

# OREGON ASTHMA LEADERSHIP PLAN

2014–2019



Oregon  
**Health**  
Authority

PUBLIC HEALTH DIVISION  
Health Promotion and Chronic Disease Prevention

# The Oregon Asthma Leadership Plan

## 2014–2019



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# Introduction

## Background

Asthma is one of the most common chronic diseases in the United States. For reasons that are unclear, the proportion of people with asthma increased nearly 25% nationwide from 2000 to 2010. Much about asthma remains unknown and requires further study. Asthma cannot be cured, but it can be controlled. Quality health care, correct medications, good self-management skills and policies reducing exposure to environmental triggers can help people with asthma live healthy and productive lives. To combat this complicated disease, the Oregon Asthma Program (OAP) partners with strategic state and local organizations concerned about asthma to ensure that all Oregonians with asthma live, work, play and learn in communities that support health and optimal quality of life.



## The burden of asthma in Oregon

The OAP maintains a robust data system to measure the burden of asthma in Oregon, determine what priority areas need to be addressed to reduce this burden, and identify which populations are most affected by this chronic disease. From the OAP data system, it is known that asthma is a major burden to Oregonians living with the disease and to Oregon's health care system. The combined asthma prevalence in 2012 among adults (10%) and children (7%) suggests that approximately 360,000 Oregonians have asthma.<sup>1</sup>

The burden of asthma is both economic and personal, affecting the state through direct health care costs (hospitalizations and emergency department visits) and indirect costs (missed school and work days and days of restricted activity). It also affects quality of life for people with asthma and their families. More than a quarter of Oregon adults with asthma report missing at least one day of work or usual activities during the last year, and almost one-third report missing sleep because of asthma.<sup>2</sup> Oregonians with asthma are more likely to report being in fair or poor health than those without asthma.<sup>1</sup> The cost of asthma hospitalizations is significant; in 2012, 2,000 people were hospitalized with asthma as the primary diagnosis, totaling more than \$28 million in direct charges.<sup>3</sup> Also in 2012, there were 47 deaths in Oregon due to asthma.<sup>4</sup>

Using the OAP data system, OAP staff and key partners identified the following areas of concern that make it difficult to decrease the burden of asthma in Oregon:

**Tobacco use:** A higher proportion of Oregon adults with asthma smoke (24%), compared to the general population (18%).<sup>1</sup> Additionally, in 2012, 23% were exposed to secondhand smoke, a major asthma trigger.<sup>1</sup>

**Self-management:** In 2012, few children (34%) and even fewer adults (24%) had an asthma action plan or had taken an asthma management course or class (7% and 6%).<sup>2</sup> The *Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma* (EPR-3) recommend that all people with asthma should have a current asthma action plan.<sup>5</sup>





**Environmental triggers:** In 2009, 19 Oregon communities experienced a total of 106 days when air was unhealthy for sensitive groups (including children and people with asthma).<sup>6</sup> In addition, 16% of Oregon adults with asthma had seen or smelled mold in their home, 34% used a wood burning fireplace or stove and 69% had pets in the home.<sup>2</sup> All of these are important asthma triggers that affect the quality of air in the home.<sup>2</sup> Unfortunately, only 38% of Oregonians with asthma were advised by a health professional to make changes regarding their indoor environment.<sup>2</sup>

**Obesity:** In 2012, extremely obese Oregonians (BMI > 40) were three times as likely to report having asthma (26%) compared to individuals with a healthy weight (8%).<sup>1</sup> People with asthma who are obese have decreased lung function and do not respond well to asthma medications.

**Asthma disparities:** Oregonians who are disproportionately affected by asthma are those without a college education, with lower incomes or who are enrolled in the Oregon Health Plan (OHP, Oregon Medicaid and Children’s Health Insurance Program). People with lower incomes are more likely to live in substandard housing, smoke and have higher disease morbidity.<sup>7</sup> Adults earning less than \$15,000 per year had almost twice the asthma prevalence (16%) compared to those earning more than \$50,000 per year (9%).<sup>1</sup> Adults insured through the OHP had more than twice the prevalence of asthma (23%) compared to those who were uninsured (8%) or those who had some other form of insurance (9%).<sup>1</sup>

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\* Numbers for unhealthy days are the total number of days at all air monitoring sites in Oregon. Unhealthy air is defined as being above the Environmental Protection Agency’s (EPA) level for the air quality index for sensitive groups or for all people. The air quality index includes all pollutants measured at each monitoring station.

# Long-term goals

The Oregon Asthma Leadership Plan (hereafter referred to as the Leadership Plan) is a comprehensive plan for change, addressing asthma in the various settings where Oregonians with asthma live, work, learn and play. It is a road map for partners and others to work collaboratively on strategies that improve the quality of life for all Oregonians with asthma. In order to make the greatest impact, the Leadership Plan's goals and objectives are population-based in nature, with an emphasis on reaching groups disproportionately affected by asthma.

The long term goals of the Leadership Plan address three asthma intervention areas, some based on past and present Government Performance Results Act asthma measures.<sup>8</sup> These areas include reducing asthma hospitalizations, increasing asthma self-management education and reducing asthma disparities.

## **Reduce asthma hospitalizations:**

Asthma hospitalizations are expensive and often preventable with good self-management skills.

## **Increase asthma self-management education:**

Asthma self-management education is essential to provide people with asthma the skills necessary to control asthma and improve outcomes.

## **Reduce asthma disparities:**

Many Oregonians who are disproportionately affected by asthma are those without a college education, with lower incomes or who are enrolled in the OHP. People with lower incomes are more likely to live in substandard housing, smoke and have higher disease morbidity.<sup>7</sup>

## Asthma focus areas

To respond to the concerns identified through the OAP surveillance system and discussions with key partners, the following focus areas were identified to achieve the Leadership Plan's long-term goals:

1. Decrease tobacco use among people with asthma.
2. Increase self-management skills among people with asthma.
3. Decrease exposure to environmental triggers among people with asthma.
4. Decrease obesity among people with asthma.
5. Increase or maintain surveillance and evaluation.

