

### Worksite Wellness

**Outcome 9** - Support the expansion of worksite wellness policies and initiatives founded on evidence-based strategies to prevent chronic disease risk factors, promote early detection and management of chronic disease, increase physical activity and healthy eating behaviors, and reduce tobacco usage among workers.

*Criteria for success:* State agencies offer healthier foods and beverages in state cafeterias and vending and implement smoke free campus policies. State worksite wellness programming combines healthy eating, physical activity and chronic disease prevention programs routinely evaluated for effectiveness and impact. Health insurance plans for state workers include evidence-based incentives for health risk assessments, biometric screenings and follow-up prevention, and early detection and disease management programs, including but not limited to tobacco cessation and weight loss programs. The State of Colorado shares research, outcomes and best practices with private employers who are implementing evidence based programming.

**Objective 9.1** - By March 2014, there is a 20 percent decrease in sugar-sweetened beverages (SSBs) offered in vending and cafeterias at five state venues calculated from a Fall 2013 baseline.

Key partners: CDPHE, Colorado Department of Human Services (CDHS), other Colorado state agencies

**Objective 9.2** - By December 2017, there is an 80 percent decrease in SSBs offered in vending and cafeterias in all state agencies and venues. The decrease is calculated from an April 2013 baseline.

Key partners: CDPHE, Colorado Department of Human Services (CDHS), Department of Personnel and Administrative, Department of Labor and Employment, and other Colorado state agencies

**Objective 9.3** - By March 2014, five state venues offer healthier foods or meals in state cafeterias and vending.

Key partners: CDPHE, Colorado Department of Personnel and Administration, designated state agencies.

**Objective 9.4** - By December 2017, all state venues and agencies offer healthier foods or meals in cafeterias and vending in accordance with the 2010 Dietary Guidelines.

Key partners: CDPHE, Colorado Department of Personnel and Administration, all Colorado state agencies.

**Objective 9.5** - By March 2014, the Department of Personnel and Administration will implement one evidence based chronic disease prevention program available for state agency employees.

Key partners: Colorado Department of Personnel and Administration, health plans serving state workers, CDPHE

**Objective 9.6** - By December 2017, all state agencies coordinate with state health plans to offer three chronic disease prevention and early detection programs to their employees.

Key partners: CDPHE, Colorado Department of Personnel and Administration, health plans serving state workers.

**Objective 9.7** - By March 2014, the State of Colorado will identify one worksite wellness survey instrument to evaluate chronic disease prevention, early detection and disease management programs offered by public and private employers.

Key partners: CDPHE, Colorado Department of Personnel and Administration, University of Colorado School of Public Health and School of Medicine.

**Objective 9.8** - By December 2015, the State of Colorado will issue a statewide scan of public and private worksite wellness initiatives in Colorado.

Key partners: CDPHE, Colorado Department of Personnel and Administration, University of Colorado School of Public Health and Medicine.

## Health Systems Transformation

Strong evidence exists that controlling risk factors will substantially reduce chronic disease. Early detection and management of chronic disease prevent complications, slow progression and improve health outcomes. Greater health insurance coverage alone will not ensure the provision and use of preventive services. Building a coordinated health system improves the clinical environment by more effectively delivering evidence-based preventive services and helping Coloradans more effectively access those services to improve their health. Health systems and quality improvement changes such as use of electronic health records, feedback on clinical performance, and reporting requirements for tobacco use, high blood pressure, diabetes and other screenings can encourage health care providers and health plans to focus on preventive services and ultimately lead to better health outcomes for Coloradans.

**Goal:** Build on existing efforts to establish a comprehensive health system of prevention, early detection, treatment, and management of chronic diseases.

### Health Information Technology

**Outcome 10** - Health information technology (HIT) is used to improve risk factor and chronic disease management, increase use of preventive care and increase the implementation of quality improvement processes in health systems.

