

## REDUCING THE BURDEN OF ASTHMA IN RHODE ISLAND



### Asthma State Plan 2009–2014



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## Asthma State Plan 2009–2014

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Department of Health

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April 7, 2009

Dear Rhode Islanders,

It is with great pleasure that I present to you *Reducing the Burden of Asthma in Rhode Island: Asthma State Plan, 2009–2014*. This document provides a detailed plan of action to reduce the burden of asthma in Rhode Island. Asthma is a chronic disease of the lungs that, if not well controlled, can result in a reduced quality of life and even death. It results in hundreds of hospitalizations, emergency department visits, doctor visits, and lost school and workdays each year in our state. Asthma does not affect all groups equally. Therefore, the overall mission includes the development of interventions that will address the management of asthma with emphasis on priority populations most affected by asthma, such as racial and ethnic minority and low-income populations.

An Integrated Chronic Care Health Systems Approach was used as a comprehensive framework for this plan to ensure inclusion and collaboration among all systems that play a vital role in the control of asthma. Agencies and organizations within the Community, Health Care, Environmental Health, Health Communication, and Surveillance and Evaluation Systems are critical to our success. No single system, agency, or organization can meet the challenge alone.

The Rhode Island Department of Health (HEALTH) provides this document in hopes that community agencies and organizations will continue to partner with us in our efforts to achieve the data-driven goals and objectives developed jointly by HEALTH and the Rhode Island Asthma Control Coalition.

Sincerely,

A handwritten signature in blue ink, which appears to read "David R. Gifford" followed by a date "10/22/2009".

David R. Gifford, MD, MPH  
Director of Health





February 2009

Dear Rhode Islanders:

On behalf of the Rhode Island Asthma Control Coalition, I give full support of this report *Reducing the Burden of Asthma in Rhode Island: Asthma State Plan, 2009–2014*. This document is a culmination of three years of work by many in the community and the Rhode Island Department of Health (HEALTH) who share the goal of reducing the disparities in the burden of asthma. This 2009–2014 document is a plan of action, not passivity, and will move Rhode Island forward to be a leader in asthma control.

The Coalition consists of a variety of community health organizations eager to see the plan implemented; they have worked tirelessly through committees to bring the best practices and evidence-based interventions and activities into the Chronic Care Health System.

The Rhode Island Asthma Control Coalition is proud to partner with HEALTH to achieve the goals and objectives of this plan.

Sincerely,

Betina B. Ragless  
Chair, Rhode Island Asthma Control Coalition  
Director, Health Promotion  
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# Acknowledgements

The Rhode Island Department of Health would like to acknowledge and thank the Rhode Island Asthma Control Coalition and its members for their dedication and commitment to improving the lives of people in Rhode Island with asthma. Members volunteered numerous hours developing *Reducing the Burden of Asthma in Rhode Island: Asthma State Plan, 2009–2014*. Their expertise, dedication, and passion for working with the people of Rhode Island who live with asthma is admirable, and with this comprehensive road map, we look forward to continuing to work together through 2014 to reduce the burden of asthma in our state. In addition, thank you to members of the Rhode Island Healthy Housing Collaborative, Rhode Island Chronic Care Collaborative, and the Rhode Island Association of Certified Asthma Educators for their valuable insight and contributions throughout the development of this plan.

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# Executive Summary

## ASTHMA IN RHODE ISLAND

In Rhode Island, an estimated 10% of adults and 11% of children currently have asthma. Asthma is a potentially life-threatening chronic disease of the lungs that can make it difficult for a person to breathe. There is no cure for asthma and there are no medically recognized primary preventative measures. However, a person can control their asthma by avoiding factors that can ‘trigger’ an asthma attack and by taking asthma medications as prescribed. Severe, poorly controlled asthma can result in emergency department visits, hospitalizations, and a reduced quality of life (e.g., missed school and work days, depression, difficulty sleeping, and limitations in normal activity).

## RHODE ISLAND DEPARTMENT OF HEALTH’S ASTHMA CONTROL PROGRAM AND THE RHODE ISLAND ASTHMA CONTROL COALITION

The Rhode Island Department of Health’s (HEALTH) Asthma Control Program and the Rhode Island Asthma Control Coalition (RIACC) have partnered and provided leadership in the development of this document, *Reducing the Burden of Asthma in Rhode Island: Asthma State Plan, 2009–2014 (Asthma State Plan)*. Their mission is to provide leadership to improve health outcomes of all Rhode Islanders with asthma by increasing access to quality health care, education, community resources and services, and healthy environments where we live, work, learn, and play. Interventions will address the prevention and management of asthma with emphasis on racial and ethnic minorities and people of low income. RIACC consists of members representing a variety of areas of expertise and community agencies and organizations that are essential to the overall success of reaching this mission.

*The purpose of the Asthma State Plan is to provide a road map on how to best improve asthma control among those in Rhode Island with asthma, reduce asthma-related hospitalizations and emergency department visits, and reduce disparities among priority populations.*



## PURPOSE OF THE ASTHMA STATE PLAN

The purpose of the *Asthma State Plan* is to provide a road map on how to best improve asthma control among those in Rhode Island with asthma, reduce asthma-related hospitalizations and emergency department visits, and reduce disparities among priority populations. Provided below are long-term outcome objectives that address health care use and health disparities. Health disparities objectives target priority populations identified using Rhode Island asthma prevalence and hospitalization data.

- » By August 2014, reduce the percent of people in Rhode Island who are hospitalized for asthma from 14.6% in 2007 to 13.7%.
- » By August 2014, reduce the percent of people in Rhode Island who visit the emergency department due to asthma from 54.9 per 10,000 in 2007 to 50.0 per 10,000.

### Health Disparities Objectives:

- » By August 2014, reduce the percent of Black non-Hispanic people in Rhode Island who are hospitalized for asthma from 35.6% in 2007 to 30.2%.
- » By August 2014, reduce the percent of Hispanic people in Rhode Island who are hospitalized for asthma from 22.3% in 2007 to 19.3%.
- » By August 2014, reduce the percent of Black non-Hispanic children in Rhode Island who are hospitalized for asthma from 42.0% in 2007 to 31.7%.
- » By August 2014, reduce the percent of Hispanic children in Rhode Island who are hospitalized for asthma from 29.8% in 2007 to 24.6%.
- » By August 2014, reduce the percent of children with asthma covered by RItCare (Medicaid) who are hospitalized for asthma from 44.0% in 2007 to 38.0%.

- » By August 2014, reduce the percent of people who reside in a core city in Rhode Island who are hospitalized for asthma from 16.2% in 2000 to 14.7%.

The framework of the *Asthma State Plan* is based on the Integrated Chronic Care Health Systems Approach developed by HEALTH's Chronic Care and Disease Management Team. This Approach is built on the 10 Essential Public Health Practices, the Care Model, and the Model of Influence. The Integrated Chronic Care Health Systems Approach is based on the principle that no one system or organization can achieve measurable change; all agencies and organizations within each system need to integrate efforts to affect change. On a larger scale, the Asthma Control Program is a component of the 'Chronic Care and Risk Factor Integration' efforts of the Chronic Care and Disease Management Team. The systems fall into five broad categories, with asthma-specific goals in each system:

### Surveillance & Evaluation System

Goal 1: Ensure that policies, programs, and system-wide changes are based on and evaluated using timely, comprehensive, and accurate asthma data.

Goal 2: Decrease the disproportionate burden of asthma in racial and ethnic minority and low-income populations.

Goal 3: Develop a crosscutting epidemiology and surveillance system.

Goal 4: Evaluate short-term, intermediate, and long-term surveillance and programmatic objectives defined throughout the five years of implementation of the *Asthma State Plan*.

### **Health Communication System**

Goal 5: Increase public awareness about living well with asthma, including resources and information for self-management.

### **Environmental Health System**

Goal 6: Ensure that all homes are dry, clean, pest-free, ventilated, safe, contaminant-free, and maintained.

Goal 7: Reduce exposure within schools to environmental asthma triggers, irritants, and asthmagens.

Goal 8: Reduce exposure within worksites to environmental asthma triggers, irritants, and asthmagens.

Goal 9: Reduce exposure to outdoor air pollutants that trigger asthma exacerbations and may result in other adverse health effects.

### **Health Care System**

Goal 10: Promote and establish high-quality asthma care and education among providers who serve people with asthma, with emphasis on providers who serve populations that are disparately affected by asthma.

Goal 11: Improve patient access to asthma management resources, tools, and medications.

