

a strategic plan  
to address

# COPD

(chronic obstructive pulmonary disease)

in Colorado



recommendations from the Colorado COPD Coalition  
August, 2007



Colorado COPD Coalition



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of Colorado





August 2007

A Strategic Plan to Address  
**Chronic Obstructive  
Pulmonary Disease (COPD)**  
in Colorado

Prepared by



[www.coloradocpdcoalition.org](http://www.coloradocpdcoalition.org)



[www.lungcolorado.org](http://www.lungcolorado.org)



# Acknowledgements

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# A Letter from Robert Keith MD

Dear Colorado Residents,

COPD is the fourth leading cause of death in Colorado (and the United States) and it is estimated that over 400,000 people in our state have this debilitating disease. A *Strategic Plan to Address Chronic Obstructive Pulmonary Disease (COPD) in Colorado* sets forth recommendations for the goals, objectives and strategies to reduce COPD mortality in our state.

In 2006, the Cancer, Cardiovascular Disease and Pulmonary Disease Competitive Grants Program at the Colorado Department of Public Health and Environment awarded the American Lung Association of Colorado (ALAC) a grant to develop a state plan to address COPD prevention, early detection and treatment. In May of 2006, the ALAC convened a COPD Summit attended by nearly 100 stakeholders including medical and research professionals, patients and caregivers. The group met to identify barriers to COPD awareness and treatment and to develop strategies to address those barriers. The COPD Coalition was born from this summit and in late 2006 the Coalition began developing the included strategic plan.

The intent of this strategic plan is to raise statewide awareness of COPD and the symptoms and risk factors associated with the disease and improve the diagnosis and care of COPD patients. The plan also recommends the establishment of a COPD surveillance system in the state as there is no clear picture of how many people in Colorado have COPD and how many are at risk of developing it. Establishing a COPD surveillance system is a critical first step in the fight to reduce the burden of the disease.

I look forward to working with our stakeholders and welcoming new Coalition members as we put the *Strategic Plan to Address COPD in Colorado* into action.

Sincerely,

**Robert Keith, MD**

Associate Professor of Medicine  
Medical Director of Respiratory Therapy  
Division of Pulmonary Sciences & Critical Care Medicine  
Eastern Colorado Healthcare System/Denver VAMC  
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# Contents

1. Executive Summary	8
2. Introduction	11
3. Section 1: Education & Awareness	17
4. Section 2: Data & Surveillance	20
5. Section 3: Research & Treatment	24
6. Section 4: Community Coordination & Advocacy	27
7. Section 5: Coordination & Evaluation	30
8. Participants - Working Groups	31
9. References	33
10. Notes	34



# Executive Summary

## A Strategic Plan to Address Chronic Obstructive Pulmonary Disease

(COPD) in Colorado was developed through the efforts of the American Lung Association of Colorado, the Colorado Department of Public Health and Environment and the Colorado COPD Coalition.

The term Chronic Obstructive Pulmonary Disease refers to two serious lung diseases: emphysema and chronic bronchitis. COPD is characterized by airflow limitation - partially blocked airways - which makes it hard for air to get in and out of the lungs. Risk factors for COPD include smoking, environmental exposures and genetic factors. Symptoms include coughing (sometimes referred to as “smoker’s cough”), shortness of breath, excess sputum production and wheezing. COPD is the fourth leading cause of death in the United States and it is projected to be the third by the year 2020. Colorado ranks 7th in the United States for COPD mortality and the Colorado COPD Coalition estimates over 400,000 Coloradans have the disease.

To address this public health priority, the Colorado COPD Coalition was charged with developing a strategic state plan designed to reduce Colorado’s COPD burden and guide the creation of programs to address the disease. The Colorado COPD Coalition includes volunteer representatives from several state organizations, health care professionals, educators, representatives from managed care plans, researchers, industry representatives, members of community based organizations and patients and their caregivers. The mission of the Colorado COPD Coalition is to create and implement a sustainable and

coordinated campaign to address the health crisis of COPD in Colorado.

The three-year plan outlined in this document establishes goals, strategies and performance measures that can be used by organizations, professionals and individuals to raise awareness about COPD and improve the health of those living with the disease in Colorado. The goals and strategies contained herein range from ensuring health care providers use the most current treatment guidelines to empowering patients to advocate for themselves.

## COPD in Colorado

Colorado has one of the highest COPD mortality rates in the country. The disease has claimed the lives of over 1,700 Coloradans each year over the past ten years. While the number of deaths and hospitalizations due to COPD are significant, they undoubtedly underestimate the true burden of the disease in the state. COPD is also a contributing factor in many deaths and hospitalizations from other causes like cardiovascular disease, lung cancer and respiratory infections.

## Comprehensive Solutions

There can be no single, easy solution to the problem of COPD in Colorado. As with other multi-faceted chronic diseases, there are many barriers to reducing COPD mortality. This disease is a public health problem that not only challenges healthcare systems but also public and private intervention programs. Solutions will be required from a large variety of different organizations and sectors, and partnerships will be essential.