*Criteria for Success:* Develop an electronic health information transfer and exchange functionality. HIT partners collaborate with public health so that providers and patients use the tools to support chronic disease control, including alerts, patient reminder systems, clinical decision supports, clinical quality measures, and patient registries. There are targeted resources, training and technical assistance for health care systems in QI: assessing gaps and aligning current surveillance efforts to capture accurate measures of both behavioral and physiologic mediators of chronic disease in the population.

**Objective 10.1** - Establish partnerships with Colorado Regional Health Information Organizations (CORHIO) & Colorado Regional Extension Centers (CORECS), Quality Health Network (QHN), Medicare/Colorado Foundation for Medical Care, Medicaid/Regional Care Collaboratives (RCCOs), and other partners engaged in activities to promote meaningful use of EHRs. Provide support and technical assistance on evidence-based strategies and best practices to provider groups, school-based health centers, and partner organizations to better manage screening, risk factors and chronic disease.

**Objective 10.2** - By December 2016, 85 percent of all primary care and safety-net providers are meaningful users of chronic disease clinical quality measures of the electronic health records.

**Objective 10.3** - Assess and support all partners in their efforts to build capacity for EHRs.

Key partners: CORECS, RCCOs, Center for Improving Value in Health Care (CIVHC), QHN, Colorado Community Health Network (CCHN), School Based Health Centers, Rural and Primary Care Health Office, Health Team Works, Physician Health Partnership and CDPHE.

**Objective 10.4** - By December 2017, 85 percent of primary care and safety net providers are reporting CD health measures through the Health Information Exchange.

Key partners: CORHIO, CORECS, CCHN, OHCO with collaboration from HCPF, CDPHE and State Leadership Team.

### Evidence-Based Health Care Access

**Outcome 11** - Health insurance plans continue to expand coverage of evidence-based practices to prevent, detect, and control chronic diseases.

*Criteria for Success:* CDPHE, the Colorado Association of Health Plans (CAHP), the Colorado Prevention Alliance (CPA), and Medicaid have partnered to examine the USPSTF grade A and B recommendations and progress in making operational benefits to include evidence-based programs or interventions in at least three areas.

**Objective 11.1** - Support efforts to remove barriers and improve outreach regarding available and underused prevention and management health benefits. This may include offering subject matter expertise, evidence-based research and opportunities for collaboration. A minimum of 50 percent of fully insured health plans have made operational three Chronic Disease USPSTF recommendations by December 2015.

Key partners: CPA and State Leadership Team

**Objective 11.2** - At least 50 percent of health plans offer two low-cost or no co-pay services to prevent and control chronic disease by December 2017.

Key partners: CPA, and CDPHE

*Examples:* Assessment of BMI and diagnosis of overweight/obese clients by providers, home blood pressure monitors checks, pre-diabetes and diabetes education, and Diabetes Prevention Program.

### Health System Coordination and Improved Preventive Care

**Outcome 12** - There will be greater coordination of the public health and health care systems resulting in increased utilization of evidence-based services for chronic disease prevention, early detection, and control.

*Criteria for Success:* State Leadership Team and health system develop a referral and feedback mechanism among health care, worksites, schools and public health. Providers connect to the community of support outside the clinical office. Coloradans have increased access and opportunities to engage in evidence-based and community-centered health and wellness programs, screenings, diagnostics and treatment.

*Examples:*

- Alignment of State tobacco excise tax supported programs — Cancer, Cardiovascular and Pulmonary Disease, Tobacco and Health Disparities with Chronic Disease domains