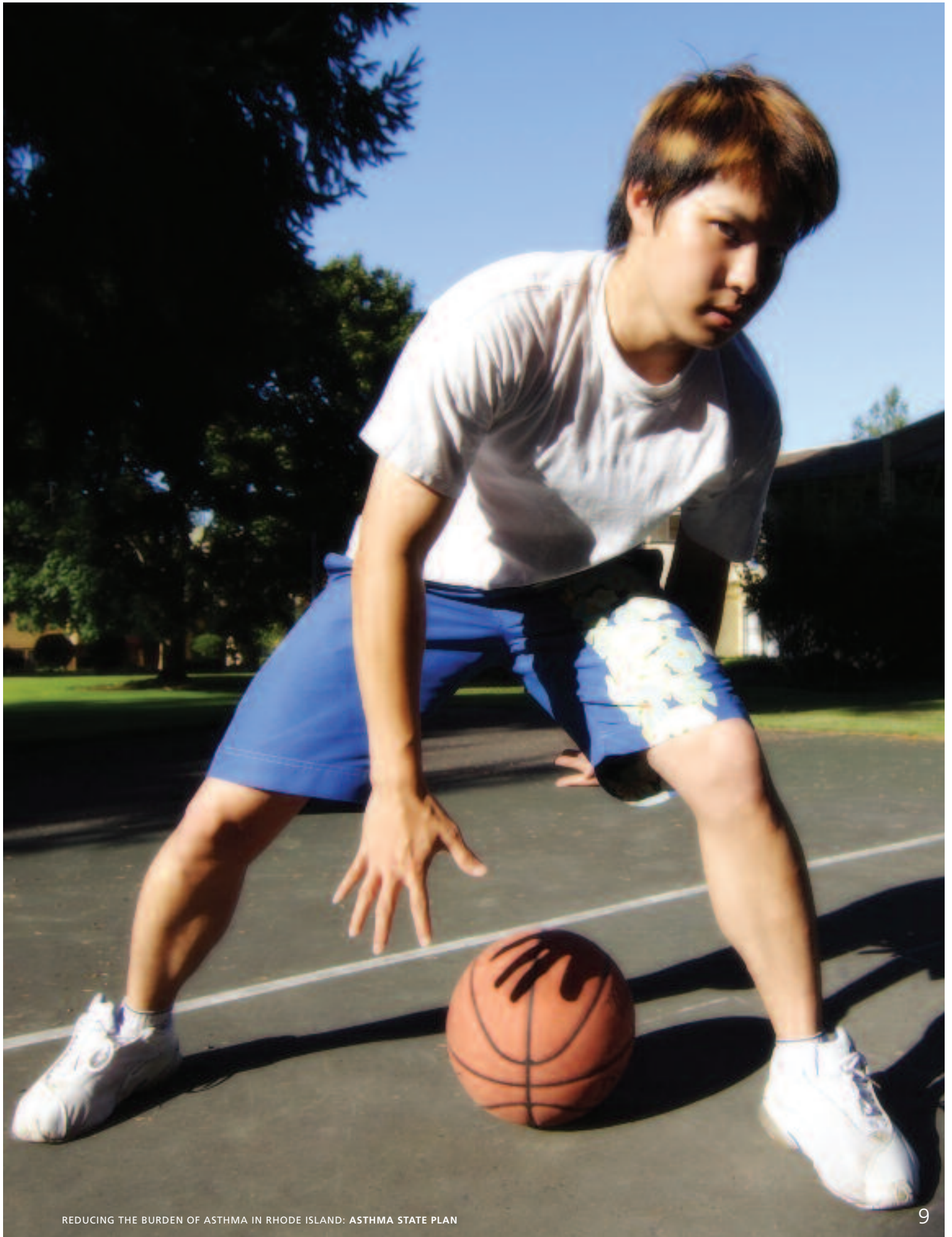
Goal 12: Improve the ability of asthma patients and their families to self-manage their disease.

### **Community System**

Goal 13: Ensure a broad and strong asthma control coalition that has a shared vision of reducing the burden of asthma and ensuring that all people with asthma achieve their optimal state of health, wellness, and quality of life.

Goal 14: Ensure that people affected by asthma have the knowledge and skills for asthma self-management and the tools to increase awareness and advocate for change to reduce the burden of asthma.

The *Asthma State Plan* is a collection of the priorities, current efforts, and ideas of HEALTH, RIACC, and partners statewide. The plan is a living document that will be used to guide activities. Objectives are well defined and measurable. They will be revisited and evaluated yearly to monitor progress and to identify activities and needs not yet identifiable.



# Purpose, Mission, and Framework

## WHAT IS ASTHMA?

Asthma is a potentially life-threatening chronic disease of the lungs that can make it difficult for a person to breathe. There is not a cure for asthma and there are no known primary preventative measures. However, a person can control their asthma by identifying and avoiding factors that can ‘trigger’ an asthma attack and by taking asthma medications as prescribed. Severe, poorly controlled asthma can result in emergency department visits, hospitalization, missed school and work days, depression, difficulty sleeping, and limitations in normal activity. Figure 1 lists typical asthma triggers.

In 1999, Rhode Island established the Rhode Island Asthma Control Coalition (RIACC), a coalition of over 40 community partners. RIACC is a part of the vital coordinated statewide effort to achieve sustainable statewide changes in the environment, education, and the quality of health care to reduce the risk of developing asthma and reduce its severity once the disease develops.

## PURPOSE OF THE ASTHMA STATE PLAN

*Reducing the Burden of Asthma in Rhode Island: Asthma State Plan, 2009–2014 (Asthma State Plan)* aims to improve asthma control among people in Rhode Island with the disease by reducing exposures to triggers and increasing adherence to asthma medications. This five-year plan will serve as a ‘blueprint’ to guide RIACC, the Rhode Island Department of Health (HEALTH), and statewide partners in their efforts to reduce the burden of asthma. To reduce disparities in asthma among the adult and pediatric populations, special emphasis has been placed on reaching Medicaid and Medicare recipients, people of low income, African American and Hispanic populations, and children and the elderly in core cities. Rhode Island defines a core city as any city where the child poverty level is greater than 15%, according to the 2000 Census. These cities include: Central Falls, Newport, Pawtucket, Providence, West Warwick, and Woonsocket.

From October 2007 to December 2008, RIACC met as a whole and in small workgroups to develop the vision, mission, goals, and objectives of the *Asthma State Plan*. The plan was developed by RIACC and HEALTH with input from critical partners such as the Rhode Island Healthy Housing Collaborative, the Rhode Island Chronic Care Collaborative (RICCC), and the Rhode Island Association of Certified Asthma Educators. RIACC members and their partners provided expertise in the following areas: health care, environment, housing, policy development, program development, health disparities, advocacy, public health, workforce development, communications, education, surveillance, and evaluation. A complete list of RIACC members can be found in the Acknowledgements section of this document.



## VISION AND MISSION

*The vision of the Rhode Island Asthma Control Coalition and Rhode Island Department of Health is to reduce the burden of asthma and ensure that all people affected by asthma achieve their optimal state of health, wellness, and quality of life.*

*The mission is to provide leadership to improve health outcomes of all Rhode Islanders with asthma by increasing access to quality health care, education, community resources and services, and healthy environments where we live, work, learn, and play. Interventions will address the prevention and management of asthma with emphasis on racial and ethnic minorities and people of low income.*

FIGURE 1.

## Asthma Triggers

Viral respiratory infections

Environmental allergens-indoor

- » Mold
- » Dust mites
- » Cockroach
- » Animal dander or secretory products

Environmental allergens-outdoor

- » Pollen

Exercise

Occupational chemicals or allergens

Irritants

- » Smoking and second-hand smoke
- » Strong odors
- » Air pollutants
- » Occupational chemicals
- » Dusts and particulates
- » Vapors, gases, and aerosols

Emotions

- » Fear
- » Anger
- » Frustration
- » Hard crying or laughing

Stress

- » Fear, anger, or frustrations

Drugs

- » Aspirin
- » Other non-steroidal anti-inflammatory drugs
- » Beta-blockers including eye drops

Exposure to cold air

Source: USDHHS, Guidelines for the Diagnosis and Management of Asthma, Summary Report 2007.

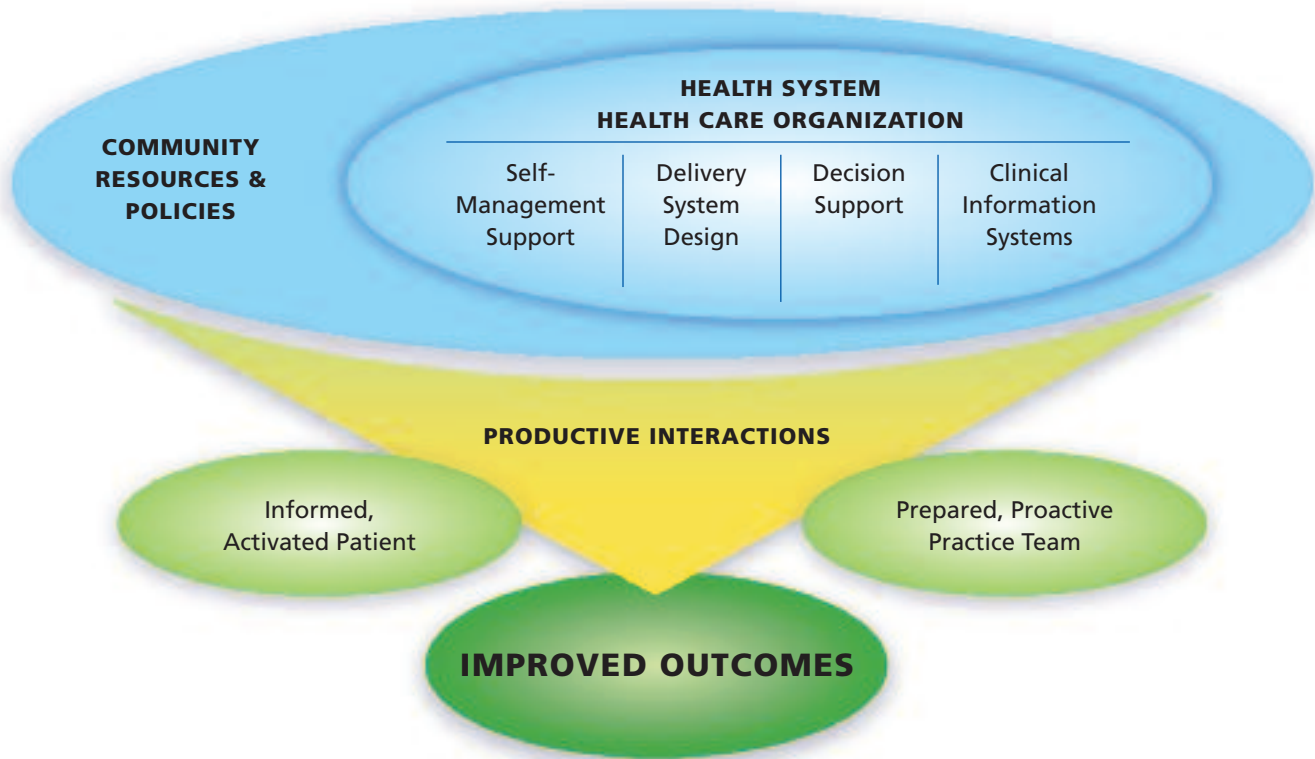
FIGURE 2.