# Executive Summary

The Colorado COPD Coalition believes the key to reducing the burden of COPD in Colorado involves:

- Improving the identification and diagnosis of persons with COPD
- Ensuring that healthcare providers are using developed guidelines and making referrals to proven therapies
- Assisting people in receiving treatment and adhering to management regimens
- Addressing barriers to accessing quality medical care
- Providing resources to better understand the disease process and effectively gauge the prevalence of COPD

To develop the *Colorado COPD Plan*, four Colorado COPD Coalition working groups were formed. The following is a summary of the goals and related strategies identified by the individual working groups.

## Education & Awareness

The Education & Awareness working group focused on increasing public awareness of COPD and on empowering patients to better advocate for quality care. Strategies to address these goals include:

- Developing a resource directory to be distributed statewide
- Launching a community focused media campaign utilizing national awareness materials

- Creating a speakers bureau for patient, public and professional education

- Disseminating educational material directly to patients

## Data & Surveillance

The Data & Surveillance working group determined a need to focus on the development of a comprehensive surveillance system. The strategies selected to address this goal include:

- Developing an annual comprehensive Colorado COPD surveillance report
- Obtaining measurements of COPD prevalence in Colorado
- Improving the acquisition of data related to the disability and cost of COPD
- Identifying and characterizing health disparities in Colorado related to COPD
- Developing and promoting quality measures for processes of care related to COPD
- Creating and maintaining a registry of patients with COPD in Colorado

## Research & Treatment

The Research & Treatment working group focused on ensuring that all of Colorado's healthcare providers are diagnosing and treating COPD patients with the latest diagnostic standards. Objectives to stimulate COPD research in the state are also included. The strategies developed to best



# Executive Summary

address these goals include:

- Distributing a semi-annual COPD treatment update newsletter
- Launching a COPD research database
- Determining the number of referrals made to pulmonary rehabilitation programs statewide
- Conducting a feasibility study of expanding the use of spirometry in rural Colorado
- Assessing COPD guideline use in clinical settings
- Improving COPD awareness, education and outreach with racial or ethnic minority, rural and low-income communities
- Increasing awareness and understanding of COPD among policymakers

## Community Coordination & Advocacy

The Community Coordination & Advocacy working group focused on coordinating ongoing COPD advocacy efforts as well as empowering patients. The strategies developed to best address these goals include:

- Creating a COPD action tool kit for public use
- Developing an electronic COPD resource center
- Collaborating with the State Tobacco Education and Prevention Partnership (STEPP) to develop smoking cessation materials for the COPD population



# Introduction

**Chronic Obstructive Pulmonary Disease (COPD) is the fourth leading cause of death in the United States** and over 12 million Americans have been diagnosed with the disease.<sup>1</sup> It is predicted to be the third leading cause of death by 2020.<sup>2</sup> In 2004, the estimated annual cost of COPD in the United States was \$37.2 billion and in Colorado the estimated annual cost of COPD hospitalizations was \$70 million.<sup>3,4</sup>

COPD is one of the most significant preventable public health problems in America today largely because the vast majority of those affected by this disabling disease are cigarette smokers. Long term exposure to cigarette smoke accounts for upwards of 90% of all COPD cases and at least 10-15% of long-term smokers will develop COPD over a lifetime of smoking.<sup>5</sup>

While smoking remains the leading risk factor for COPD, other risk factors include low birth weight, frequent lung infections, long-term exposure to lung irritants like pollution and dust, and the genetic (inherited) form of emphysema, alpha-1 antitrypsin. In fact, nearly 1 in 4 adults with airway obstruction has never smoked.<sup>6</sup> The reasons for this are not yet known, though in Colorado (as in other western states) COPD mortality rates are higher than the highest smoking attributed mortality (SAM) rate.<sup>7</sup>

## What is COPD?

COPD is an umbrella term for two serious lung diseases: emphysema and chronic bronchitis. Most often, COPD is a mix of both emphysema and chronic bronchitis. In emphysema the tiny air sacs in the lungs are damaged, leading to shortness of breath and difficulty breathing. In chronic bronchitis the airways (tubes that bring air in and out of

the lungs) are inflamed, this irritation leads to a persistent cough and overproduction of mucus.

Alpha-1 antitrypsin deficiency (AAT) is a genetic abnormality known to cause COPD. Patients with severe AAT can develop emphysema earlier than people who develop COPD from smoking. It is estimated that upwards of 5% of the emphysema cases in the U.S. are AAT related and potentially 100,000 Americans have the deficiency.<sup>8</sup> AAT, like COPD, is under diagnosed.

## Risk factors for Chronic Obstructive Pulmonary Disease (COPD)

- Genes
- Exposure to particles
  - Tobacco smoke
  - Occupational dust, organic or inorganic
  - Indoor air pollution from heating or cooking biomass in poorly ventilated dwellings
  - Outdoor air pollution
- Lung growth and development
- Oxidative stress
- Gender
- Age
- Respiratory infections
- Socioeconomic status
- Nutrition
- Comorbidities

Source: GOLD Guidelines, 2003

Long considered a disease of the elderly, nearly half of those diagnosed with COPD are under 65 years old and the average age at diagnosis is 53 years.<sup>9</sup> The majority of those diagnosed with COPD identify as white (87%).<sup>10</sup> While lower smoking rates historically among minorities may account for the significant gap between minority and white COPD prevalence, underdiagnosis in these populations is certainly a contributing factor.