By outlining objectives and strategies within these focus areas, the Leadership Plan strives to achieve its goals. Doing so also supports the Oregon Health Authority's Triple Aim of better health, better care and lower costs for all Oregonians, particularly populations suffering from asthma disparities.

The Leadership Plan also supports health care reform in Oregon. Specifically, the Leadership Plan objectives support the work of Oregon's Coordinated Care Organizations (CCOs), which provide care for low-income Oregonians receiving coverage under the OHP. For more information on CCOs, refer to the website:

[www.oregon.gov/oha/ohpb/pages/health-reform/ccos.aspx](http://www.oregon.gov/oha/ohpb/pages/health-reform/ccos.aspx).

## Measuring progress towards improving asthma in Oregon

The OAP and asthma partners developed three overall measures of statewide progress to determine if progress is being made in reducing the burden of asthma, reducing risk factors and improving self-management skills. The three overall measures are shown on the next page and include a five-year target for improvement.



Long-term asthma measures of progress	Oregon baseline*	Oregon 2019 targets
Reduce the rate of hospitalizations for asthma (per 10,000).	5.0 (2012)	4.5
Increase the number of Oregonians with asthma who attended an evidence-based chronic disease self-management program.	2,077 (2012)	14,000**
Increase the proportion of Oregonians with current asthma who received formal training for asthma management.	6.1% (2008–2010)	14.5%

Progress among those who are disproportionately affected by asthma will be measured annually in each of these areas when data is available. This measurement will specifically track the progress of Oregonians without a college education, with lower incomes or who are enrolled in the OHP.

The OAP and asthma partners also worked together to set measures of progress for each objective in this Leadership Plan. Measures of progress for each of the objectives are shown in a table at the end of each focus area. Whenever possible, these measures were population-based or based on the key sub-population (OHP) related to asthma disparities. When population-based measures were not feasible, process-based measures of progress were used. Process-based measures were also used when the desired outcome was to build the infrastructure needed to make policy, systems and environmental changes that support population-level improvements in the health of Oregonians with asthma.

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\* The baseline for reducing asthma hospitalizations was from hospital discharges. The baseline for increasing the number of people attending chronic disease self-management programs was from the Living Well with Chronic Conditions Database and Quit Line reports. The baseline for increasing the proportion reporting they ever took a course or class on how to manage their asthma used data from the Behavioral Risk Factors Surveillance System Asthma Callback Survey.

\*\* Cumulative sum for 2012 through 2019

## Focus Area One: Decrease tobacco use among people with asthma



### Rationale for tobacco priority

Tobacco use is the number one preventable cause of death and disability among Oregonians. This is particularly true for Oregonians with asthma, who in 2012 smoked more (24%) than those without asthma (18%).<sup>1</sup> Smoking is an important avoidable trigger associated with increased asthma severity and reduced effectiveness of medications. The National Asthma Education and Prevention Program's EPR-3 advises that all patients with asthma not smoke and avoid secondhand tobacco smoke.

Effective strategies for comprehensive tobacco control include passing laws and policies to protect the public from

secondhand smoke, limiting access to tobacco products and providing access to cessation resources for tobacco users. The Centers for Disease Control and Prevention (CDC) Best Practices for Comprehensive Tobacco Control Programs (2007) stated that one million asthma attacks could be prevented in children if they were completely protected from secondhand smoke. Funding tobacco control increases promotion, adoption and implementation of policies, systems and environmental changes that reduce tobacco use among people with asthma. Raising the price of tobacco is effective in reducing smoking among people with asthma, especially among low-income adults. For every 10% increase in the price of tobacco, there is approximately a 4% decrease in adult cigarette consumption.<sup>9</sup> Providing access to the Oregon Tobacco Quit Line provides people who have asthma with information and resources to help them quit smoking.

## Objectives and Strategies

**Objective 1:** By August 31, 2019, reduce the percentage of adults with asthma who smoke cigarettes (from 24% to 20%).

### Strategies

1.1 *Increase the number of jurisdictions covered by retail restrictions such as sampling bans, bans on flavored tobacco or tobacco advertising restrictions.*

- ✓ **Setting:** State, community, worksites, schools
- ✓ **Key organization(s):** Health Promotion and Chronic Disease Prevention (HPCDP), local public health authorities (LPHA)

1.2 *Maintain surveillance of Oregonians with asthma who smoke, those who are exposed to secondhand smoke, and those that use the Oregon Tobacco Quit Line.*

- ✓ **Setting:** State
- ✓ **Key organization(s):** OAP

**Objective 2:** By August 31, 2019, reduce the percentage of Oregonians with asthma reporting they were exposed to secondhand smoke (from 23% to 17%).

### Strategy

2.1 *Increase the number of environments where tobacco use is prohibited.*

- ✓ **Setting:** State, community, worksites, multi-unit housing, schools
- ✓ **Key organization(s):** HPCDP, LPHA







**Objective 3:** By August 31, 2019, reduce the number of packs of cigarettes sold in Oregon (from 44 to 38 packs per capita).

### **Strategy**

*3.1 Increase the price of tobacco products with at least 10% of the revenue dedicated to a comprehensive tobacco control infrastructure.*

- ✓ **Setting:** State
- ✓ **Key organization(s):** Oregon Health Authority (OHA), HPCDP, Lung Association of the Mountain Pacific (LAMP)

**Objective 4:** By August 31, 2019, increase the number of adult Oregonians on the OHP with asthma who call the Oregon Tobacco Quit Line (from 504 to 800 annually).

## Strategy

4.1 HPCDP grantees partner with local CCOs, which provide OHP services to low-income Oregonians with asthma, to promote the Oregon Tobacco Quit Line and other evidence-based cessation benefits.