## 10 Essential Public Health Practices

- 1 Monitor health status to identify and solve community health problems.
- 2 Diagnose and investigate health problems and health hazards in the community.
- 3 Inform, educate, and empower people about health issues.
- 4 Mobilize community partnerships and action to identify and solve health problems.
- 5 Develop policies and plans that support individual and community health efforts.
- 6 Enforce laws and regulations that protect health and ensure safety.
- 7 Link people to needed personal health services and assure the provision of health care when otherwise unavailable.
- 8 Assure competent public and personal health care workforce.
- 9 Evaluate effectiveness, accessibility, and quality of personal and population-based health services.
- 10 Research for new insights and innovative solutions to health problems.

Source: Centers for Disease Control and Prevention, 2008. [www.cdc.gov/od/ocphp/nphsp/essentialphservices.htm](http://www.cdc.gov/od/ocphp/nphsp/essentialphservices.htm)

FIGURE 3.  
THE CARE MODEL



#### FRAMEWORK OF THE ASTHMA STATE PLAN

The framework of the plan is based on the Integrated Chronic Care Health Systems Approach developed by HEALTH's Chronic Care and Disease Management Team. The Integrated Chronic Care Health Systems Approach is built on the 10 Essential Public Health Practices (see Figure 2) of the US Department of Health and Human Services,<sup>1</sup> Dr. Ed Wagner's Planned Care Model (see Figure 3), and the Division of Diabetes Translation Section within the Centers for Disease Control and Prevention's Model of Influence. The Integrated Chronic Care Health Systems Approach is based on the principle that no one system or organization can achieve measurable change; all agencies and organizations within each system need to integrate efforts to affect change. Asthma is one program in the 'Chronic Care and Risk Factor Integration' efforts of HEALTH's Chronic Care and Disease Management Team.

#### THE CARE MODEL

The Care Model (also called the Planned Care Model and Chronic Care Model)<sup>2,3</sup> is a population-based, patient-centered model that redesigns health care using an office-based team approach to ensure quality, evidence-based clinical care. As illustrated in Figure 3, the components of the model include:

- » **Self-Management:** Effective self-management is very different from telling patients what to do. Patients have a central role in determining their care, one that fosters a sense of responsibility for their own health.
- » **Decision Support:** Treatment decisions need to be based on explicit, proven guidelines supported by at least one defining study. Health care organizations creatively integrate explicit, proven guidelines into the day-to-day practice of the primary care providers in an accessible and easy-to-use manner.



- » **Delivery System Design:** The delivery of patient care requires not only determining what care is needed, but clarifying roles and tasks to ensure the patient gets the care; making sure that all the clinicians who take care of a patient have centralized, up-to-date information about the patient’s status; and making follow-up a part of standard procedure.
- » **Clinical Information System:** A registry, an information system that can track individual patients as well as populations of patients, is a necessity when managing chronic illness or preventive care.
- » **Organization of Health Care:** Health care systems can create an environment in which organized efforts to improve the care of people with chronic illness take hold and flourish.
- » **Community:** To improve the health of the population, health care organizations reach out to form powerful alliances and partnerships with state programs, local agencies, schools, faith organizations, businesses, and clubs.

## MODEL OF INFLUENCE

The fundamental premise of the Model of Influence is that chronic disease programs impact change in health status outcomes and public health by influencing partners, communities, and systems that have direct control and accountability. Changes in the systems, organizations, or populations and communities will eventually impact the individual who is served by, works in, or lives in these entities.

## INTEGRATED CHRONIC CARE HEALTH SYSTEMS APPROACH

As illustrated in Figure 4, the Integrated Chronic Care Health Systems Approach consists of five interconnected systems vital to meet the goals and objectives of the *Asthma State Plan*. Although each system has its unique qualities and components, all are reliant on each other in order to function efficiently, effectively, and comprehensively. Each of these components is essential to reducing the burden of chronic diseases of a population, as well as individuals and their families. The five systems include:

- 1 Surveillance and Evaluation System** includes several population-based and intervention-specific databases to obtain a comprehensive assessment of the burden of asthma, allowing for the examination of risk factors and co-morbidities to identify high risk populations, to evaluate interventions, and to identify gaps and needs.
- 2 Health Communication System** provides information to the public, including patients and providers, within each of the five systems based on national standards of care. This information is shared through the media, internet connections, and venues such as community-based organizations, schools, and worksites.

**3 Environmental Health System** reflects the social determinants of health such as policies related to the environmental health of the built environment where people spend the majority of their time (e.g., schools, worksites, homes) and the outdoor environment.

**4 Health Care System** includes evidence-based interventions such as the work completed by RICCC and workforce development among health care providers.

**5 Community System** encompasses evidence-based interventions in worksites, community-based organizations, and schools, as well as the provision of resources in the community for patient self-management.

The goals and objectives within the *Asthma State Plan* fall within one of the five systems. Four common components of each system include partners, policy, advocacy, and health disparities. To address the Healthy People 2010 Goal to eliminate health disparities among different segments of the population, priority was placed on the use of data to better identify: 1) high-risk populations with the greatest burden of asthma; and 2) the social determinants of health that impact the burden of asthma.

*The Integrated Chronic Care Health Systems Approach consists of five interconnected systems vital to meet the goals and objectives of the Asthma State Plan.*



FIGURE 4.  
**INTEGRATED ASTHMA CARE SYSTEMS APPROACH**



# Burden of Asthma in Rhode Island

## WHAT ARE THE DATA SOURCES?

The Rhode Island Department of Health receives funding from the Centers for Disease Control and Prevention (CDC) to collect, analyze, interpret, and disseminate state, county, and local data regarding the burden of asthma in Rhode Island. Two reports, *Burden of Asthma in Rhode Island* and *Asthma State Plan, 2009–2014* were written concurrently. The burden document can be accessed at [www.health.ri.gov](http://www.health.ri.gov). Data provided by HEALTH was critical in the development of the goals and objectives of the *Asthma State Plan*. The state population-based data sources include:

- » Rhode Island Behavioral Risk Factor Surveillance Survey (RI BRFSS)
- » Rhode Island Youth Risk Behavioral Survey (RI YRBS)
- » Rhode Island Hospital Discharge Data
- » Rhode Island Emergency Department Data
- » Vital Records (Death Certificates)

## WHO HAS ASTHMA IN RHODE ISLAND?

Rhode Island has a higher prevalence of asthma than the national average. However, adult asthma rates in Rhode Island have remained stable since 2000 with no significant differences from one year to the next.

- » An estimated 83,448 Rhode Island adults aged 18 and older currently have asthma, about 10.1% of the state adult population, versus 8.4% nationally. (RI BRFSS, 2003–2007; US BRFSS, 2007)
- » An estimated 26,696 Rhode Island children have asthma, about 11.3% of the state child population, versus 9% nationally.<sup>4</sup> (RI BRFSS, 2007)

## WHAT IS THE IMPACT OF ASTHMA?

Asthma can impact the cost to the health care system for asthma hospitalizations, emergency department visits, and medications. In addition, asthma can impact the quality of a person's life. Measures such as the number of reported asthma attacks and symptoms, missed school or work days due to asthma, interrupted sleep due to asthma symptoms, and inability to work or carry out usual activities in the past year because of asthma are also collected through the RI BRFSS to provide insight on the impact of asthma among those living in Rhode Island with this chronic disease.