# Introduction

## Burden of COPD in Colorado

*(Adapted from the 2007 Colorado COPD Surveillance Report)*

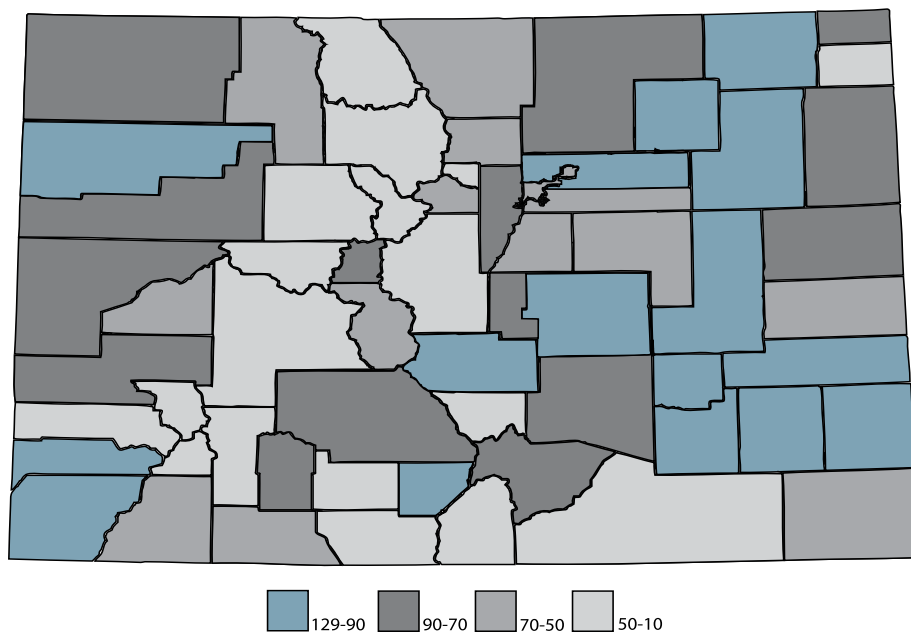
Colorado, like other states in the mountain west, has one of the highest rates of death from COPD in the nation. In 2003, Colorado ranked seventh with an age-adjusted rate of 53.7 deaths/100,000 people. COPD was the fourth leading cause of death in Colorado in 2005. Since 1998, COPD has claimed the lives of over 1,700 Coloradans each year with the number of deaths per year on the rise. COPD also results in 4,000-6,000 hospitalizations each year.

While the number of deaths and hospitalizations

due to COPD are significant, they undoubtedly underestimate the true burden of the disease in the state. COPD is a contributing factor in many deaths and hospitalizations from other causes like cardiovascular disease, lung cancer and respiratory infections. In addition, many people have COPD that is not yet serious enough to result in hospitalization or death but may have significant influence on their quality of life.

## Prevalence

The true prevalence of COPD in Colorado is unknown. Future surveillance should attempt to characterize the number of people currently diagnosed with COPD and the number of people



Age-adjusted COPD mortality rates in Colorado.  
COPD deaths/100,000 population per year, 1990-2005, age 25 and over.



# Introduction

## Leading causes of death in Colorado, 2005

Cause of death	Number of deaths	Percent of deaths
1. Malignant neoplasms	6,367	21.6
2. Heart disease	6,282	21.3
3. Unintentional injuries	1,928	6.5
4. Chronic lower respiratory tract disease	1,908	6.5

Source: Health Statistics Section, CDPHE

who have COPD but do not yet carry a diagnosis. Based on national data, the American Lung Association estimates that between 140,000 and 190,000 Coloradans have a diagnosis of COPD. Given that the prevalence of COPD measured by lung function testing is approximately 2.4 times higher than the number based on self-report, we suspect that COPD affects between 330,000 and 460,000 people in Colorado.

Although exposure to tobacco smoke in Colorado has decreased in recent years, the burden of COPD is expected to persist due to the aging of the population and the number of people who smoked in years past. The ongoing abuse of tobacco, particularly in younger Coloradans, suggests that COPD will continue to be a problem for many years to come. (Recent studies estimate that upwards of 25% of Colorado high school students smoke.)

### Age and Gender

The population most effected by COPD is older Coloradans. The prevalence of COPD and the rates of death and hospitalization from this disease increase dramatically with age. Although the age-adjusted rates of COPD hospitalization and mortality in men are higher than those in women, the number of hospitalizations and deaths due to COPD by gender are similar because of the larger

population of older women at risk. Smoking rates are also similar in men and women, which suggests that COPD will continue to be a significant problem for both genders.

### Urban, Rural and Frontier Counties

COPD mortality rates are higher in rural and frontier counties than in urban counties. This is likely due to the fact that rural Colorado has, on average, an older population, as the differences resolve with age-adjustment. Nonetheless, the increased burden of COPD in rural Colorado is real and should be a focus of future surveillance and intervention.

### Future Efforts

COPD is a significant problem in the state of Colorado and will likely remain a significant problem for the foreseeable future. Current data underscore the need to target interventions in the groups at highest risk, especially former smokers, older people and rural Coloradans. Today, significant gaps exist in our knowledge. Future data and surveillance efforts should attempt to better characterize the prevalence, morbidity and economic costs and the burden of COPD in specific populations including racial/ethnic minorities, rural communities and groups with social and economic



# Introduction

disadvantages.