## Colorado Chronic Disease State Plan

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February 2014

- Expanded access and reimbursement for Chronic Disease Self-Management Education, the National Diabetes Prevention Program and Diabetes Self-Management Education throughout CO communities
- Expanded State Medicaid chronic disease prevention and control programs serving disproportionately affected and low-SES populations
- Efforts to establish medical homes for all promoted and supported.
- Promote worksite wellness programs that support CD screening, healthy eating & physical activity
- Success gaps for STEPP tobacco control programs, including the Quitline use and cessation services, addressed
- Obesity and tobacco addiction as a chronic condition in health systems treated (see objective 15)
- Pueblo City & County Health Department's Coordinated Chronic Disease pilot project evaluated
- Team-based care reimbursement models for chronic disease management promoted
- Oral health will be financed as an important part of general health, measured by mandated public and private dental insurance coverage for adults and children
- Develop formal referral mechanisms between dentists and physicians for medical screenings (diabetes, hypercholesterolemia, and hypertension) in dental settings. These screenings could reduce health care costs and increase health outcomes

**Objective 12.1** - By June 2015, facilitate at least five referral systems between clinical systems and community prevention or self-management education programs. Implement systems to increase access and referrals to evidence-based chronic disease programs that meet national standards and demonstrate improved behavioral and clinical outcomes for people with chronic disease.

Key partners: State Leadership Team

**Objective 12.2** - By December 2014, partner with University of Colorado Denver to increase colorectal cancer screening rates of Coloradans aged 50-64 years by working with community clinics to carry out screening and follow-up services to medically underserved Coloradans.

Key partners: CDPHE, University of Colorado Denver, Colorado Cancer Coalition

**Objective 12.3** - At least 80 percent of Chronic Disease partner organizations (CD State Leadership Team) will report greater coordination among public health programs and health care systems by 2014, increasing to 95 percent by December 2016.

**Objective 12.4** - By March 2017, work with community clinics to carry out health system change and deliver the latest and most appropriate chronic disease prevention, early detection, treatment and quality of life care for underserved and rural communities. Ensure that the majority of underserved urban and rural communities in Colorado have access to screenings, diagnostics and treatment.

Key partners: CDPHE/LPHAs, State Leadership Team, Tri-County Health Department

*Examples:* CVD screening for qualifying women, cervical and breast cancer screening

**Objective 12.5** - By June 2017, increase chronic disease-based educational opportunities for organizations, providers, pharmacists and community health workers, including modules focused on diabetes and hypertension. Metric established after baseline assessment.

Key partners: CDPHE

### Treat Tobacco Dependence, Obesity & Poor Oral Health as Chronic Conditions

**Outcome 13** - A majority of people and health care systems in Colorado recognize and treat tobacco dependence, obesity and poor oral health as chronic conditions.

*Criteria for Success:* Tobacco dependence and obesity are aligned and integrated with other chronic disease programming and strategies in health care facilities and systems.

**Objective 13.1** - By December 2017, a majority of tobacco cessation treatment coverage packages align with state recommendations. Medicaid coverage and Colorado QuitLine protocols are modified to help manage tobacco as a chronic condition.

*Key partners:* CDPHE and the Tobacco State Leadership Team

**Objective 13.2** - By December 2018, increase the health insurance coverage for evidence-based obesity prevention strategies and counseling, including DPP. Metric established after baseline assessment.

Key partners: CDPHE

**Objective 13.3** - Increase the number of dental professionals accepting Medicaid and working with high-risk populations. Also, increase the number of dental professionals who provide oral health care to children by age one, pregnant women and older adults.

Key Partners- CDPHE, OHCO, CCHN,

## Community-Clinical Linkages

In the ever-changing health care landscape, it is increasingly important to reach people through their communities. Closely aligned with the transformation of Health Systems, Colorado intends to strengthen linkages between the traditional clinical setting and the places where people live, work and play by sustaining a community-based workforce that complements a medical team; reducing barriers to quality chronic disease prevention, treatment and management; developing a sustainable system to find community-based resources; and increasing the evidence-based opportunities for community members to manage their health.

**Goal:** Ensure linkages between clinical/healthcare settings and effective, evidence-based community resources for people with chronic disease and those at-risk.

### Community Resources, Health Workers and Patient Navigation

**Outcome 14** - Develop and implement sustainable models for community health workers and patient navigators to facilitate access and utilization of effective clinical and community resources for prevention, early detection and management of chronic disease, especially among priority populations.