- » In 2006–2007, total charges attributable to Rhode Island hospitalizations due to asthma were \$35 million. (RI Hospital Discharge Data, 2006–2007)
- » In 2007, the hospitalization rate for asthma was 14.6 per 10,000 Rhode Islanders. (RI Hospital Discharge Data, 2007)
- » In 2007, there were 6,995 Emergency Department visits in Rhode Island due to asthma. (RI Emergency Department Data, 2007)
- » An estimated 46% of Rhode Island adults with asthma reported having an asthma attack in the past year. (RI BRFSS, 2005–2006)
- » 18% of adults with current asthma reported experiencing daily symptoms of asthma in the last 30 days and 27% reported having asthma symptoms at least once a week or more often. (RI BRFSS, 2004–2006).
- » 25% of children with current asthma missed one or more school days in the past year due to asthma. (RI BRFSS, 2005–2006)

- » 19% of adults with current asthma missed one or more days of work in the past year due to asthma. (RI BRFSS, 2004–2006)
- » 40% of Rhode Island adults with current asthma reported that asthma interrupted their sleep at night on one or more days of the past month. (RI BRFSS, 2004–2006)
- » 15% of adults with asthma reported one to seven days of limited activity in the past year due to asthma and 22% reported eight or more days of limited activity in the past year due to asthma. (RI BRFSS, 2004–2006)
- » Between 2000 and 2007, there was an average of 10 deaths per year in Rhode Island for which asthma was the underlying cause (Range: 5 to 16 deaths). Over an eight-year period, there was an average of 43 deaths per year where asthma was listed as a contributing factor, but not the underlying cause.

#### **OTHER FACTORS THAT AFFECT ASTHMA**

Several factors can make asthma management more difficult; they include smoking, exposure to second-hand smoke, and obesity. Studies have shown that reducing a person with asthma’s exposure to second-hand smoke improves the level of asthma control and reduces asthma-related emergency department visits and hospitalizations.<sup>5,6</sup>

It has been established that there is an association between asthma and excess body weight. People with asthma who are obese are more likely to experience higher asthma severity and have more emergency department visits due to asthma than people with asthma who are not obese. It has been determined that obese people with asthma who lose weight experience an improvement in asthma control and vice versa: as people with asthma gain excess weight asthma control

decreases. Studies are underway to determine the physiological relationship between asthma and obesity, and how each condition exacerbates the other.<sup>7</sup> Rhode Island data show that:

- » Adults with current asthma were significantly more likely to be current smokers (23.4%) than adults without asthma (18.1%). (RI BRFSS, 2005–2007)
- » Adults with current asthma were as likely to be exposed to a smoker as adults without asthma, 25.5% vs. 22.7%. (RI BRFSS, 2005–2007)
- » Nearly 40% of middle school students (37.8%) live with someone who is a current smoker, putting 12,177 children at risk for serious health problems (RI YRBS, 2007), such as sudden infant death syndrome (SIDS), acute respiratory infections, ear problems, worsening of allergies, and more severe asthma in those who have the disease. (US Surgeon General, 2006)
- » Adults with current asthma were significantly more likely to be obese (32.3%) than adults without asthma (20.0%). (RI BRFSS, 2005–2007) Being obese was defined as a body mass index (BMI) of greater than or equal to 30.

**TABLE 1.****Disparities in Current Adult Asthma Prevalence**

Rhode Island Behavioral Risk Factor Surveillance System (RI BRFSS), 2003–2007

Asthma Sample		
Characteristics of adults (18+ yrs)	Unweighted sample <sup>1</sup>	Current asthma prevalence % (95% CI) <sup>2</sup>
<b>Sex</b>		
Male	7,784	6.9 (6.2 – 7.6)
Female	13,137	12.9 (12.2 – 13.7)
<b>Age group</b>		
18 to 64	15,456	10.5 (9.9 – 11.2)
65 and older	5,215	8.1 (7.3 – 9.0)
<b>Educational level</b>		
< 12 years	2,266	13.2 (11.1 – 15.2)
HS Diploma or higher	18,601	9.7 (9.2 – 10.3)
<b>Household income</b>		
< \$25,000 per year	4,747	12.3 (11.0 – 13.5)
> \$25,000 per year	13,047	9.4 (8.8 – 10.0)
<b>Race/Ethnicity</b>		
Hispanic	1,670	7.6 (5.9 – 9.2)
Black non-Hispanic	656	11.1 (8.1 – 14.0)
White non-Hispanic	17,727	10.3 (9.7 – 10.8)
<b>Overall</b>	<b>20,921</b>	<b>10.1 (9.5 – 10.6)</b>

<sup>1</sup> Sample of respondents with a “yes” or “no” response to the question about current asthma.<sup>2</sup> Weighted data.

Data Source: 2003–2007 Rhode Island Behavioral Risk Factor Surveillance System combined file, Rhode Island Department of Health, Center for Health Data and Analysis.

**TABLE 2.****Disparities in Current Pediatric Asthma Prevalence**

Rhode Island Behavioral Risk Factor Surveillance System (RI BRFSS), 2005–2007

Asthma Sample		
Characteristics of children (0 to 17 years)	Unweighted sample <sup>1</sup>	Current asthma prevalence % (95% CI) <sup>2</sup>
<b>Sex</b>		
Male	1,864	12.6 (10.9 – 14.4)
Female	1,712	10.2 (8.4 – 11.9)
<b>Age group</b>		
0 to 4	829	8.1 (5.9 – 10.4)
5 to 11	1,249	11.6 (9.5 – 13.7)
12 to 17	1,370	13.6 (11.6 – 15.8)
<b>Overall</b>	<b>3,625</b>	<b>11.3 (10.1 – 12.5)</b>

<sup>1</sup> Sample of respondents with a “yes” or “no” response to the question about current asthma.<sup>2</sup> Weighted data.

Data Source: 2005–2007 Rhode Island Behavioral Risk Factor Surveillance System combined file, Rhode Island Department of Health, Center for Health Data and Analysis.

## HEALTH DISPARITIES

Health disparities for asthma have been defined as differences in asthma prevalence, outcomes, and management by race and ethnicity, socioeconomic status (e.g., household income, payer type), and area of residence. Many of HEALTH’s data sets do not have a large enough sample of racial/ethnic minority groups to detect a meaningful statistical difference across population subgroups. Since many racial group differences can be explained by socioeconomic differences, this report focuses on economic rather than racial disparities. In Rhode Island, blacks are twice as likely to be poor as whites, and Hispanics are more than three times as likely to be poor as whites. A household income of less than \$25,000 a year was used as a marker for low income. Many social service agencies in Rhode Island use a cutoff of \$25,000 in annual household income as a measure of need, a category often referred to as “low-income” or “near-poor.” In addition to income differences, Rhode Island’s racial and ethnic minorities are more likely to be uninsured than are whites. In 2007–2008, 21% of Hispanics, 17% of Blacks, and 9% of whites were uninsured. Rhode Island’s racial/ethnic minority populations also are concentrated in core cities.<sup>8</sup>

The RI BRFSS and Hospital Discharge Data were used to identify disparities in asthma prevalence and hospitalizations. Frequent hospitalizations for asthma are an indication

that a person has severe, poorly controlled asthma. Based on the data provided in Tables 1–7 and Figures 5–7, the following populations were identified as priority populations that are often targeted by ongoing and proposed interventions:

- » People of low income
- » Hispanic adults and children
- » Black non-Hispanic adults and children
- » Children
- » Women 65 years and older
- » Medicaid and Medicare recipients – adults and children
- » Adults and children of low income residing in the core cities, with special emphasis on the City of Providence

Disparities based on reported income below \$25,000 per year can be found in Table 3. Among those with reported asthma, the low-income population, with a reported income of less than \$25,000 per year, were significantly more likely to report frequent asthma symptoms, use of relief medications, loss of sleep, limited activity, and doctor visits due to worsening asthma, than persons with asthma who have household incomes of \$25,000 and higher.

**TABLE 3.**

### Disparities in Asthma Control Based on Income

Rhode Island Behavioral Risk Factor Surveillance System (RI BRFSS), 2003–2007

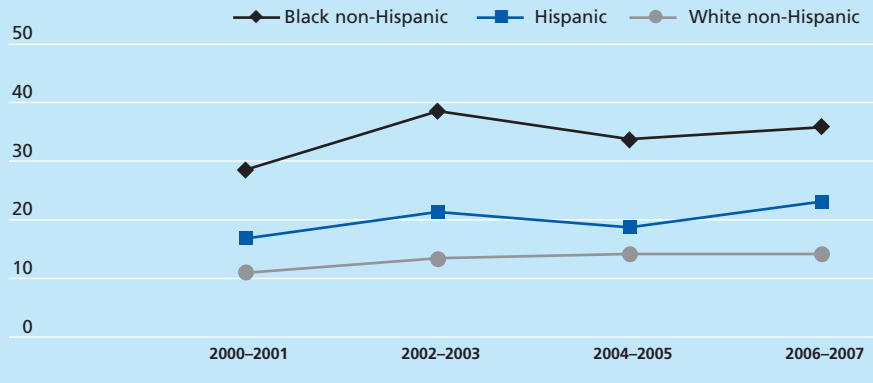
Disparity	<\$25,000 per year	>\$25,000 per year
Asthma symptoms most days of the week or daily	60.7%	42.0%
Used prescription asthma medication 1+ times in past 30 days to stop attack (relief medications)	67.3%	49.5%
Interrupted sleep one or more days of the past month	55.3%	32.7%
Limited in usual activities one or more days of the past year	47.9%	31.3%
Office visit because asthma worsening past year (1+ visits)	34.5%	23.7%

Data Source: 2003–2007 Rhode Island Behavioral Risk Factor Surveillance System combined file, Rhode Island Department of Health, Center for Health Data and Analysis.

FIGURE 5.