- ✓ **Setting:** State, community, health system
- ✓ **Key organization(s):** HPCDP, LPHA

## Measures of progress on objectives

Related objectives	Measures of progress	Oregon data sources	Oregon baselines	Oregon 2019 targets
1	Percentage of Oregon adults with asthma that smoke cigarettes	BRFSS	24% (2012)	20%
1, 2	Percentage of Oregon adults with asthma reporting they were exposed to secondhand smoke	BRFSS	23% (2012)	17%
2	Percentage of Oregon adults with asthma who have smoke-free homes	BRFSS	88% (2011)	90%
3	Number of packs of cigarettes per capita sold in Oregon	Tax Burden on Tobacco report	44 packs per capita (2012)	38 packs per capita
4	Number of adult Oregonians on the OHP with asthma that call the Oregon Tobacco Quit Line	Oregon Tobacco Quit Line	504 (2012)	800

## Focus Area Two: Increase self-management among people with asthma



### Rationale for self-management focus area

There is no cure for asthma but it can be controlled with good self-management and quality medical care. For people with asthma, self-management refers to the education, self-management skills, use of medications and actions taken to prevent or control exacerbations (i.e. asthma episodes or attacks).<sup>5</sup>

In addition, people with asthma who smoke are encouraged to quit as part of evidence-based methods to prevent asthma episodes,<sup>5</sup> improving overall self-management. With appropriate self-management knowledge and skills, a person with asthma can better manage their disease and improve their quality of life. Increasing the number of Oregonians who self-manage their asthma will achieve better health, better care and lower costs, as well as lower the rate of asthma hospitalizations.

Two evidence-based resources that can help OHP members with asthma include Living Well with Chronic Conditions and its Latino cultural and Spanish language adaptation, Tomando Control de su Salud, and the Oregon Tobacco Quit Line. Living Well with Chronic Conditions is an evidence-based program that helps people manage chronic conditions such as asthma. Living Well helps people follow through on disease management instructions provided by health care providers and has demonstrated effectiveness with diverse populations, including low-income





populations. Living Well has been shown to increase patient self-efficacy (confidence in ability to deal with health problems).<sup>10</sup> Increased self-efficacy has been associated with increased asthma control and quality of life among people with asthma.<sup>11</sup> Tobacco smoke is a key asthma trigger, and the Oregon Tobacco Quit Line is a free, evidence-based telephone and online program that helps people quit.

In addition to the programs directly supported by the OAP, the LAMP supports asthma education in the school setting. Their two school programs, Open Airways for Schools and Asthma 101, prepare staff to support students and improve the confidence of school staff to deal with and prevent asthma-related incidents at school.

The Patient Self-Management Collaborative is another group that the OAP works with to reduce the burden of asthma with a focus on reducing asthma disparities among low-income patients. The Patient Self-Management Collaborative is a multi-year collaboration between the OAP and the Oregon Primary Care Association. Seven Federally Qualified Health Centers are receiving training and technical assistance to develop protocols for providing self-management support to patients with asthma and other chronic conditions and referring them to self-management resources, including Living Well, Tomando Control and the Oregon Tobacco Quit Line.

## Objectives and strategies

**Objective 1:** By August 31, 2019, increase the number of people with asthma that have access to evidence-based chronic disease self-management programs (between 2012 and 2019, 9,000 people with asthma call the Oregon Tobacco Quit Line and 5,000 attend Living Well with Chronic Conditions or Tomando Control classes ).

### Strategies

1.1 *Implement the Living Well with Chronic Conditions sustainability (business) plan for program delivery and sustainable financing to expand the reach of the program to more Oregonians with asthma.*

- ✓ **Setting:** Community, worksite, health system
- ✓ **Key organization(s):** LPHA, HPCDP

1.2 *Partner with Patient Self-Management Collaborative clinics to integrate systematic referral to the Oregon Tobacco Quit Line for patients that use tobacco and currently have asthma.*

- ✓ **Setting:** Community, worksite, health system
- ✓ **Key organization(s):** HPCDP, Oregon Primary Care Association, Multnomah County Health Department, Northwest Human Services, Lincoln Community Health Center, Community Health Centers of Benton and Linn Counties, Siskiyou Community Health Center, La Clinica del Valle, Yakima Valley Farm Workers Clinic, other LPHA, Alere Wellbeing

1.3 *Partner with Patient Self-Management Collaborative clinics to integrate systematic referral to Living Well with Chronic Conditions/ Tomando Control for patients that currently have asthma.*

- ✓ **Setting:** Community, worksite, health system
- ✓ **Key organization(s):** HPCDP, Oregon Primary Care Association, Multnomah County Health Department, Northwest Human Services, Lincoln Community Health Center, Community Health Centers of Benton and Linn Counties, Siskiyou Community Health Center, La Clinica del Valle, Yakima Valley Farm Workers Clinic, other LPHA, Oregon Living Well Network



- 1.4 *Promote the LAMP's evidence-based asthma self-management programs, Asthma 101 and Open Airways for Schools, to local and statewide partners.*
- ✓ **Setting:** Community, worksite, schools
  - ✓ **Key organization(s):** OAP, LAMP, LPHA
- 1.5 *Increase surveillance of asthma self-management by maintaining the Living Well Database, developing a database for the Oregon Tobacco Quit Line specific to asthma, maintaining surveys of people with asthma who have an asthma action plan, and working with the LAMP to share data on asthma training efforts.*
- ✓ **Setting:** Community, worksite, health system, schools
  - ✓ **Key organization(s):** OAP, LAMP
- 1.6 *Partner with Oregon Environmental Public Health to integrate referral to asthma self-management and Healthy Homes Environmental Assessments for patients seen during home visiting programs that currently have asthma.*
- ✓ **Setting:** Communities
  - ✓ **Key organization(s):** LPHA, Oregon Environmental Public Health





**Objective 2:** By August 31, 2019, increase health system infrastructure that supports effective self-management of asthma and related risk factors to Oregonians on the OHP with asthma through a coordinated, patient-centered approach (from 0 to 5 CCOs include the Oregon Tobacco Quit Line and Living Well with Chronic Conditions or Tomando Control as a covered benefit).