*Criteria for success:* Patient navigators and community health workers are employed in urban, rural and frontier communities through sustainable funding and have access to trainings, public health data and outcomes.

**Objective 14.1** - By December 2013, achieve consensus by Patient Navigator-Community Health Worker (PN-CHW) Collaborative on competencies of patient navigators (PNs) and community health workers (CHWs).

Key partners: Patient Navigator-Community Health Worker Collaborative

**Objective 14.2** - By July 2014, The PN-CHW Collaborative will identify and develop training pathways for PNs and CHWs in Colorado, in coordination with A35 review committees prioritization and grant process.

Key partners: PN-CHW Collaborative Training/Certification Subcommittee, LiveWell Colorado

**Objective 14.3** - By February 2015, there will be increased use of Patient Navigator and Community Health Worker training programs to expand capacity for chronic disease screening, with diagnostic and treatment mobile units in rural and under-served communities [metric established after baseline assessment].

Key partners: CHWPN and A 35 Review committees

**Objective 14.4** - By June 2015, identify and implement sustainable funding mechanisms for patient navigators and community health workers through health plan reimbursement pilots and other payment mechanisms.

Key partners: CHW-PN Work Group Sustainable Funding Subcommittee

**Outcome 15** - A centralized resource system for community-based resources is established.

*Criteria for success:* By 2017, a single, sustainable resource system exists to facilitate coordination of and referrals to community-based resources.

**Objective 15.1** - By 2014, identify and recruit at least five programs or organizations with established resource systems.

**Objective 15.2** - By December 2015, convene Community-Based Resources Workgroup to develop a pilot of a statewide centralized community-based resource system. Test systems and continuously monitor and evaluate.

Key partners: CDPHE

### Engaging a Comprehensive Health Care Team

**Outcome 16** - Increased engagement of non-physician practitioners (including pharmacists, dentists, dental hygienist, community health workers, patient navigators and other health-extenders) to increase awareness, access and utilization of early detection, screening and self-management.

*Criteria for success:* Increased proportion of health extenders who offer or provide referrals to medication management, self-management, screening and other chronic disease programs.

**Objective 16.1** - By June 30, 2017, increase the number of pharmacists engaged in the provision of medication therapy management and self-management community education for adults with hypertension and adults with diabetes. Metric established after baseline assessment.

**Objective 16.2** - By June 30, 2017, increase the number of oral health and health care providers who engage in cross-referral for chronic diseases, including hypertension and oral disease. Metric established after baseline assessment.

**Objective 16.3** - By June 30, 2017, increase the number of community health workers, patient navigators and promotores who provide linkages between health systems and community resources for adults with high blood pressure and adults with diabetes. Metric established after baseline assessment.

Key partner: CDPHE

**Objective 16.4** - By June 2017, develop a sustainable statewide system to use pharmacy students in rotations across the state to provide blood pressure checks, consultation and referral.

Key partners: CDPHE, Regis University, and University of Colorado

**Objective 16.5** - By June 2017, develop sustainable reimbursement mechanism for pharmacists to participate as on-care teams.

Key partners: CDPHE, University of Colorado, Regis University, Colorado Pharmacists' Society

**Objective 16.6** - By 2017, support primary care providers' (MD, PA, NP's) training so that they provide preventive oral health –risk assessment, screenings and fluoride varnish application as part of a well child visit.

Key partners: Oral Health Unit

### Chronic Disease Management, Survivorship, and Support

**Outcome 17** - Increased organization and coordination between health care systems, school districts, low-income housing authorities, correctional facilities and social services to support chronic disease management, cancer survivorship, and self-management care plans, particularly low SES populations.

*Criteria for Success:* Colorado health and dental care systems, school districts, low-income housing authorities, correctional facilities and social services provide access to evidence-based disease management and self-management care plans based on clinical practice guidelines to guide a patient's.

**Objective 17.1** - By 2015, ensure that low-SES groups have access to disease management and self-management care plans.