Age-adjusted<sup>1</sup> asthma<sup>2</sup> hospitalization rates,<sup>3</sup> by race/ethnicity and year<sup>4</sup>

Rhode Island Hospital Discharge Data, 2000–2007



1 Age-adjusted to the year 2000 US standard population.

2 Asthma listed as the principal diagnosis (ICD-9-CM codes 493.00–493.92).

3 All rates are per 10,000 population.

4 Years are combined in two-year intervals to have sufficient cases.

Data Source: 2000–2007 Rhode Island Hospital Discharge Data, Rhode Island Department of Health, Center for Health Data and Analysis.

## HOSPITAL DISCHARGE DATA

The prevalence of asthma in Rhode Island is similar among non-Hispanic whites (10.3%), and non-Hispanic Blacks (11.1%), and higher for both groups than Hispanics (7.6%). However, age-adjusted hospitalization rates for asthma are significantly higher for Hispanics (22.3 per 10,000) and non-Hispanic Blacks (35.6 per 10,000) compared to non-Hispanic whites (12.8 per 10,000). Please see Figure 5; all ages included.

Although asthma prevalence data for children in Rhode Island by race and ethnicity is not available, age-specific hospitalization rates for pediatric asthma by race/ethnicity highlight disparities (see Table 4). The hospitalization rates due to asthma are significantly higher for Black non-Hispanic (39.8 per 10,000) and Hispanic (27.1 per 10,000) children than White non-Hispanic children (17.0 per 10,000).

Age-specific hospitalization rates also show disparities by age group and gender. Hospitalization rates are highest among children up to the age of four and women over the age of 65 (see Tables 5 and 6).

Disparities in asthma-related admissions by payer type (an indirect measure of poverty) are shown in Figures 6 and 7. Medicaid was the primary payer for over half (52%) of hospitalizations for pediatric asthma (see Figure 6). Among adults hospitalized for asthma, Medicaid and Medicare were the primary payers for 63% of these admissions (see Figure 7).

**TABLE 4.**

**Annual and average age-specific pediatric asthma<sup>1</sup> hospitalization rates<sup>2</sup> by race/ethnicity**

Rhode Island Hospital Discharge Data, 2001–2007<sup>3</sup>

Children ages 0 to 17	2001	2002	2003	2004	2005	2006	2007	Average
White non-Hispanic	16.9	18.1	19.1	17.5	16.4	14.8	16.4	17.0
Black non-Hispanic	37.0	43.3	39.4	39.6	33.7	43.8	42.0	39.8
Hispanic	22.3	27.8	31.1	27.2	27.5	23.2	29.8	27.1

1 Asthma listed as the principal diagnosis (ICD-9-CM codes 493.00–493.92).

2 All rates are per 10,000 population.

3 Data for 2000 are not shown because less than 50 children hospitalized for asthma were non-Hispanic black or Hispanic.

Data Source: 2001–2007 Rhode Island Hospital Discharge Data, Rhode Island Department of Health, Center for Health Data and Analysis.

**TABLE 5.**

**Annual and average age-specific asthma<sup>1</sup> hospitalization rates<sup>2</sup> and overall age-adjusted<sup>3</sup> asthma hospitalization rates**

Rhode Island Hospital Discharge Data, 2000–2007

Age Group	2000	2001	2002	2003	2004	2005	2006	2007	Average
0 to 4	29.9	47.7	52.9	58.0	51.5	49.8	51.6	48.4	48.7
5 to 17	10.4	10.8	11.2	11.8	10.2	10.0	7.8	11.5	10.5
18 to 44	10.0	8.5	8.7	8.9	7.1	8.2	7.4	7.5	8.3
45 to 64	10.6	11.8	11.6	13.1	13.6	15.5	16.0	15.7	13.5
65+	10.8	17.0	16.3	19.0	19.0	23.8	22.7	21.3	20.1
<b>Overall (Age-adjusted)</b>	<b>11.6</b>	<b>13.3</b>	<b>13.7</b>	<b>14.9</b>	<b>13.6</b>	<b>14.9</b>	<b>14.3</b>	<b>14.6</b>	<b>13.9</b>

1 Asthma listed as the principal diagnosis (ICD-9-CM codes 493.00–493.92).

2 All rates are per 10,000 population.

3 Standard 2000 US population used for direct age-adjustment.

Data Source: 2000–2007 Rhode Island Hospital Discharge Data, Rhode Island Department of Health, Center for Health Data and Analysis.

**TABLE 6.**

**Annual and average age-specific asthma<sup>1</sup> hospitalization rates<sup>2</sup> and overall age-adjusted<sup>3</sup> asthma hospitalization rates by sex and age group**

Rhode Island Hospital Discharge Data, 2000–2007

Sex and Age	2000	2001	2002	2003	2004	2005	2006	2007	Average
<b>Female</b>									
0 to 17	11.0	15.2	16.6	19.0	17.3	16.8	15.3	16.4	16.0
18 to 44	13.7	12.2	12.2	12.7	10.6	11.7	10.4	11.0	11.8
45 to 64	16.1	17.4	17.3	19.5	20.3	21.9	24.5	21.6	19.8
65+	15.0	22.9	21.7	24.5	24.6	30.6	29.9	28.3	24.7
<b>Male</b>									
0 to 17	19.6	25.1	26.8	28.0	24.2	23.7	22.9	25.7	24.5
18 to 44	6.2	4.8	5.1	4.9	3.6	4.6	4.3	4.0	4.7
45 to 64	4.8	5.8	5.4	6.3	6.6	8.8	7.0	9.3	6.7
65+	4.3	8.2	8.0	10.7	10.6	13.7	11.9	11.0	9.8
<b>Overall (Age-adjusted)</b>	<b>11.6</b>	<b>13.3</b>	<b>13.7</b>	<b>14.9</b>	<b>13.6</b>	<b>14.9</b>	<b>14.3</b>	<b>14.6</b>	<b>13.9</b>

1 Asthma listed as the principal diagnosis (ICD-9-CM codes 493.00–493.92).

2 All rates are per 10,000 population.

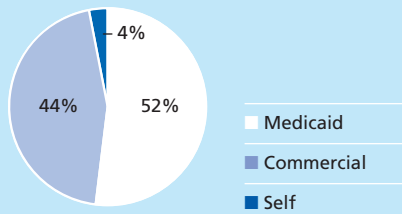
3 Standard 2000 US population used for direct age-adjustment.

Data Source: 2000–2007 Rhode Island Hospital Discharge Data, Rhode Island Department of Health, Center for Health Data and Analysis.

**FIGURE 6.**

**Primary payer for asthma hospitalization<sup>1</sup> among children (ages 0 to 17)**

Rhode Island Hospital Discharge Data, 2006–2007

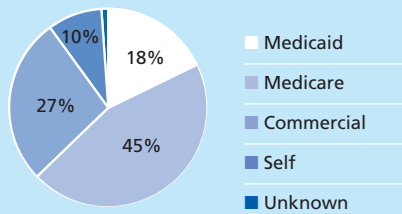


<sup>1</sup> Asthma listed as the principal diagnosis (ICD-9-CM 493.00–493.92). Data Source: 2006–2007 Rhode Island Hospital Discharge Data, Rhode Island Department of Health, Center for Health Data and Analysis.

**FIGURE 7.**

**Primary payer for asthma hospitalization<sup>1</sup> among adults (ages 18+)**

Rhode Island Hospital Discharge Data, 2006–2007



<sup>1</sup> Asthma listed as the principal diagnosis (ICD-9-CM 493.00–493.92). Data Source: 2006–2007 Rhode Island Hospital Discharge Data, Rhode Island Department of Health, Center for Health Data and Analysis.

**TABLE 7.**

**Age-specific asthma<sup>1</sup> hospitalization rates<sup>2</sup> and overall age-adjusted<sup>3</sup> asthma hospitalization rates by geographic residence**

Rhode Island Hospital Discharge Data, 2000

Geographic Residence	2000
<b>State</b>	
0 to 17	11.6
18 to 64	10.3
65+	10.9
Overall – Age-Adjusted	10.6
<b>Providence</b>	
0 to 17	23.0
18 to 64	17.4
65+	19.7
Overall – Age-Adjusted	18.9
<b>Core Cities</b>	
0 to 17	22.1
18 to 64	14.2
65+	13.9
Overall – Age-Adjusted	16.2

<sup>1</sup> Asthma listed as the principal diagnosis (ICD-9-CM codes 493.00–493.92).  
<sup>2</sup> All rates are per 10,000 population.  
<sup>3</sup> Standard 2000 US population used for direct age-adjustment. Data Source: 2000 Rhode Island Hospital Discharge Data, Rhode Island Department of Health, Center for Health Data and Analysis.