## **Strategies**

*2.1 Partner with local CCOs to adopt/promote the Oregon Tobacco Quit Line and other evidence-based cessation benefits.*

✓ **Setting:** Community, worksite, health system

✓ **Key organization(s):** HPCDP, LPHA

*2.2 Partner with local CCOs to adopt/promote Living Well with Chronic Conditions, Tomando Control and other evidence-based asthma self-management benefits.*

✓ **Setting:** Community, worksite, health system

✓ **Key organization(s):** HPCDP, LPHA

*2.3 Partner with local CCOs to provide non-traditional health workers with guidelines-based asthma practices for the home environment.*

✓ **Setting:** Health system

✓ **Key organization(s):** OAP, HPCDP, LPHA

*2.4 Develop Living Well with Chronic Conditions and Tomando Control reimbursement models for publicly funded health plans such as the OHP.*

✓ **Setting:** Health system

✓ **Key organization(s):** OAP, HPCDP

*2.5 Partner with the OHP to provide technical assistance on appropriate asthma measures for quality and performance improvement in CCOs.*

✓ **Setting:** Health system

✓ **Key organization(s):** OAP, OHP

**Objective 3:** By August 31, 2019, increase the health system infrastructure that supports effective self-management of asthma and related risk factors for children and adolescents in Oregon with asthma.

## Strategies

3.1 *Partner with the Oregon Adolescent Health Section to encourage the development of a Department of Education-led, coordinated school health approach, based on CDC's Coordinated School Health framework, including evidence-based, comprehensive asthma self-management school health tools and policies.*

- ✓ **Setting:** State, schools
- ✓ **Key organization(s):** Oregon Department of Education (ODE), Oregon Adolescent Health Section, OAP

**Objective 4:** By August 31, 2019, increase the percent of people with asthma who receive a annual flu vaccination (from 45% to 55%).

## Strategies

4.1 *Partner with the Oregon Immunization Program and LPHA to disseminate information (brochures, social media posts, fact sheets) on the importance of flu vaccinations.*

- ✓ **Setting:** Health systems, state, schools
- ✓ **Key organization(s):** ODED, Oregon Immunization Program, OAP, LPHA

4.2 *Partner with the Oregon Immunization Program to support a media or education campaign starting in October of each year that highlights vaccines.*

- ✓ **Setting:** Health systems, state
- ✓ **Key organization(s):** Oregon Immunization Program, OAP

4.3 *Partner with the Oregon Immunization Program to increase immunization rates in regions/groups/populations with disproportionately low rates (or rates below the state average).*

- ✓ **Setting:** Health systems, state
- ✓ **Key Organization(s):** Oregon Immunization Program, OAP, LPHA

## Measures of progress on objectives

Related objectives	Measures of progress	Oregon data sources	Oregon baselines	Oregon 2019 targets
1	Number of people with asthma calling the Oregon Tobacco Quit Line	Oregon Tobacco Quit Line	1,820 (2012)	9,000*
1	Number of people with asthma calling the Oregon Tobacco Quit Line and are referred to Living Well with Chronic Conditions/ Tomando Control	Oregon Tobacco Quit Line	1,820 (2012)	
1	Number of people with asthma completing the Asthma 101 online tool	LAMP	0 (2012)	500*
1	Number of facilitators trained to teach the Open Airways for Schools online program	LAMP	0 (2012)	50*
1, 2	Number of people with asthma who attend Living Well with Chronic Conditions/ Tomando Control class	Living Well Database	257 (2012)	5,000*
2	Number of CCOs providing Living Well with Chronic Conditions/Tomando Control and the Oregon Tobacco Quit Line as covered benefits for members	CCOs benefit report	0 (2012)	5

\* Cumulative sum for 2012 through 2019.



2	Number of asthma-related CCO metrics included in the OHA/CCO measurement strategy	CCOs measures report	0 (2012)	2
1, 3	Percentage of Oregonians with current asthma that have an asthma action plan	BRFSS – Asthma Callback Survey	26% (2008–2010)	37%
1, 3	Percent of Oregonians with current asthma who report they have received self-management training for asthma	BRFSS – Asthma Callback Survey	6.1% (2008–2010)	14.4%
3	Number of school districts that have coordinated school health approaches that include comprehensive asthma self-management school health tools and policies	Coordinated school health report	0 (2012)	5*
4	Percent of Oregon adults with current asthma who received an annual flu vaccination	Oregon BRFSS	45% (2012)	55%

\* Cumulative sum for 2012 through 2019.

## Focus Area Three: Decrease exposure to environmental triggers among people with asthma



### Rationale for environmental triggers priority

Outdoor air pollution is linked to a number of health problems like asthma, heart disease and breathing problems. Both ozone and fine particulate matter (PM<sub>2.5</sub>) make asthma symptoms worse among people who are sensitive and may trigger asthma attacks. Because of the public health risks, the Environmental Protection Agency (EPA) sets National Ambient Air Quality Standards for both ozone and PM<sub>2.5</sub>. These standards reflect current science on the acceptable level of these pollutants allowed in the air before harm will occur.

The Oregon Department of Environmental Quality (DEQ) is the primary agency tasked with improving the quality of Oregon's air. Their mission is to preserve and enhance Oregon's air quality. To protect Oregonians from poor air quality, the DEQ uses the overall Air Quality Index, which generally includes PM<sub>2.5</sub> and ozone in areas of concern to identify unhealthy air quality days. The DEQ also sets goals and

strategies to improve air quality, called key performance measures. These measures include reducing the number of days air is unhealthy for children and people with asthma (known as sensitive groups), and reducing diesel emissions. For more on DEQ's key performance measures see the website: [www.deq.state.or.us/about/apm.htm](http://www.deq.state.or.us/about/apm.htm).

Limiting the amount of ozone and PM<sub>2.5</sub> that Oregonians with asthma are exposed to will reduce lung aggravation, chest pain and other negative effects of poor air quality. Strategies to improve air quality cannot target only people with asthma, but population-level interventions will improve the quality of life for all Oregonians, including people with asthma. Therefore, the objectives, strategies and measures for this section are not specific to people with asthma.

The EPR-3 guidelines and the EPA recommend that all people with asthma avoid exertion outdoors when levels of air pollution are high. The EPA also encourages people with asthma to follow their local weather reports, monitor the Air Quality Index, use air conditioning to filter air coming into the home and close windows to limit the amount of pollutants entering the home.