## Diagnosis

Nationally, COPD is underdiagnosed and undertreated.<sup>11</sup> In early stages of the disease, patients with COPD may in fact be asymptomatic.<sup>12</sup> Early stage COPD requires a test called spirometry (a test that measures lung function) for detection and it is not routinely used in primary care practices. Many patients with COPD do not inform their primary care providers of their symptoms until the condition has worsened to the point that it impacts their daily lives. Patients with moderate to severe COPD typically have persistent symptoms including chronic cough, sputum production and shortness of breath. COPD is a progressive disease and later stages are often marked by increased exacerbations.

The Colorado COPD Coalition recommends that patients who have symptoms of cough, sputum production, dyspnea (shortness of breath) and a history of exposure to risk factors (chiefly smoking) be considered for a diagnosis of COPD.

## Treatment

With treatment, COPD patients can have improved quality of life and decreased frequency of exacerbations. An effective treatment program for COPD includes the prevention of disease progression, relief of symptoms, improvement of exercise tolerance and the prevention and treatment of complications and exacerbations.<sup>13</sup>

## Smoking Cessation

The most important step in treating patients with COPD is smoking cessation. Quitting smoking can reduce lung function decline by up to 50%.<sup>14</sup> For patients with mild to moderate disease, bronchodilators (medications that relax smooth muscles in the lungs) can improve quality of life and help to increase exercise tolerance.

## Long-term Oxygen Therapy

Long-term oxygen therapy has been proven to increase survival, exercise capacity and improve patient well-being.<sup>15</sup> The use of long-term oxygen therapy can be continuous, with activity or sleep,

### Colorado COPD Mortality by Racial/Ethnic Group, age 25 and up, 2005

(\*Events per 100,000 population)

Race	COPD deaths	Population	Crude rate*	Age-Adjusted rate*
White	1694	2365023	71.63	82.57
Hispanic	116	424321	27.34	61.13
Black	33	117589	28.06	48.45
Asian	7	87296	8.02	14.54
American Indian	6	42666	14.06	24.63



# Introduction

## Colorado COPD hospitalizations by gender, age 25 and up, 2004

(\* Events per 100,000 population)

Gender	Number of hospitalizations	Crude rate*	Age-Adjusted rate*
Male	2010	135.3	185.1
Female	2248	148.8	160.8

dependent upon the patient's needs.

The use and maintenance of supplemental oxygen equipment is frequently covered in pulmonary rehabilitation programs (see below) and is often discussed in COPD support groups.

### Pulmonary Rehabilitation

Many COPD patients find pulmonary rehabilitation can greatly improve their quality of life. It has been shown to reduce symptoms and increase physical and emotional participation in daily activities.<sup>16</sup> The most effective pulmonary rehabilitation programs involve a team of practitioners (including physicians, respiratory therapists, nurses, nutritionists, pharmacists and social workers) managing the rehabilitation process. This process includes diagnosis and treatment, exercise training, education, counseling and dietary assessment.

While lung function may not improve, many patients who go through pulmonary rehabilitation report an increase in stamina and well-being. Patient education should be focused on involving patients and their caregivers in their care. There are currently twenty-seven pulmonary rehabilitation programs active at clinics and in hospitals across Colorado. The majority of these programs are located in metropolitan areas (Denver metro, Colorado Springs, Pueblo and Grand Junction). The Colorado COPD Coalition recommends increasing the number of referrals

to existing pulmonary rehabilitation programs in Colorado and advocating for the creation of new programs in areas particularly underserved.

### Surgery

Several surgical interventions for COPD have been shown to improve lung function, survival and quality of life. The three interventions with the most benefit include:

- Bullectomy -- surgical removal of large, dilated air spaces in lungs of COPD patients
- Lung volume reduction surgery -- surgically reducing the size of the lungs by removing diseased lung tissue
- Lung transplantation -- a life preserving intervention for end-stage COPD patients

### Summary

This strategic plan to address COPD in Colorado represents a call to action for the entire state. It is a public document that can be used to articulate a unified message and approach to reducing COPD mortality in Colorado. It also should be considered a work-in-progress. During working group discussions many reasonable and effective strategies were discussed and debated and while a good many were not included in the final draft of



# Introduction

this plan, these issues still remain important and should be considered in the future. The Colorado COPD Coalition will assess the *Colorado COPD Plan* on an annual basis and revise it as needed to ensure it continues to effectively address COPD in our state.

The remainder of this document contains the goals, objectives and strategies of each working group and an evaluation component.

## Abbreviations:

ALAC - American Lung Association of Colorado  
BRFSS - Behavioral Risk Factor Surveillance System Survey  
CCGC - Colorado Clinical Guidelines Collaborative  
CDPHE - Colorado Department of Public Health and Environment  
CSRC - Colorado Society for Respiratory Care  
NHLBI - National Heart, Lung & Blood Institute  
NJMRC - National Jewish Medical & Research Center  
RMCRA - Rocky Mountain CardioPulmonary Rehabilitation Association  
STEPP - State Tobacco Education & Prevention Partnership  
UCHSC - University of Colorado Health Sciences

## Colorado COPD Coalition:

### Vision for Colorado

The vision of the Colorado COPD Coalition is for our state to lead the country in increasing COPD awareness, prevention, diagnosis and treatment.