There are large disparities in asthma hospitalizations between those who live in the City of Providence and those who live in the rest of the state. The age-adjusted asthma hospitalization rate for Providence is nearly twice that for the state as a whole (Providence: 18.9 per 10,000 vs. Rhode Island: 10.6 per 10,000). A similar pattern is observed for age-specific asthma hospitalization rates by geographic residence. In each age group, the age-specific asthma hospitalization rate is nearly two times higher in Providence than for the state. Providence is the most populous city in the state. It has the highest percentage of minority residents, with non-Hispanic whites comprising less than half (45.8%) of the population,<sup>9</sup> and a poverty rate that is among the ten highest for US cities with populations over 100,000 (>30%).<sup>10</sup>

The overall purpose of the *Asthma State Plan* is to reach the outcome objectives listed on the opposite page. The outcome objectives and objectives within each system were developed in alignment with the Healthy People 2010 Asthma Objectives and the Recommended Healthy People 2020 Overarching Goals in Figures 8 and 9. These measures will be used to determine the success of the Plan and to monitor the efforts of RIACC and HEALTH's Asthma Control Program. Key objectives to measure the impact of activities on reducing asthma disparities are also included. Goals and objectives are data-driven, and all objectives are SMART (Specific, Measurable, Achievable, Realistic, and Time-framed). In addition, data sets such as the RI BRFSS and RI YRBS have the capacity to provide data for adults and children to monitor:

- » History of asthma symptoms and attacks
- » Health care utilization due to asthma
- » Knowledge of asthma management
- » Modifications of environment to control asthma
- » Asthma medication use
- » Cost of asthma care
- » School related asthma
- » Work related asthma
- » Co-morbid conditions
- » Complimentary and alternative therapies

### OUTCOME OBJECTIVES:

- » By August 2014, reduce the percent of people in Rhode Island who are hospitalized for asthma from 14.6% in 2007 to 13.7%.
- » By August 2014, reduce the percent of people in Rhode Island who visit the emergency department due to asthma from 54.9 per 10,000 in 2007 to 50.0 per 10,000.

### HEALTH DISPARITIES OBJECTIVES:

- » By August 2014, reduce the percent of Black non-Hispanic people in Rhode Island who are hospitalized for asthma from 35.6% in 2007 to 30.2%.
- » By August 2014, reduce the percent of Hispanic people in Rhode Island who are hospitalized for asthma from 22.3% in 2007 to 19.3%.

- » By August 2014, reduce the percent of Black non-Hispanic children in Rhode Island who are hospitalized for asthma from 42.0% in 2007 to 31.7%.
- » By August 2014, reduce the percent of Hispanic children in Rhode Island who are hospitalized for asthma from 29.8% in 2007 to 24.6%.
- » By August 2014, reduce the percent of children with asthma covered by RIteCare (Medicaid) who are hospitalized for asthma from 44.0% in 2007 to 38.0%.
- » By August 2014, reduce the percent of people who reside in a core city in Rhode Island who are hospitalized for asthma from 16.2% in 2000 to 14.7%.

FIGURE 8.

#### Recommended Healthy People 2020 Overarching Goals

Eliminate preventable disease, disability, injury, and premature death.

Achieve health equity, eliminate disparities, and improve the health of all groups.

Create social and physical environments that promote good health for all.

Promote healthy development and healthy behaviors across every stage of life.

Source: US Department of Health and Human Services, National Institutes of Health.<sup>11</sup>

FIGURE 9.

#### Healthy People 2010 Asthma Objectives

24.1 Reduce asthma deaths.

24.2 Reduce hospitalizations for asthma.

24.3 Reduce hospital emergency department visits for asthma.

24.4 Reduce activity limitations among persons with asthma.

24.5 [Developmental] Reduce the number of school or work days missed by persons with asthma due to asthma.

24.6 Increase the proportion of persons with asthma who receive formal patient education, including information about community and self-help resources, as an essential part of the management of their condition.

24.7 [Developmental] Increase the proportion of persons with asthma who receive appropriate asthma care according to the National Asthma Education and Prevention Program (NAEPP) Guidelines.

24.8 [Developmental] Establish in at least 25 States a surveillance system for tracking asthma death, illness, disability, impact of occupational and environmental factors on asthma, access to medical care, and asthma management.

Source: US Department of Health and Human Services, National Institutes of Health, National Heart, Lung, and Blood Institute.<sup>12</sup>



# Goals and Objectives Within the Chronic Care Health Systems Framework

## Surveillance & Evaluation System

### GOAL 1

ENSURE THAT POLICIES, PROGRAMS, AND SYSTEM-WIDE CHANGES ARE BASED ON AND EVALUATED USING TIMELY, COMPREHENSIVE, AND ACCURATE ASTHMA DATA.

#### OBJECTIVE 1.1

By 2014, complete and disseminate yearly Asthma Reports.

##### DATA SOURCE:

HEALTH – Asthma Control Program

##### ACTIVITIES:

Identify data gaps and needs. (Key partners: HEALTH – Asthma Control Program, Center for Health Data and Analysis, and Chronic Care and Disease Management and Environmental Health Teams, RIACC, RICCC, Brown University Program in Public Health)

Complete reports that will document prevalence, health care utilization, costs, mortality, asthma control, asthma management, co-morbidities, and/or disparities. (Key partners: HEALTH – Asthma Control Program, Center for Health Data and Analysis, and Chronic Care and Disease Management and Environmental Health Teams, RIACC, RICCC, Brown University Program in Public Health)

Complete reports in multiple formats (e.g., burden documents, fact sheets, presentations, briefs, papers). (Key partner: HEALTH – Asthma Control Program)

Disseminate reports and presentations of data on new data sets added to the Asthma Surveillance System. (Key partner: HEALTH – Asthma Control Program)

Publish and disseminate a comprehensive burden of asthma report every three years. (Key partner: HEALTH – Asthma Control Program)

Publish and disseminate brief reports annually, using selected available data, for state and local private and public policy makers, staff of funding agencies, local and state public health practitioners, program administrators, health care practitioners, persons with asthma and their families, the general public, and the media. (Key partners: HEALTH – Asthma Control Program, Center for Health Data and Analysis, and Chronic Care and Disease Management and Environmental Health Teams, RIACC, RICCC, Brown University Program in Public Health)

Establish additional creative and cost-effective ways to obtain quality data on health outcomes, health care use, environmental exposures, and special population groups from clinical and university-based partners. (Key partners: HEALTH, Brown University Program in Public Health, Hasbro Children’s Hospital, health insurance plans, health centers, worksites)

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**OBJECTIVE 1.2**

By 2014, determine the feasibility of linking asthma surveillance data and environmental monitoring data.

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**DATA SOURCES:**

HEALTH – Asthma Control Program and Healthy Homes and Environment Team

**ACTIVITIES:**

Identify environmental data that can be linked to Hospital Discharge and Emergency Department data at the census track or zip code level. (Key partners: HEALTH – Asthma Control and Environmental Health Programs, Brown University Program in Public Health)

Obtain one data set on outdoor air quality for certain contaminants associated with asthma exacerbations. (Key partners: HEALTH – Asthma Control and Environmental Health Programs)

Obtain one data set on indoor environmental triggers shown to have a significant impact on people with asthma living in public housing. (Key partners: HEALTH – Asthma Control, Environmental Health, Healthy Homes/ Communities, and Occupational and Radiological Health Programs)

Identify a funding source for supporting an occupational health surveillance grant (e.g., National Institute for Occupational Safety and Health) to establish surveillance for work-related asthma in Rhode Island. (Key partners: HEALTH – Asthma Control, Environmental Health, and Occupational and Radiological Health Programs)

Publish a policy brief summarizing the findings on integrating health, environmental, and occupational data for asthma and make recommendations.

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**OBJECTIVE 1.3**

By 2014, build capacity for surveillance of asthma admissions to Emergency Departments (ED) using Geographical Information System mapping of data.

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**DATA SOURCES:** HEALTH – Asthma Control Program and Center for Health Data and Analysis

**ACTIVITIES:**

Identify a funding source for supporting the training of HEALTH epidemiologists to incorporate Geographic Information Systems (GIS) modeling into on-going surveillance of asthma data in Rhode Island. (Key partners: HEALTH, Brown University)

Through GIS-based modeling, identify the Rhode Island neighborhoods that disproportionately use the ED for asthma care. (Key partners: HEALTH, Brown University)

Obtain Institutional Review Board approval, as needed, for specific work. (Key partners: HEALTH, Brown University)

Write a health brief summarizing the findings on using GIS to analyze asthma health care utilization data. (Key partners: HEALTH, Brown University)

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**OBJECTIVE 1.4**

By 2014, expand Rhode Island asthma surveillance to include surveys of WIC clinic users and Head Start participants to investigate asthma prevalence and care.

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**DATA SOURCE:** HEALTH – Asthma Control Program

**ACTIVITIES:**

Develop an agreement with Rhode Island WIC clinics and Head Start programs, including protection of privacy and confidentiality. (Key partners: HEALTH – Asthma Control Program, RICCC, WIC clinics, Head Start programs)

Design and disseminate the survey for WIC clinics and Head Start programs. (Key partners: HEALTH – Asthma Control Program, RICCC, WIC clinics, Head Start programs)

Complete analyses of survey results and produce reports. (Key partners: HEALTH – Asthma Control Program and Center for Health Data and Analysis)

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**OBJECTIVE 1.5**

By 2014, establish a Memorandum of Understanding with the Rhode Island Department of Human Services to monitor trends in asthma prevalence, demographics, comorbidities, utilization and associated “costs” among Rhode Island’s Medicare beneficiaries.