Key partners: State Leadership Team and various disease specific coalitions

**Outcome 18** - Increased use of evidence-based preventive community services that meet low SES community needs to address the existing health disparities regarding tobacco use, obesity, and chronic disease

*Criteria for Success:* Increased number of evidence-based preventive community services implemented in identified low-SES communities. Active coalitions representative of the community help bring about behavior change with defined populations.

**Objective 18.1** - Increase access to STEPP tobacco control programs, including the Quitline, DPP, CDSMP, cancer screening programs, school-based dental sealant programs, community water fluoridation and other evidence-based prevention and control programs.

**Objective 18.2** - By 2017, increase cancer, tobacco, diabetes, blood pressure, cholesterol and oral health screening for low-SES populations.

*Examples:* By December 2017, tobacco prevalence and initiation among young adults, especially straight-to-work, decreases by 30 percent. By December 2017, tobacco initiation among youth decreases by 30 percent, especially for high burden and low-SES populations.

Key partners: CDPHE and local public health agencies, CCHN/Rural Health Network, and other community clinics.

## Health Education and Communication

Health education and communication supports, strengthens and enhances efforts of other domains by raising public awareness, broadening outreach to partners and implementing effective marketing strategies to communicate collaborative chronic disease prevention efforts. Such efforts rely on analyzing the social and behavioral characteristics of target audiences to deliver effective messages through appropriate communication channels to influence health behaviors. Health education and communication is an integral component of this plan. The tactics outlined here can inform and influence individual and community efforts to enhance healthy behaviors, reduce health disparities and prevent chronic disease. Nationally recognized institutions, such as the Centers for Disease Control and Prevention, encourage communication strategies in comprehensive interventions aimed at affecting individual, community, organizational and environmental policy change.

**Goal:** Promote awareness and knowledge of chronic disease prevention, early detection, treatment and management among diverse key audiences, with an emphasis on health disparities and their root causes, including social & economic obstacles to health and limited English proficiency

### Communication and Coordination of Plans, Tools and Community Resources

**Outcome 19** - Increased knowledge and utilization of Coordinated Chronic Disease Framework as a base for chronic disease communication efforts.

*Criteria for success:* Community stakeholders, policymakers and partners receive, support and prioritize the Coordinated Chronic Disease Framework to reduce the burden of population-level chronic disease.

**Objective 19.1** - By August 2017, educate and support state and community stakeholders with targeted implementation of the Coordinated Chronic Disease Framework through continual dissemination of information and resources. Engage elected officials, policy makers, business and community leaders to become champions and supporters of the coordinated chronic disease framework efforts at the state and community levels. Evaluate use of chronic disease framework toolkits through partner survey feedback. Make modifications as needed.

Key partners: CDPHE

**Outcome 20** - Expanded access to tools and information to support all Coloradans in making healthy choices related to chronic diseases.

*Criteria for success:* The majority of Coloradans have access to tools and information needed to prevent and manage chronic disease.

**Objective 20.1** - By August 2017, increase awareness and availability of existing community resources to provide education, statewide data, policies, trainings, prevention-specific articles and other information on chronic disease prevention and control through a CDPHE email-based collaborative group and COPrevent.org, an interactive blog of the CDPHE Prevention Services

Division that provides news and updates to more than 2,000 partners working with the division to promote healthy living and prevent chronic disease.

Key partners: CDPHE

**Objective 20.2** - Identify new and existing partner communication channels based on partner identified opportunities for inclusion of chronic disease health education messages and cross promotion. Maintain more than five channels to disseminate chronic disease information targeted by audience, literacy level and health information access.

Key partners: CDPHE, LPHAs, partner organizations

**Objective 20.3** - Maintain online material fulfillment center to provide chronic disease-related outreach materials for partner customization, download and print orders. Templates will include press releases, fact sheets, educational materials, advertising campaigns and other communications collateral.