### Mission

The mission of the Colorado COPD Coalition is to create and implement a sustainable and coordinated campaign to address the health crisis of Chronic Obstructive Pulmonary Disease (COPD) in Colorado.



## Section 1:

# Education & Awareness

## Goal

Increase public awareness of COPD.

## Objective

Implement a statewide campaign to educate the lay public, patient population and health professionals about COPD in Colorado.

## Rationale

Raising public awareness of COPD promotes the ability of lay people to recognize the disease thereby increasing the chances they will seek appropriate healthcare interventions early. It is hoped that as the public becomes more aware of the disease, there will be an increase in the demand for regular surveillance and enhanced public health interventions.



## Strategy A

By April 2007, disseminate (both in print and electronically) the first annual Colorado COPD Resource Directory.

### Action:

- Gather information on resources available in Colorado and contact industry (pharmaceutical companies, oxygen suppliers, etc...) representatives.
- Develop resource database and interactive website that can be updated by individual companies and organizations listed in the database.
- Ensure timely issuance of quarterly directory updates both on-line and in print.

### Performance measures:

- A 10% increase in circulation by April 2008.
- A 25% increase in the number of participating companies and organizations by April 2009.

### Prospective partners:

Colorado COPD Coalition, Colorado COPD Connection, ALAC, CDPHE



## Section 1:

# Education & Awareness

## Strategy B

By October 2007, launch a statewide media campaign utilizing NHLBI COPD Awareness campaign materials.

### Action:

- Identify key public message targeting Colorado's diverse population.
- Catalog and review existing media and look for opportunities for collaboration and overlap.
- Adapt National Heart Lung and Blood Institute (NHLBI) "Learn More, Breathe Better" campaign materials for local dissemination in partnership with NHLBI.
- Collaborate with media specialists.
- Develop evaluation tools.

### Performance measures:

- Campaign active in three Colorado counties by April 2008.
- Campaign active in an addition five Colorado counties by April 2009.

### Prospective partners:

Colorado COPD Coalition, NHLBI, ALAC, UCHSC, NJMRC, CDPHE

## Strategy C

By January 2009, create a COPD Coalition speakers bureau to provide speakers statewide to communities, companies, businesses, schools and partnering organizations.

### Action:

- Identify and prepare training materials.
- Partner with community outreach, medical professionals, payers, public health, universities, pharmacists, employers and home medical to develop database of speakers across state.
- Develop website and materials to promote bureau in collaboration with ongoing media campaign.

### Performance measure:

- 12 active speakers in bureau by July 2009.

### Prospective partners:

Colorado COPD Coalition, STEPP, NHLBI, CDPHE, CSRC



## Section 1:

# Education & Awareness

## Strategy D

By July 2009, distribute a Colorado COPD Coalition bi-monthly COPD newsletter in partnership with both local and national oxygen supply companies.

### Action:

- Identify impact of materials currently in use by local oxygen supply companies and national oxygen supply companies operating locally.
- Develop newsletter in conjunction with media campaign website/materials.
- Coordinate efforts with patient advocacy groups.

### Performance measures:

- 700 households receiving newsletter by October 2009.
- 30% increase in the number of households receiving newsletter by April 2010.

### Prospective partners:

Colorado COPD Coalition, ALAC, National/Local O2 supply companies, Colorado COPD Connection, RMCRA, CSRC



## Section 2:

# Data & Surveillance

## Goal

To improve and expand COPD surveillance in Colorado.

## Objective

Establish a surveillance system to accurately track the mortality and morbidity of COPD in Colorado and measure the impact of the disease on the economy of the state.

## Rationale

Assessing and monitoring the prevalence of COPD is a foundation for improved disease management. Accurate epidemiological data is elusive for COPD. COPD prevalence and mortality data, if available, greatly underestimates the total burden because the disease is usually moderately advanced before diagnosis can be made and spirometry is not consistently available. Historically, COPD has been variably defined and does not often appear in standardized health surveys. Mortality and hospitalization data for COPD also underestimated the burden of the disease because it is likely cited as a contributor rather than the underlying cause of illness or death.



## Strategy A

By April 2009, develop an annual comprehensive Colorado COPD surveillance report using government and corporate data sources.

### Action:

- Identify users and data providers.
- Appoint an epidemiologist at the state level responsible for updating and producing reports.
- Identify gaps in current data to improve ongoing data acquisition.
- Identify high-risk populations for targeted interventions.
- Identify sources of data for public health officials, researchers and patients and disseminate findings.

### Performance measures:

- Surveillance report released.
- Staff hired to identify further data sources and update report.

### Prospective partners:

Colorado COPD Coalition, ALAC, CDPHE, UCHSC



## Section 2:

# Data & Surveillance

## Strategy B

By April 2009, obtain measurements of COPD prevalence in Colorado to more accurately assess the current and future burden of the disease.

### Action:

- Add a COPD question module to the Colorado Behavioral Risk Factor Surveillance System (BRFSS) survey.
- Fund a needs assessment of COPD prevalence using a careful sampling strategy covering diverse populations using spirometry to confirm cases.