---

**DATA SOURCE:**

Rhode Island Department of Human Services

**TARGET POPULATION:**

Medicare beneficiaries

**ACTIVITIES:**

Establish a relationship with Rhode Island Medicare Services, through its contract with the Centers for Medicare & Medicaid Services (CMS), to formalize an agreement for receiving and analyzing Medicare data to include data on Medicare enrollees with asthma. (Key partners: HEALTH – Asthma Control Program, Rhode Island Centers for Medicare & Medicaid Services)

Define the key measures of asthma outcomes for current and proposed asthma surveillance activities. (Key partners: HEALTH – Asthma Control and Healthy Homes/Communities Programs, Center for Health Data and Analysis, and Environmental Health, RICCC, Rhode Island Centers for Medicare & Medicaid Services)

Review available content in current and proposed Medicare datasets. (Key partners: HEALTH – Asthma Control and Healthy Homes/Communities Programs, Center for Health Data and Analysis, and Environmental Health, RICCC, Rhode Island Centers for Medicare & Medicaid Services)

Draft a plan that specifies the data to be shared between the Centers for Medicare & Medicaid Services and HEALTH. (Key partners: HEALTH – Asthma Control and Healthy Homes/Communities Programs, Center for Health Data and Analysis, and Environmental Health, RICCC, Rhode Island Centers for Medicare & Medicaid Services)

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**OBJECTIVE 1.6**

By 2014, establish a Memorandum of Understanding with the Rhode Island Department of Human Services to monitor trends in asthma prevalence, demographics, comorbidities, utilization and associated “costs” among Rhode Island’s Medicaid beneficiaries.

---

**DATA SOURCE:**

Rhode Island Department of Human Services

**TARGET POPULATION:**

Medicaid recipients

**ACTIVITIES:**

Build on existing relationships between HEALTH and the Rhode Island Department of Human Services to expand on current agreements for receiving and analyzing Medicaid data to include data on Medicaid enrollees with asthma. (Key partners: HEALTH – Asthma Control Program and Center for Health Data and Analysis, Rhode Island Centers for Medicare & Medicaid Services)

Define the key measures of asthma outcomes for current and proposed asthma surveillance activities. (Key partners: HEALTH – Asthma Control and Healthy Homes/Communities Programs, Center for Health Data and Analysis, and Environmental Health, RICCC)

Review available content in current and proposed Medicaid datasets and draft a plan that specifies the data to be shared between the State Medicaid office and HEALTH. (Key partners: HEALTH – Asthma Control Program and Center for Health Data and Analysis)

# Surveillance & Evaluation System

## GOAL 2

DECREASE THE DISPROPORTIONATE BURDEN OF ASTHMA IN RACIAL AND ETHNIC MINORITY AND LOW-INCOME POPULATIONS.

### OBJECTIVE 2.1

By 2014, identify resources needed to assure sustainable, efficient, and effective asthma surveillance in Rhode Island for monitoring disparities in population subgroups.

#### DATA SOURCE:

HEALTH – Asthma Control Program

#### TARGET POPULATIONS:

Priority populations

#### ACTIVITIES:

Identify current HEALTH resources dedicated to asthma surveillance to document disparities. (Key partners: HEALTH – Asthma Control Program and Center for Health Data and Analysis)

Determine what additional resources are needed to develop the necessary infrastructure at HEALTH to ensure that Rhode Island’s population-based health surveys oversample minorities in order to target interventions to eliminate disparities in asthma prevalence, diagnosis, treatment, and outcomes. (Key partners: HEALTH – Asthma Control Program and Center for Health Data and Analysis)

Identify questions to explore in examining how and why disparities persist in asthma outcomes. (Key partners: HEALTH – Asthma Control Program and Center for Health Data and Analysis)

Identify and seek external sources of support and funding (e.g., Centers for Disease Control and Prevention and other potential funders) for oversampling minorities in health surveys. (Key partners: HEALTH – Asthma Control Program and Center for Health Data and Analysis)

Develop a list of organizations and institutions conducting asthma surveillance with sufficient sample sizes to monitor the burden of asthma in minority populations. Work collaboratively with these groups to document disparities in asthma outcomes and to target interventions to eliminate disparities in asthma prevalence, diagnosis, treatment, and outcomes. (Key partners: HEALTH – Asthma Control Program and Center for Health Data and Analysis, Brown University Program in Public Health)

Write a health brief summarizing the findings on disparities in asthma outcomes. (Key partners: HEALTH – Asthma Control Program and Center for Health Data and Analysis)

*Work collaboratively with organizations and institutions to document disparities in asthma outcomes and to target interventions to eliminate disparities in asthma prevalence, diagnosis, treatment, and outcomes.*



# Surveillance & Evaluation System

## GOAL 3

### DEVELOP A CROSSCUTTING EPIDEMIOLOGY AND SURVEILLANCE SYSTEM.

#### OBJECTIVE 3.1

By 2014, build a Chronic Disease Surveillance System that supports Rhode Island's on-going commitment to integrate program planning, implementation, and evaluation for four ambulatory care-sensitive chronic diseases (diabetes, asthma, heart disease, and cancer) and associated risk factors.

#### DATA SOURCE:

HEALTH – Chronic Care and Disease Management Team

#### TARGET POPULATIONS:

General population and vulnerable populations as defined by race/ethnicity, socio-economic status, geography, gender, age, disability status, and other populations identified to be at-risk for health disparities

#### ACTIVITIES:

Inventory existing data collaboratively with the Chronic Care and Disease Management Team and programs that address associated risk factors. (Key partners: HEALTH – Asthma Control, Diabetes, Cancer, Heart Disease and Stroke, Obesity, Environmental Health, and Tobacco Programs)

Design Chronic Disease Surveillance System. (Key partners: HEALTH – Asthma Control, Diabetes, Cancer, Heart Disease and Stroke, Obesity, Environmental Health, and Tobacco Programs)

This would include the following activities:

- Improve data collection and analysis
- Integrate mapping of disease burden and risk factors
- Support a multi-program epidemiology workforce
- Leverage and share technology resources
- Package data reports to include multiple program areas
- Develop data sources for integrated public health information systems

Ensure that the Asthma Surveillance System routinely monitors numerous diseases, including asthma, cardiovascular disease, obesity, and diabetes to better understand the trends and burden of individual diseases and co-morbidities so that evidence-based or best-practice intervention methods for integrated chronic disease programs are data driven. (Key partners: HEALTH – Asthma Control, Diabetes, Cancer, Heart Disease and Stroke, Obesity, Environmental Health, and Tobacco Programs)

Build state and local partnerships, including non-traditional partners, to share population-based and clinical data that supports program integration efforts statewide and at the community level. (Key partners: HEALTH – Asthma Control, Diabetes, Cancer, Heart Disease and Stroke, Obesity, Environmental Health, and Tobacco Programs)

Use data to inform programs and policies championed by state and local partners that help persons with asthma and other chronic conditions to achieve optimal health. (Key partners: HEALTH – Asthma Control, Diabetes, Cancer, Heart Disease and Stroke, Obesity, Environmental Health, and Tobacco Programs)

Use data to develop integrated state plans to guide HEALTH's integration efforts to improve quality of life for persons with asthma and other chronic conditions. (Key partners: HEALTH – Asthma Control, Diabetes, Cancer, Heart Disease and Stroke, Obesity, Environmental Health, and Tobacco Programs)

# Surveillance & Evaluation System

## GOAL 4

EVALUATE SHORT-TERM, INTERMEDIATE, AND LONG-TERM SURVEILLANCE AND PROGRAMMATIC OBJECTIVES DEFINED THROUGHOUT THE FIVE YEARS OF IMPLEMENTATION OF THE *ASTHMA STATE PLAN*.

### OBJECTIVE 4.1

By 2010, evaluate short-term objectives with target dates in 2009–2010.

#### DATA SOURCE:

HEALTH – Asthma Control Program

#### ACTIVITIES:

Publish an inventory of Asthma Surveillance System data sets that documents increased capacity for asthma surveillance and improved capacity to link different data sources. (Key partners: HEALTH – Asthma Control Program and Center for Health Data and Analysis)

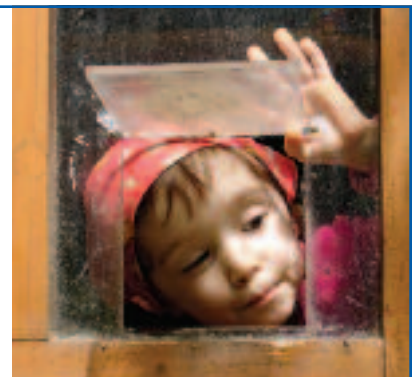
Document through meeting notes, publications, and conferences, Rhode Island’s Healthy Housing Collaborative activities to assess and reduce asthma triggers in indoor environments. (Key partners: Rhode Island Healthy Housing Collaborative, HEALTH – Asthma Control and Healthy Housing/Communities Programs)

Publish health briefs to increase awareness and understanding of disparities in asthma outcomes (e.g., emergency department and inpatient admissions for asthma by age, gender, race, ethnicity, payer source, and geographical location) to support asthma-related programs to reduce disparities in asthma outcomes. (Key partners: HEALTH – Asthma Control Program and Center for Health Data and Analysis)

Document through meeting minutes of RIACC, the implementation of data-driven activities in the *Asthma State Plan* specific to health care, worksites, schools, and community systems. (Key partners: HEALTH – Asthma Control Program and RIACC)

Proactively review the current methodology for the collection and analysis of asthma data, and where appropriate, identify and implement changes to improve the quality and accuracy of collected data. (Key partners: HEALTH – Asthma Control Program and Center for Health Data and Analysis)

*Publish health briefs to increase awareness and understanding of disparities in asthma outcomes (e.g., emergency department and inpatient admissions for asthma by age, gender, race, ethnicity, payer source, and geographical location) to support asthma-related programs to reduce disparities in asthma outcomes.*



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**OBJECTIVE 4.2**

By 2012, evaluate intermediate objectives with target dates in 2011, 2012, and 2013.