Key partners: CDPHE

**Outcome 21** - Aligned chronic disease messaging with other state agencies, local public health, and community partners on chronic disease prevention, and the social determinants of health framework. Messaging will include program enrollment, diabetes management, and nutrition and physical activity recommendations and regulations. Provide supportive messaging documentation to partners to facilitate use. Survey partners to determine ease of use and make messaging modifications as needed.

*Criteria for success:* CDPHE and state and local partners have a shared communication plan to disseminate chronic-disease related messaging. Messages rooted in focus group findings with diverse, statewide target audiences.

**Objective 21.1** - By December 2017, coordinate messaging with Colorado Department of Education (CDE) on promotion and implementation of state law requiring 600 minutes of physical activity per month in elementary schools. Align messaging with CDE on the federal Healthy Hunger Free Kids Act. Interpret and implement forthcoming nutrition and meal service regulations for local education agencies. Include oral health information as part of school health education

Key partners: CDPHE, CDE

**Objective 21.2** - By December 2017, coordinate with public health partners, including Million Hearts, to develop a communication plan to promote blood pressure checks, hypertension self-management, medication therapy management and patient reimbursement opportunities.

Key partners: CDPHE, Million Hearts, partner organizations

**Objective 21.3** - By December 2017, partner with the Center for African American Health to modify the “Just Check It” blood pressure management materials and reach out to African-American populations in eastern Colorado to engage community members in blood pressure self-management.

Key partners: CDPHE, community based organizations focused on health equity and engagement for African-American population, Center for African American Health

**Objective 21.4** - By December 2017, develop chronic disease messaging framework document to support and align messages across health factors. Development process to include testing messages with target audiences through focus groups and vetting selection through State Leadership Team and other key partners for statewide buy-in. Final document will include approved messages, cross promotion strategies and tactics for usage across communication platforms.

Key partners: CDPHE, State Leadership Team, partner organizations

**Objective 21.5** - By December 2017, coordinate and deliver messages for key partner communities and sectors to increase the number of individuals who get their blood pressure checked and the percentage of individuals with hypertension who self-check as part of their management plans.

Key partners: CDPHE

**Outcome 22** - Expanded culturally-relevant and patient-centered health education campaigns, outreach programs and targeted marketing on chronic disease prevention and control priorities.

*Criteria for success:* A clearinghouse of culturally, linguistically and literacy appropriate health education and promotion materials and resources is created and evaluated in collaboration with relevant community-based organizations. From this clearinghouse, culturally relevant and linguistically competent chronic disease prevention guidelines are selected and disseminated to the general public via websites, portals, community groups or other mechanisms.

**Objective 22.1** - By August 2017, conduct more than five coordinated chronic disease social marketing campaign to raise awareness, increase knowledge and change the social norm to one that promotes prevention, early detection, treatment and self-management. Social marketing campaign plans to be tailored by target audience and to include paid and earned media.

Key partners: CDPHE

**Objective 22.2** - Collaborate with the National Diabetes Education Program, the Centers for Disease Control and Prevention, the Diabetes Training and Technical Assistance Center to increase awareness of, referrals to and enrollment in community-based Diabetes Prevention Programs through social media messaging, professional presentations, bilingual communication and news releases.

Key partners: CDPHE, National Diabetes Education Program, CDC, Diabetes Training and Technical Assistance Center

**Objective 22.3** - By August 2017, evaluate chronic disease social marketing campaigns and disseminate findings to inform chronic disease policies and practices. Post-run analysis report of comprehensive media and marketing campaign is provided partners.

Key partners: CDPHE

## Appendix A

See next page.

# Coordinated Chronic Disease framework for Colorado

**Goals:** Improve health outcomes related to chronic disease:

- ◆ Prevent development of diseases,
- ◆ Identify and intervene early for those with chronic disease,
- ◆ Provide comprehensive treatment for those with chronic disease, and
- ◆ Self-management for those with chronic disease.