### Performance measure:

- Two COPD questions added to BRFSS for 2009.

### Prospective partners:

Colorado COPD Coalition, ALAC, CDPHE, UCHSC

## Strategy C

By January 2010, improve the acquisition of data related to the disability and cost of COPD in Colorado.

### Action:

- Add questions to the BRFSS to assess activity limitation, functional limitation and healthcare utilization from COPD.
- Fund studies to characterize the direct and indirect costs of the disease to individuals with COPD, their families and to the state of Colorado.

### Performance measures:

- COPD module including cost questions added to BRFSS for 2010.

### Prospective partners:

Colorado COPD Coalition, ALAC, CDPHE, UCHSC



## Section 2:

# Data & Surveillance

## Strategy D

By April 2010, identify and characterize health disparities in Colorado related to COPD.

### Action:

- Use current and future data to examine the burden of disease in different populations, including age, gender, racial/ethnic, geographic and socioeconomic differences.
- Identify the impact of comorbid conditions on outcomes and processes of care for patients with COPD.

### Performance measure:

- Health disparities related to COPD identified.

### Prospective partners:

Colorado COPD Coalition, ALAC, CDPHE, UCHSC, STEPP

## Strategy E

By July 2010, develop and promote quality measures for processes of care (guidelines and protocols) related to COPD.

### Action:

- Work with health plans and with government payers to develop and implement quality measures for COPD including but not limited to: counseling on tobacco cessation, appropriate use of spirometry for diagnosis and disease monitoring, use of vaccinations, chronic disease management and management of acute exacerbations of COPD.
- Utilize data gathered on process measures to evaluate the effectiveness of programs funded through CCPD.

### Performance measure:

- COPD quality measures developed and process data gathered.

### Prospective partners:

Colorado COPD Coalition, ALAC, CDPHE, UCHSC, NJMRC



## Section 2:

# Data & Surveillance

## Strategy F

By July 2010, create and maintain a registry of patients with COPD in Colorado in conjunction with plans to create a research database.

### Action:

- Protect patient confidentiality through appropriate data management and informed consent.
- Collect detailed clinical information where available.
- Make resource available to public health officials, researchers and patients.

### Performance measure:

- COPD registry/database created.

### Prospective partners:

Colorado COPD Coalition, ALAC, CDPHE, UCHSC, NJMRC, CSRC



## Section 3:

# Research & Treatment

## Goal

Colorado healthcare providers will correctly identify and treat COPD.

## Objective

To attract COPD research dollars to Colorado, increase patient participation in COPD research and improve COPD care.

## Rationale:

While there is no cure for COPD, scientific advances have led to better techniques in managing the disease. More research is needed, however, to address disease onset, progression and the development of new therapies. For effective research studies to move forward, patient participation is crucial.

According to the GOLD (Global Initiative for Chronic Obstructive Lung Disease) guidelines, the goals of COPD treatment and management for patients should be to prevent disease progression, relieve symptoms, improve exercise tolerance, improve health status, prevent and treat complications and exacerbations, reduce mortality and prevent or minimize side-effects from treatment. Early detection of the disease is critical and the use of spirometry in clinical care has been demonstrated to significantly improve early detection of COPD. The National Lung Health Education Program (NLHEP) suggests that clinical spirometry should be "as ubiquitous as measuring blood pressure."



## Strategy A

By January 2008, distribute a semi-annual COPD treatment update newsletter to primary care physicians, clinics, hospitals and pharmacies across the state.

### Action:

- Identify impact of materials distributed and used by medical professionals, collaborate with healthcare systems to share developed newsletters and education resources.
- Survey healthcare systems to determine utilization of materials and perceived needs.
- Develop newsletter in conjunction with media campaign website/materials.

### Performance measures:

- 1,000 newsletters circulated by July 2008.
- 40% increase in the number of newsletters in circulation by April 2009.

### Prospective partners:

Colorado COPD Coalition, NHLBI, ALAC, CDPHE, UCHSC, NJMRC, CSRC, RMCRA



## Section 3:

# Research & Treatment

## Strategy B

By April 2009, launch a Colorado COPD research database accessible by patients interested in research and researchers looking for study participants in conjunction with the patient registry for surveillance purposes.

### Action:

- Develop secure web space and hire staff to facilitate database development and maintenance.
- Collaborate with media campaign to register patient participants for database inclusion.
- Coordinate efforts with patient advocacy groups.

### Performance measures:

- 200 patient participants in database by January 2010.
- 50% increase in the number of patient participants by July 2010.

### Prospective partners:

Colorado COPD Coalition, ALAC, CDPHE, UCHSC, NJMRC, RMCRA, CSRC

## Strategy C

By July 2009, determine the number of referrals made to pulmonary rehabilitation programs statewide.

### Action:

- Discuss program availability and development of physician awareness materials with Rocky Mountain CardioPulmonary Rehabilitation Association (RMCRA).
- Identify health system partners.
- Develop rehabilitation grant/awards financial assistance programs.
- Distribute materials and gauge physician interest.

### Performance measure:

- Number of physician referrals to Colorado pulmonary rehabilitation programs identified.

### Prospective partners:

Colorado COPD Coalition, RMCRA, ALAC, UCHSC, CDPHE, NJMRC



## Section 3:

# Research & Treatment

## Strategy D

By January 2010, conduct feasibility study of expanding spirometry in rural Colorado.