In addition to poor outdoor air quality, many indoor sources of air pollution can emit large amounts of the same pollutants present in wildfire smoke, which can irritate the respiratory system and worsen chronic lung conditions such as asthma. Indoor sources of air pollution such as burning cigarettes (which create secondhand smoke) and wood-burning stoves and furnaces can greatly increase the particle levels in a home. Other indoor asthma triggers that can cause asthma symptoms include mold, cockroaches, dust mites, household pet dander and other pests.

There are a number of evidence-based strategies available for improving indoor air quality. The EPR-3 recommends that all people with asthma create an asthma action plan in partnership with their provider, giving guidance on identifying triggers and avoiding factors that worsen their asthma, including indoor triggers. The Community Guide, a resource for evidence-based recommendations that improve public health, recommends comprehensive home-based environmental interventions for children and adolescents with asthma, as there is evidence that these interventions improve asthma symptoms and reduce the number of school days missed due to asthma. For more information, visit the website: [www.thecommunityguide.org/asthma/index.html](http://www.thecommunityguide.org/asthma/index.html).



## Objectives and strategies

**Objective 1:** By August 31, 2019, outdoor air quality will meet DEQ’s key performance measures for sensitive groups (from 106 to 20 annual days at air quality monitors where air is unhealthy for sensitive groups).

### Strategies

1.1 *Provide data, bill analysis, and testimony, as requested by the OHA leadership, to support advocates in creating legislative concepts that improve air quality for people with asthma, such as reducing diesel emissions for buses, garbage trucks, delivery vehicles and over-the-road trucks.*

- ✓ **Setting:** State, community, worksites, schools
- ✓ **Key organization(s):** DEQ, OAP

**Objective 2:** By August 31, 2019, increase the amount of outdoor air quality information provided to sensitive groups.

### Strategies

2.1 *Partner with DEQ to develop key messages on outdoor air quality and asthma.*

- ✓ **Setting:** State, community, worksites, schools
- ✓ **Key organization(s):** DEQ, OAP

2.2 *Promote use of DEQ daily Air Quality Forecasts to communicate daily air pollutant levels to people with asthma.*

- ✓ **Setting:** State, community
- ✓ **Key organization(s):** OAP, HPCDP, DEQ

2.3 *Maintain a partnership with the Oregon Environmental Public Health Program (EPH) to ensure high quality data on asthma are available to the public.*

- ✓ **Setting:** State
- ✓ **Key organization(s):** OAP, EPH

**Objective 3:** By August 31, 2019, provide information to CCOs on indoor asthma triggers and strategies to reduce asthma triggers.

## Strategies

3.1 *Make available indoor asthma trigger fact sheets on the Oregon Asthma Resource Bank to share in monthly information sheets provided by the OAP to the OHP and shared with CCOs.*

✓ **Setting:** Community, health system

✓ **Key organization(s):** OAP

3.2 *Provide technical assistance to CCOs upon request related to indoor asthma triggers.*

✓ **Setting:** Community, health system

✓ **Key organization(s):** OAP

3.3 *Provide call-in assistance and distribute resources to CCOs related to healthy homes, schools and workplaces.*

✓ **Setting:** Community, health system

✓ **Key organization(s):** EPH



## Measures of progress on objectives

Related objectives	Measures of progress	Oregon data sources	Oregon baselines	Oregon 2019 targets
1	Annual number of days at air quality monitors where air is unhealthy for sensitive groups	DEQ	106 (2009)	20
2	Number of Oregonians estimated to have asthma who signed up to receive daily Air Quality Forecasts	DEQ	Unknown	TBD
1, 2	Number of messages created that educate people with asthma of the dangers of poor outdoor air quality in relation to asthma	OAP messages tracking database	0	At least 15
3	Number of fact sheets produced on indoor air quality triggers and strategies to reduce triggers shared with the OHP	Oregon Asthma Resource Bank	0	At least 1
3	The percentage of people with current asthma who were advised to make alterations at home, school or work to improve asthma	BRFSS – Asthma Callback Survey	38% (2008–2010)	40%



## Focus Area Four: Decrease obesity among people with asthma



### Rationale for obesity priority

Obesity is the second leading preventable cause of death and disability among Oregonians and obesity is reported to be an important asthma risk factor. While the mechanics underlying the relationship between obesity and asthma are not fully understood, literature suggests that obesity is associated with increased prevalence and incidence of asthma, increased severity and poor asthma control.<sup>12</sup> Investigators have shown that people who are obese have decreased lung function<sup>13</sup> and obese individuals with asthma do not respond as well to asthma medications.<sup>14</sup> Other factors related to asthma and obesity may include obesity caused low-grade systemic inflammation, obesity-related changes in hormones, increased problems such as gastroesophageal reflux and sleep-disordered breathing.<sup>15</sup> Reducing the burden of obesity in Oregon through evidence-based strategies may achieve better health and lower costs, as well as lower the rate of asthma hospitalizations.

Effective strategies in comprehensive obesity prevention include establishing environments that promote and provide safe and sustainable options to eat healthy foods more often, increase physical activity and discourage sugary beverage consumption. In order to slow the rate of obesity, Oregon must develop state and local infrastructure to plan, coordinate and promote the adoption and implementation of policy, systems and environmental changes to improve nutrition, increase physical activity and reduce disparities among populations at increased risk for obesity. This work began in 2008 in some parts of the state. Expanding this infrastructure across the state will ensure Oregon is able to work toward increasing physical activity and healthy eating, decreasing obesity in all Oregonians and potentially helping those with asthma control their disease.