**Vision:**  
 Coloradans have the  
 Healthiest Lifestyle Possible!

**Values & Guiding Principles:**

- ◆ Shared commitment at the individual, community & state level,
- ◆ Focus on addressing health disparities,
- ◆ Coordinated systems approach that builds on existing work, and
- ◆ Cross-sector, inclusive stakeholder participation and engagement.

## Community – Clinical Linkages

**Goal:** Establish a coordinated community-based chronic disease health system that provides linkages between clinical settings & community-based resources for people with and at-risk for chronic disease.

### Outcomes

- ◆ Improved access to clinical services & community-based resources.
- ◆ Increased # of people supported by community-based resources & services.
- ◆ Improved referral systems between clinical settings & community-based resources.
- ◆ Improved information sharing to coordinate care.
- ◆ Improved awareness & access to early detection and screening, and self-management programs.

### Strategies

- ◆ Conduct resource mapping of clinical services & community-based resources, address any gaps.
- ◆ Reduce access barriers to clinical services and community-based resources, especially among priority populations.
- ◆ Establish a centralized resource network of clinical services and community-based resources for referral purposes.
- ◆ Promote information sharing between patients, clinical settings, and community-based resources to coordinate care.
- ◆ Strengthen & build relationships between community-based health initiatives & clinical settings.
- ◆ Assist Coloradans to connect with a primary health care provider for chronic disease prevention & control.
- ◆ Develop and implement a credentialing and training system for community health workers.
- ◆ Promote a statewide system of credentialed community health workers to facilitate access to & use of prevention, early detection, treatment & management services, especially among priority populations.
- ◆ Expand the use of evidenced-based chronic disease self-management programs.
- ◆ Offer screenings & provide information on chronic disease prevention and control at community events and locations, and facilitate referrals to clinical services and community-based resources.

## Health Systems

**Goal:** Build on existing efforts to establish a comprehensive health system of prevention, early detection, treatment, and management of chronic disease.

### Outcomes

- ◆ Increased practitioner understanding & utilization of practices and procedures defined by the Affordable Care Act.
- ◆ Improved access and delivery of culturally & linguistically appropriate care.
- ◆ Improved information sharing through health information technology.
- ◆ Increased coverage/benefits for chronic disease services.
- ◆ Increased enrollment and utilization of health insurance.

### Strategies

- ◆ Advocate & support effective person-centered models that provide coordinated, comprehensive chronic disease prevention & care.
- ◆ Establish guidance to coordinate the implementation of screening protocols and services related to chronic disease prevention and early detection.
- ◆ Expand the use of health information technology to support data exchange between clinics, community providers, patients, health care facilities and pharmacies.
- ◆ Enhance and maintain a skilled, cross trained and diverse chronic disease workforce.
- ◆ Train and support health care providers to align with the Affordable Care Act.
- ◆ Educate and train health care professionals and providers on person-centered, culturally and linguistically appropriate models to provide coordinated and comprehensive chronic disease prevention and control.
- ◆ Expand health insurance coverage/benefits to include comprehensive evidence-based and innovative prevention, early detection, treatment, and management of chronic disease.
- ◆ Facilitate access to and use of health insurance for those with and at-risk for chronic disease, especially priority populations.
- ◆ Partner with private and public health insurers and employers to improve health care services for those with, and at-risk for chronic disease.

## Policy & Environmental Change

**Goal:** Establish a system that supports coordinated chronic disease policies, practices, and environmental change at the state and community levels.

### Outcomes

- ◆ Increased alignment of chronic disease policies across sectors.
- ◆ Improved health & wellness policies and programs adopted and implemented.
- ◆ Improved compliance and enforcement of chronic health care policies.
- ◆ Improved documented strategies & plans for linking built environments to chronic disease prevention & control.