### Action:

- Review literature and available data and create summary report.
- Identify data access and health system partners.
- Coordinate efforts with partner firm/agency to develop report.

### Performance measure:

- Draft of feasibility study by July 2010.

### Prospective partners:

Colorado COPD Coalition, ALAC, CDPHE, UCHSC, NJMRC, STEPP

## Strategy E

By April 2010, assess guideline use in clinical settings.

### Action:

- Identify current guidelines in use and health system partners.
- Fund studies to determine guideline usage and gather site-specific data.

### Performance measure:

- Findings released.

### Prospective partners:

Colorado COPD Coalition, ALAC, CDPHE, UCHSC, NJMRC, CCGC, CSRC, RMCRA



## Section 4:

# Community Coordination & Advocacy

## Goal

Increase and coordinate COPD advocacy efforts through education and empowerment.

## Objective

Coordinate a grassroots effort to empower COPD patients to become advocates and develop resources to address health disparities in Colorado.

## Rationale

Collaboration between medical organizations, patient advocacy groups, government agencies and policy makers is essential to reduce COPD prevalence in Colorado. Coordinating a network of organizations that serve medical professionals, patients, caregivers and industry representatives under a single umbrella allows for better traction in implementing programs to promote early detection, reach under-served populations, promote clinical guidelines and improve the quality of life for those with the disease.



## Strategy A

By January 2008, create a COPD action tool kit for public use in contacting state government and elected officials.

### Action:

- Identify users and information providers in development of toolkit.
- Develop toolkit in conjunction with media campaign website/materials.
- Coordinate efforts with patient advocacy groups.

### Performance measures:

- 200 toolkits will be disseminated both electronically and via traditional print methods by April 2008.
- 40% increase in number of toolkits disseminated by July 2008.

### Prospective partners:

Colorado COPD Coalition, Colorado COPD Connection, ALAC



## Section 4:

# Community Coordination & Advocacy

## Strategy B

By July 2008, create an electronic COPD resource center.

### Action:

- Collaborate on website development with both local and national COPD advocacy groups.
- Develop website in conjunction with media campaign website/materials.
- Engender use of COPD advocacy toolkit.

### Performance measure:

- 30% increase in website traffic by April 2009.

### Prospective partners:

Colorado COPD Coalition, Colorado COPD Connection, ALAC, UCHSC, NJMRC, CRSC, RMCRA

## Strategy C

By July 2008, collaborate with the State Tobacco Education and Prevention Partnership (STEPP) to develop smoking cessation materials for COPD population.

### Action:

- Coordinate COPD advocacy materials to ensure consistency of message.

### Performance measure:

- Smoking cessation materials created.

### Prospective partners:

Colorado COPD Coalition, STEPP, ALAC, CDPHE, UCHSC, NJMRC



## Section 4:

# Community Coordination & Advocacy

## Strategy D

By July 2009, improve COPD awareness, education, outreach with racial or ethnic minority, rural and low-income communities.

### Action:

- Increase participation of racially and ethnically diverse COPD advocates, including local minority organizations.
- Conduct social marketing in communities to translate COPD best practices and self-care information.
- Provide resources for limited English speakers on how to better access healthcare.
- Coordinate efforts with media campaign and resource center development.

### Performance measure:

- 20% increase in the number of racially and ethnically diverse participants actively engaged in COPD advocacy work by January 2010.

### Prospective partners:

Colorado COPD Coalition, Colorado COPD Connection, ALAC, CDPHE, UCHSC, NJMRC

## Strategy E

By January 2010, increase awareness and understanding of COPD among policymakers.

### Action:

- Create information packet for policymakers including surveillance, burden, personal stories and key facts.
- Schedule meetings and act as resource for policymakers.

### Performance measure:

- Hold two education sessions for policymakers by July 2010.