## Objectives and strategies

**Objective 1:** By August 31, 2019, slow the rise of obesity among people with asthma.

### Strategies

*1.1 Develop a comprehensive obesity prevention and education program to build state and community capacity for chronic disease prevention, including asthma.*

✓ **Setting:** State

✓ **Key organization(s):** HPCDP

*1.2 Promote healthy eating and physical activity options and warn of the dangers of sugary beverages through education and awareness messages that are meaningful to all people in Oregon.*

✓ **Setting:** State, community, worksites, health system, schools

✓ **Key organization(s):** HPCDP, LPHA

*1.3 Increase the number of environments that have adopted and implemented standards for nutrition and physical activity.*

✓ **Setting:** State, community, worksites, health system, schools

✓ **Key organization(s):** HPCDP, LPHA

**Objective 2:** By August 31, 2019, slow the rise of obesity among OHP members with asthma.

### Strategies

2.1 *Provide consultation and guidance on metrics related to obesity control and prevention for CCOs.*

- ✓ **Setting:** Health system
- ✓ **Key organization(s):** HPCDP

2.2 *Provide information on evidence-based strategies to slow the rise of obesity and integrate those strategies into the Medicaid delivery system (i.e. CCO/insurance plan, Patient-Centered Primary Care Homes).*

- ✓ **Setting:** Health system
- ✓ **Key organization(s):** HPCDP

### Measures of progress on objectives

Related objectives	Measures of progress	Oregon data sources	Oregon baselines	Oregon 2019 targets
1	Annual number of days at air quality monitors where air is unhealthy for sensitive groups	DEQ	106 (2009)	20
2	Number of Oregonians estimated to have asthma who signed up to receive daily Air Quality Forecasts	DEQ	Unknown	TBD
1, 2	Number of messages created that educate people with asthma of the dangers of poor outdoor air quality in relation to asthma	OAP messages tracking database	0	At least 15



## Focus Area Five: Surveillance and evaluation



### Rational for surveillance and evaluation priority

Surveillance and evaluation are two of the 10 essential public health services. Asthma surveillance is key to informing the creation of effective policies and interventions that prevent and control asthma at a population-based level. Continued and systematic collection, analysis and interpretation of asthma data informs policy makers, health care professionals and the public on the importance of asthma and its effects on the health of Oregonians. Asthma data is used in the planning, implementation and evaluation of asthma policies and interventions. Evaluation of policies and interventions is critical for gauging the effectiveness, accessibility and quality of population-based asthma activities.



## Objectives and strategies

**Objective 1:** By August 31, 2019, maintain and expand asthma surveillance in Oregon.

### Strategies

1.1 *Maintain basic statewide asthma prevalence, morbidity, mortality and asthma risk factors surveillance.*

- ✓ **Setting:** State
- ✓ **Key organization(s):** OAP, HPCDP, Health Analytics, Vital Statistics, Program Design and Evaluation Services (PDES), DEQ, Office of Medical Assistance Programs (MAP)

1.2 *Maintain and expand key organizational relationships or agreements that support access to critical data systems.*

- ✓ **Setting:** State
- ✓ **Key organization(s):** OAP, HPCDP, Health Analytics, Vital Statistics, PDES, DEQ, MAP

1.3 *Expand asthma surveillance opportunities for reporting smaller geographic areas (county, sub-county) and among disparate populations (race, ethnicity, low socio-economic status and others as determined by discussions with strategic partners).*

- ✓ **Setting:** State, Centers for Disease Control and Prevention's National Asthma Control Program.
- ✓ **Key organization(s):** OAP, HPCDP, Health Analytics, Vital Statistics, PDES, DEQ, MAP, LPHA

1.4 *Maintain and expand asthma surveillance in the health care setting to support health care transformation.*

- ✓ **Setting:** State
- ✓ **Key organization(s):** OAP, HPCDP, Health Analytics, MAP.

1.5 *Partner with the EPHT to develop a plan for collaboration on asthma measures and reports.*

- ✓ **Setting:** State
- ✓ **Key organization(s):** OAP, HPCDP, EPHT, LPHA



1.6 *Develop an outline of potential asthma surveillance measures related to the work of the Oregon Healthy Homes program and Climate and Health programs.*

- ✓ **Setting:** State
- ✓ **Key organization(s):** OAP, HPCDP, Healthy Homes program, Climate and Health programs

**Objective 2:** By August 31, 2019, use surveillance data to inform policies and interventions that reduce asthma disparities and risk factors, and raise awareness of the burden of asthma in Oregon.

2.1 *Maintain or expand asthma surveillance that informs asthma policies, asthma risk factors and interventions.*

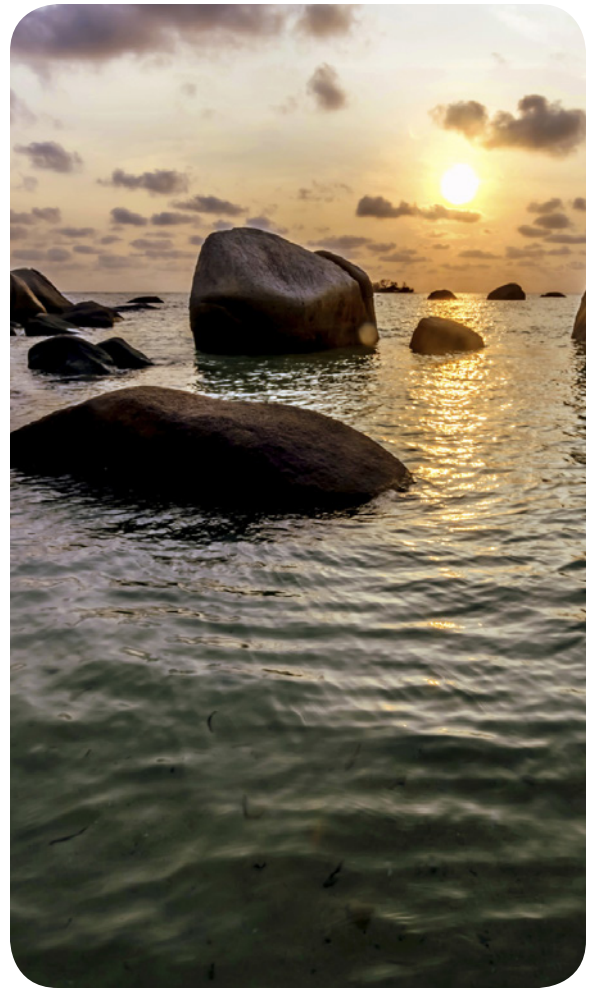
- ✓ **Setting:** State
- ✓ **Key organization(s):** OAP, HPCDP, Health Analytics, Vital Statistics, PDES, HIA Coalition, Emergency Preparedness

2.2 *Raise awareness of the burden of asthma and asthma disparities by providing information in written reports and in up-to-date reports and tables posted on the Web.*

- ✓ **Setting:** State
- ✓ **Key organization(s):** OAP, HPCDP

2.3 *Identify strategies to expand surveillance of subpopulations through partnerships with key organizations.*

- ✓ **Setting:** State
- ✓ **Key organization(s):** OAP, HPCDP, Health Analytics, Vital Statistics, PDES, EPHT, Healthy Homes program, Climate and Health programs, LAMP, DEQ, MAP, LPHA





**Objective 3:** By August 31, 2019, OAP promotes and supports the use of asthma surveillance information through technical assistance to grantees and strategic partners.