### Strategies

- ◆ Develop a coordinated policy agenda addressing chronic disease prevention and control through cross-sector partnerships and coalitions.
- ◆ Adopt and implement coordinated chronic disease health policies and programs across organizations and settings.
- ◆ Advocate for changing laws, rules and regulations that create barriers to coordinated chronic disease prevention and control.
- ◆ Promote accountability and enforcement of existing and emerging chronic disease health policies.
- ◆ Enhance state and community planning and policies, and environmental design to support healthy living.
- ◆ Explore and develop incentives and resources to encourage Coloradans to have the healthiest lifestyle possible, especially among priority populations.
- ◆ Support employers, schools and other settings to establish health & wellness policies and practices.

## Health Education/Communication

**Goal:** Promote awareness & knowledge of chronic disease prevention, early detection, treatment, and management among the public, patient population, health care professionals & providers, insurers, businesses & communities, schools & higher education, policy makers and other key audiences.

### Outcomes

- ◆ Increased knowledge of chronic disease prevention and control by key audiences.
- ◆ Expanded access to tools and information that support Coloradans in making healthy choices.
- ◆ Expanded reach and impact of marketing/ education campaigns on chronic disease prevention & control.
- ◆ Increased # of key champions of coordinated chronic disease prevention and control.

### Strategies

- ◆ Educate and support state and community stakeholders in implementing the Coordinated Chronic Disease Framework.
- ◆ Maximize existing workforce and community resources to provide education and information on chronic disease prevention and control.
- ◆ Leverage existing events to train health care providers on chronic disease prevention and control. *(See Health Systems for additional education strategies to train the health care workforce)*
- ◆ Educate and engage Coloradans to adopt the healthiest lifestyle possible to prevent chronic disease, reduce risk factors, and manage chronic disease.
- ◆ Establish an easily accessible chronic disease clearinghouse of health education materials that are culturally and linguistically appropriate for healthcare professionals, community providers, and people with chronic disease and those at-risk.
- ◆ Conduct a coordinated chronic disease social marketing campaign that is culturally and linguistically appropriate to raise awareness, increase knowledge, and change the social norm to one that promotes prevention, early detection, treatment, and self-management.
- ◆ Evaluate chronic disease social marketing campaigns and disseminate findings to inform chronic disease policies and practices.
- ◆ Engage elected officials, policy makers, business & community leaders, and advocates to become champions and supporters of coordinated chronic disease efforts at the state and community level.
- ◆ Engage elected officials, policy makers, business and community leaders, and advocates to become champions and supporters of coordinated chronic disease efforts at the state and community level.

## Data & Evaluation

**Goal:** Establish a coordinated evaluation system for chronic disease data collection, analysis and dissemination of results, and inform Community Clinical Linkages, Health Systems, Policy and Environmental Change, Health Education/ Communications.

### Outcomes

- ◆ Improved coordinated data collection and dissemination.
- ◆ Improved use of data to make informed decisions across the domains.
- ◆ Aligned targets for chronic disease prevention and control.
- ◆ Increased knowledge of the benefits of the coordinated approach to chronic disease.

### Strategies

- ◆ Implement a coordinated surveillance and evaluation system for all chronic diseases.
- ◆ Set Colorado specific chronic disease targets that are formally published and disseminated.
- ◆ Inventory and disseminate data on chronic disease by regions of the state, communities, and specific populations, especially priority populations.
- ◆ Develop, support and advocate for comprehensive research to assess priority populations.
- ◆ Support use of data to understand the impacts of social determinants of health and how best to measure efforts/activities designed to impact the root causes.
- ◆ Ensure that chronic disease initiatives have an evaluation component; identify successes and best practices and disseminate results to inform decision-making.
- ◆ Provide coordinated training and technical assistance on how data can be used to advocate, support, and improve coordinated chronic disease prevention and control.
- ◆ Conduct and disseminate the results of a cost-benefit analysis of a coordinated approach to chronic disease and risk factor reduction.
- ◆ Establish a chronic disease evaluation clearinghouse of research and evaluation reports, and evaluation resources developed by a variety of sources.

Partnerships & Collaboration

Leadership

Funding & Resources

Shared Accountability

Training & TA

Workforce

Communications

Technology

Evaluation

Innovation