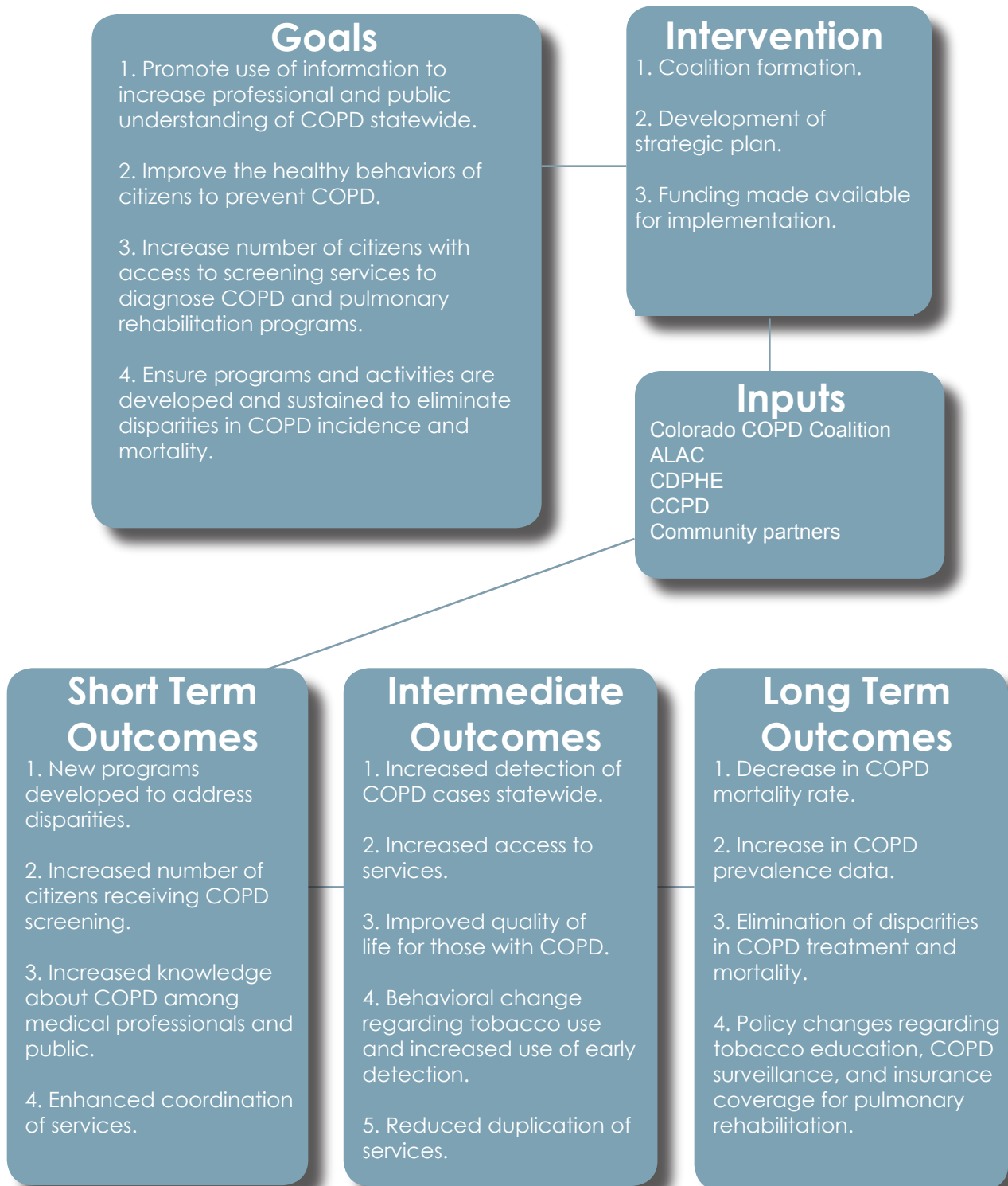
### Prospective partners:

Colorado COPD Coalition, Colorado COPD Connection, ALAC



## Section 5:

# Coordination & Evaluation





# Participants - Working Groups

## Community Coordination & Advocacy

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# Participants - Working Groups

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## References

1. National Center for Health Statistics. FASTATS for COPD. <http://www.cdc.gov/nchs/fastats/copd.htm>. Accessed March 28, 2007.
2. Ibid.
3. National Heart Lung and Blood Institute. Morbidity and Mortality Chartbook, 2004. <http://www.nhlbi.nih.gov/resources/docs/cht-book.htm>. Accessed March 28, 2007.
4. Colorado COPD Surveillance Report, 2007. Forthcoming.
5. American Thoracic Society. Standards for the diagnosis and care of patients with chronic obstructive pulmonary disease. *Am J Respir Crit Care Med* 1995; 152:S77-S120
6. Celli BR, Halbert RJ, Nordyke RJ, Schau B. Airway obstruction in never smokers: results from the Third National Health and Nutrition Examination Survey. *Am J Med* 2005; 118:1364-1372
7. Weinhold B. Death out West: the Link to COPD. *Environ Health Perspect* 2000; 108(8): A350
8. Blank CA, Brantly M. Clinical features and molecular characteristics of alpha 1-antitrypsin deficiency. *Ann Allergy* 1994; 72:105-120
9. American Lung Association. *Confronting COPD in America*. Executive Summary, 2001.
10. Ibid.
11. Stang P, Lydick E, Silberman C, Kempel A, Keating ET. The prevalence of COPD; using smoking rates to estimate disease frequency in the general population. *Chest*. 2000;117(5 Suppl 2):354S-359S
12. Enright PL, Crapo RO. Controversies in the use of spirometry for early recognition and diagnosis of chronic obstructive pulmonary disease in cigarette smokers. *Clin Chest Med*. 2000; 21:645-652
13. Fabbri LM, Hurd SS; GOLD Scientific Committee. Global Strategy for the Diagnosis, Management and Prevention of COPD. Updated 2005. Executive Summary. <http://www.goldcopd.org/Guidelineitem.asp?l1=2&l2=1&intId=996> Accessed March 28, 2007.
14. Fletcher C, Petro R. The natural history of chronic airflow obstruction. *Am Rev Respir Dis* 1977;1(6077):1645-1648
15. Fabbri LM, Hurd SS; GOLD Scientific Committee. Global Strategy for the Diagnosis, Management and Prevention of COPD. Updated 2005. Executive Summary. <http://www.goldcopd.org/Guidelineitem.asp?l1=2&l2=1&intId=996> Accessed March 28, 2007
16. Ibid.



# Notes





Colorado COPD Coalition