*3.1 Provide technical assistance to grantees that expands their understanding and use of asthma information.*

✓ **Setting:** State

✓ **Key organization(s):** OAP, HPCDP, LPHA

*3.2 Support grantees and strategic partner's goals to reduce asthma by ensuring availability of up-to-date surveillance information.*

✓ **Setting:** State

✓ **Key organization(s):** OAP, HPCDP, LPHA

*3.3 Assess OAP grantees and strategic partners technical assistance needs during Healthy Communities technical assistance calls, grantees and contractors meetings and the Place Matters conference.*

✓ **Setting:** State

✓ **Key organization(s):** OAP, HPCDP, local public health departments, EPHT, Healthy Homes program, Healthy Communities program, LAMP, DEQ, MAP

*3.4 Respond to grantee and strategic partners technical assistance requests as needed.*

✓ **Setting:** State

✓ **Key organization(s):** OAP, HPCDP , EPHT, Healthy Homes program, Healthy Communities program, LAMP, DEQ, MAP

**Objective 4:** By August 31, 2019, Oregon develops and maintains a strategic asthma evaluation plan.

*4.1 Convene stakeholders to identify evaluation priorities and opportunities*

✓ **Setting:** State

✓ **Key organization(s):** OAP, HPCDP, EPH, LAMP, LPHA, Oregon Department of Transportation

4.2 *Develop/refine a program logic model with stakeholders*

- ✓ **Setting:** State
- ✓ **Key organization(s):** OAP, HPCDP, EPH, LAMP

4.3 *Use identified evaluation priorities and opportunities to refine a list of reasonable and useful individual evaluation projects*

- ✓ **Setting:** State
- ✓ **Key organization(s):** OAP, HPCDP, EPH, LAMP

4.4 *Finalize strategic asthma evaluation plan*

- ✓ **Setting:** State
- ✓ **Key organization(s):** OAP, HPCDP,

4.5 *Review and revise the strategic asthma evaluation plan annually*

- ✓ **Setting:** State
- ✓ **Key organization(s):** OAP, HPCDP, EPHT, LAMP

**Objective 5:** By August 31, 2019, OAP and strategic asthma partners complete individual evaluations outlined in the strategic asthma evaluation plan.

5.1 *Convene stakeholders to identify evaluation priorities and opportunities for the specific evaluation focus area and define evaluation use*

- ✓ **Setting:** State
- ✓ **Key organization(s):** OAP, HPCDP, others depending on specific evaluation focus area



5.2 *Focus the evaluation by reviewing program logic model and refining the scope of the project*

- ✓ **Setting:** State
- ✓ **Key organization(s):** OAP, HPCDP, others depending on specific evaluation focus area

5.3 *Plan data collection approach and collect evaluation data*

- ✓ **Setting:** State
- ✓ **Key organization(s):** OAP, HPCDP, others depending on specific evaluation focus area

5.4 *Analyze and interpret data based upon guidance developed in 5.3*

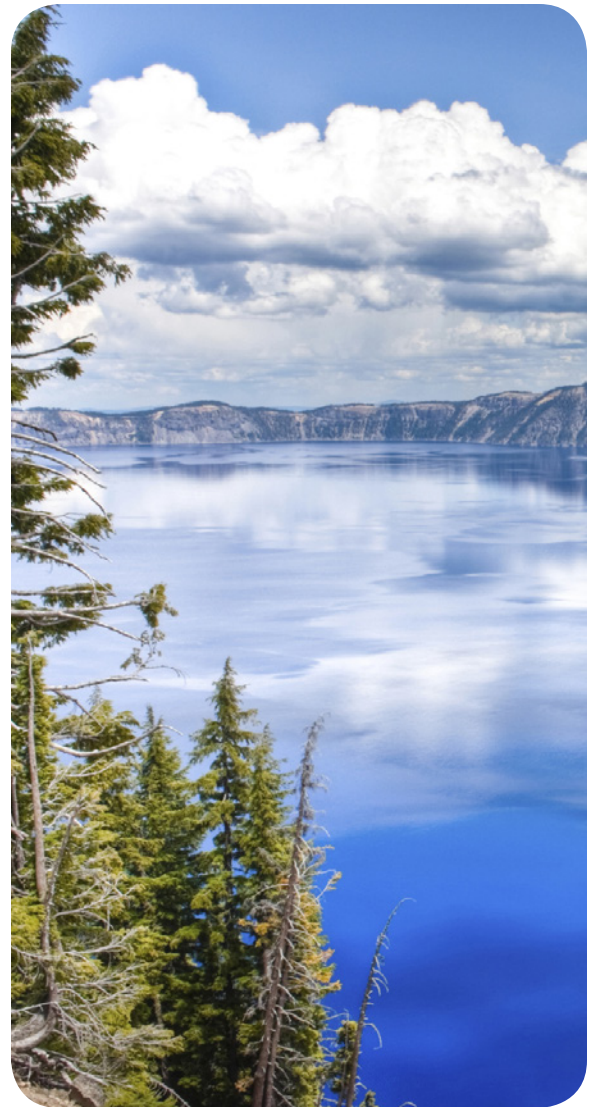
- ✓ **Setting:** State
- ✓ **Key organization(s):** OAP, HPCDP, others depending on specific evaluation focus area

5.5 *Report findings by executing communication plan*

- ✓ **Setting:** State
- ✓ **Key organization(s):** OAP, HPCDP, others depending on specific evaluation focus area

5.6 *Re-convene stakeholders to identify and plan uses for the evaluation findings*

- ✓ **Setting:** State
- ✓ **Key organization(s):** OAP, HPCDP, others depending on specific evaluation focus area





# Process of developing the Asthma Leadership Plan

The first Leadership Plan for Oregon was established in 2001 and was revisited in 2003 to update the goals, objectives and strategies. The 2006–2011 Leadership Plan was created in 2005 and included a targeted focus on self-management. The 2014–2019 Leadership Plan was completed in 2014, building from the previous Leadership plan, from work on the development of a comprehensive health promotion and chronic disease management plan, and from work with asthma partners. The steps in developing the current Leadership Plan are described below.



In 2010, the OHA, at the request of the Oregon Legislature, developed a 10-year Health Improvement Plan (HIP). This plan outlined goals, objectives and strategies to achieve health equity, prevent chronic diseases and spur linkages and integration among public health, health systems and the community. The OAP was involved in the development of this plan, which included strategies specific to asthma. The HIP was developed by a 26-member committee consisting of representatives from schools, government agencies, tribes, businesses and communities. The committee developed the initial plan using evidence-based interventions that incorporated policy, systems and environmental approaches to promote overall health. This initial plan was then informed by a community engagement process, which included public listening sessions in eight Oregon cities and a Web-based Community Input Survey. This public input was incorporated into the final HIP.





The Public Health Division, Health Promotion and Chronic Disease Prevention Section (HPCDP), developed a five-year comprehensive health promotion and chronic disease management plan. This plan was based on the work of the HIP and informed by strategic planning sessions with health promotion and chronic disease programs in the Oregon Public Health Division, including the OAP. Further discussions were held with representatives from local health authorities, tribes, disease-specific organizations (such as the LAMP, Oregon Diabetes Association and the American Heart Association) and other Oregon state agencies.

The Leadership Plan is based on the work of both the HIP and the HPCDP plans. OAP staff reviewed past asthma plans and components of the HPCDP plan related to asthma. OAP staff coordinated the development of the Leadership Plan with strategic partners through individual and group meetings, being sure to include work on asthma that is going on among OAP and its partners throughout the state. These strategic partners represented organizations that had staff, resources and shared objectives focused on asthma or issues important to asthma (such as clean air).



Once the plan was drafted, partners were solicited for feedback on the document before it was finalized. The Leadership Plan will be reviewed and revised on an annual basis using surveillance data, program evaluation findings and discussions with asthma partners.

The statewide asthma partnership includes officials and professionals representing 34 local public health authorities and the nine federally recognized tribes, as well as organizations and entities that help implement or support policies and strategies that assist people with asthma in Oregon. Examples of these organizations and entities include:

- Lung Association of the Mountain Pacific
- Oregon Environmental Public Health
- Oregon Department of Environmental Quality
- Oregon Tobacco Prevention and Education Program
- Oregon Healthy Communities Program
- Oregon Physical Activity and Nutrition Program

The Leadership Plan is a comprehensive plan for change, addressing asthma in the various settings where Oregonians with asthma live, work, learn and play. The Leadership Plan's focus areas and evidence-based strategies are population-based in nature. These areas address all people with asthma, with a particular emphasis on reaching priority populations, such as low-income Oregonians.



# Data sources and references

The information and measures in this Leadership Plan were drawn from multiple sources. Data sources differ in their reporting years and thus data are not available for all years. Data represented in this plan were the most currently available at the time of development.

1. The **Behavioral Risk Factor Surveillance System** (BRFSS) is a random-digit-dialed telephone survey that is conducted year-round among Oregon adults aged 18 years and older. Information on child asthma rates is collected for randomly selected children in the households sampled for the BRFSS and their asthma status answered by the responding adult.
2. The **BRFSS Asthma Callback Survey** is a follow-up survey of randomly selected adults with asthma or adults who responded that a randomly selected child in their household has asthma. This survey asks specific questions on the respondent's experiences, medical asthma events, home, work or school environment, and other information pertinent to asthma.
3. The **Hospital Discharge Dataset** (HDD) contains information on discharges of Oregonians from acute care hospitals in Oregon. These data are reported as an age-adjusted rate per 10,000 Oregonians.
4. Mortality rates are estimated from information recorded on state of Oregon **Death Certificates Statistical File**. This data file includes all deaths occurring in Oregon and deaths of Oregonians that occurred out-of-state.
5. National Heart, Lung and Blood Institute. 2007. Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma. Available at [www.nhlbi.nih.gov/guidelines/asthma](http://www.nhlbi.nih.gov/guidelines/asthma). Last accessed February 2013.
6. Information on **days of unhealthy air quality** in Oregon used the Oregon DEQ Air Quality Index. These data are available at [www.deq.state.or.us/aqi/index.aspx](http://www.deq.state.or.us/aqi/index.aspx).

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15. Shore, S.A. 2008. Obesity and asthma: possible mechanisms. *Journal of Allergy and Clinical Immunology*: 121:1087-1093.
16. **Cigarette consumption** information is measured using tobacco tax revenue collected by the Oregon Department of Revenue. The number of packs of cigarettes sold is calculated by dividing the cigarette tax receipts by the tax rate per pack.



17. The **Consumer Assessment of Healthcare Providers and Systems** (CAHPS) program administers patient surveys designed to support and promote the assessment of consumer experiences with health care. The OHA uses a CAHPS surveys to measure information on members of the OHP, which includes questions that are specific to Oregon.
18. Data on **people with persistent asthma on the OHP** were calculated using the Oregon Medicaid Management Information System.
19. **Living Well with Chronic Conditions** data comes from a database of known workshops that have occurred within Oregon. Information includes the number of workshops that have occurred, the number of participants that attended those workshops and the self-reported chronic conditions of the participants.
20. The number of persons with asthma who registered with the **Quit Line** comes from information provided by Alere Wellbeing Inc., the contractor that provides Quit Line services for Oregon.
21. The number of people with asthma who complete the **Asthma 101** online tool is provided by LAMP.
22. The numbers of people with asthma who complete **Open Airways for Schools** program are provided by LAMP.
23. Numbers of people who receive daily **Air Quality Forecasts** will come from the DEQ Government Delivery List.



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