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**DATA SOURCE:** HEALTH – Asthma Control Program

**ACTIVITIES:**

Complete data sharing agreements with key stakeholders to expand the Asthma Surveillance System to include new data sets (e.g., Medicaid and Medicare data) and to link health and environmental data. (Key partners: HEALTH – Asthma Control Program and Center for Health Data and Analysis, Rhode Island Department of Human Services, Brown University Program in Public Health)

Increase capacity for reporting on asthma status and related health outcomes in special populations (e.g., Medicaid enrollees, Medicare beneficiaries, RICCC patients enrolled in federally funded health centers). (Key partners: HEALTH – Asthma Control Program and Center for Health Data and Analysis, Rhode Island Department of Human Services)

Document through meeting minutes of RIACC workgroups, the implementation of data-driven policies to increase the proportion of Medicaid enrollees, Medicare beneficiaries, and RICCC patients receiving health care for asthma that complies with the National Asthma Education and Prevention Program Guidelines. (Key partners: HEALTH – Asthma Control Program and Center for Health Data and Analysis, RIACC, Rhode Island Department of Human Services, RICCC)

Document through meeting minutes of RIACC, the implementation of data-driven policies to reduce indoor and outdoor environmental asthma triggers in worksites, schools, and communities and to support asthma-related policies, programs, and legislation to reduce disparities in asthma outcomes. (Key partners: HEALTH – Asthma Control Program and Center for Health Data and Analysis, RIACC, Rhode Island Department of Human Services, RICCC)

Proactively review the current methodology for the collection and analysis of asthma data, and where appropriate, identify and implement changes to improve the quality and accuracy of collected data. (Key partners: HEALTH – Asthma Control Program and Center for Health Data and Analysis)

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**OBJECTIVE 4.3**

By 2014, evaluate long-term objectives with target dates in 2014.

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**DATA SOURCE:** HEALTH – Asthma Control Program

**ACTIVITIES:**

Evaluate integration of the Asthma Surveillance System into a Chronic Disease Surveillance System. (Key partners: HEALTH – Asthma Control, Diabetes, Cancer, Heart Disease and Stroke, Obesity, Environmental Health, and Tobacco Programs and Center for Health Data and Analysis)

Survey potential end-users of the burden of asthma document to ensure that surveillance for asthma and other chronic diseases meets the following criteria: (1) representative of all Rhode Islanders; (2) timely; (3) accurate; and (4) useful for designing policies, programs, and legislation to implement evidence-based asthma disparities interventions. (Key partner: HEALTH – Asthma Control Program)



# Health Communication System

## GOAL 5

INCREASE PUBLIC AWARENESS ABOUT LIVING WELL WITH ASTHMA, INCLUDING RESOURCES AND INFORMATION FOR SELF-MANAGEMENT.

### OBJECTIVE 5.1

By 2014, complete at least five projects aimed at raising general awareness of living well with asthma.

#### DATA SOURCE:

HEALTH – Asthma Control Program

#### TARGET POPULATIONS:

Varies, with emphasis on disparate populations

#### ACTIVITIES:

Identify gaps in asthma educational materials and resources. (Key partners: HEALTH – Asthma Control Program, RIACC)

Evaluate asthma educational materials and resources available from other states and national organizations that can be adapted for Rhode Island. (Key partners: HEALTH – Asthma Control Program, RIACC)

Integrate information about asthma into the HEALTH Information Line. (Key partners: HEALTH – Asthma Control Program and Communications Team, RIACC)

Provide access to asthma education materials through HEALTH's Chronic Care and Disease Management Community Resource Project. (Key partners: HEALTH – Asthma Control Program and Chronic Care and Disease Management Team)

Expand and maintain HEALTH Asthma Website. (Key partner: HEALTH – Communications Team)

Implement the US Environmental Protection Agency and The Ad Council No Attacks Campaign. (Key partners: HEALTH – Asthma Control Program and Communications and Healthy Homes and Environment Teams, RIACC)

Conduct four integrated media campaigns with multiple HEALTH programs and community partners. (Key partners: HEALTH – Asthma Control, Cancer, Diabetes, Heart Disease and Stroke, Obesity, Tobacco, and Immunization Programs and Communications Team, pertinent community partners)

Media campaigns will focus on:

- obesity
- tobacco
- flu
- healthy housing

Integrate asthma into the Rhode Island Living Well Program based on the Stanford School of Medicine's Chronic Disease Self Management Program to empower people with asthma and their families to better manage their disease and navigate the health care system. (Key partners: HEALTH – Asthma Control Program and Chronic Care and Disease Management Team, Rhode Island Department of Human Services)

Evaluate projects and complete yearly inventory of asthma educational materials and resources. (Key partners: HEALTH – Asthma Control Program, RIACC)

Evaluate HEALTH Asthma Website pages through the Google Analytics tracking system. (Key partners: HEALTH – Asthma Control Program and Communications Team)

# Environmental Health System: Built Environment

## GOAL 6

ENSURE THAT ALL HOMES ARE DRY, CLEAN, PEST-FREE, VENTILATED, SAFE, CONTAMINANT-FREE, AND MAINTAINED.

### HOUSING

#### OBJECTIVE 6.1

By 2014, complete five projects designed to improve awareness and knowledge of healthy housing practices pertinent to asthma among the general public, legislators, and key stakeholders.

#### DATA SOURCE:

HEALTH – Asthma Control Program

#### TARGET POPULATIONS:

Varies, with emphasis on disparate populations, legislators, and key stakeholders

#### ACTIVITIES:

Complete thorough review of literature documenting evidence-based and best practices related to healthy housing interventions and opportunities for linking asthma health outcomes to unhealthy housing conditions. (Key partner: HEALTH – Asthma Control Program)

Evaluate currently available asthma education materials and resources pertaining to healthy homes and review how they are distributed. (Key partners: HEALTH – Asthma Control Program, RIACC)

Review educational materials and resources pertaining to healthy housing available from other states, as well as national organizations, that can be adapted for Rhode Island. (Key partners: HEALTH – Asthma Control Program, RIACC)

Integrate information on healthy housing principles into asthma education efforts. (Key partners: HEALTH – Asthma Control Program, RIACC)

Implement a healthy housing educational and media campaign that integrates healthy housing principles into asthma education efforts. (Key partners: HEALTH – Asthma Control Program and Communications Team, RIACC)

Establish a statewide housing database that would be used to assess and improve the knowledge of Rhode Island's housing stock, including potential environmental hazards within each home. (Key partner: HEALTH – Healthy Homes/Communities Program)

Identify and determine most effective means to provide information needed by legislators and key stakeholders to help address asthma control needs in Rhode Island. (Key partners: HEALTH – Asthma Control Program, RIACC)

Evaluate projects to determine change in awareness and knowledge of healthy housing practices pertinent to asthma among target audiences. (Key partners: HEALTH – Asthma Control Program, RIACC)

*The National Center for Healthy Housing defines a healthy home as one that is dry, clean, pest-free, ventilated, safe, contaminant-free, and maintained.*



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**OBJECTIVE 6.2**

By 2014, replicate the Newport Housing Authority, *Healthy Residents, Healthy Homes* model in at least three public housing authorities.

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**DATA SOURCE:**

HEALTH – Asthma Control Program

**TARGET POPULATIONS:**

People of low income, Hispanic and Black non-Hispanic adults and children

**ACTIVITIES:**

Review evaluation of the *Healthy Residents, Healthy Homes* project in Newport Housing Authority and modify appropriately. (Key partners: HEALTH – Asthma Control Program, Newport Housing Authority, Rhode Island Parent Information Network, future participating public housing authorities)

Maintain and expand the *Healthy Residents, Healthy Homes* database for evaluation. (Key partners: HEALTH – Asthma Control Program, Newport Housing Authority, Rhode Island Parent Information Network, future participating public housing authorities)

Identify funding sources (e.g., CDC, EPA). (Key partners: HEALTH – Asthma Control Program, future participating public housing authorities)

Secure funding. (Key partners: HEALTH – Asthma Control Program, future participating public housing authorities)

Recruit public housing authorities, targeting those in core cities. (Key partners: HEALTH – Asthma Control Program, Newport Housing Authority, RIACC)

Implement the *Healthy Residents, Healthy Homes* model into at least three public housing authorities. (Key partners: HEALTH – Asthma Control Program, Newport Housing Authority, Rhode Island Parent Information Network, future participating public housing authorities)

Evaluate the *Healthy Residents, Healthy Homes* project in all participating housing authorities. (Key partners: HEALTH – Asthma Control Program, Newport Housing Authority, Rhode Island Parent Information Network, future participating public housing authorities)



*The goal of the Healthy Residents, Healthy Homes project is to improve asthma control among residents with asthma through environmental interventions and access to a medical home.*

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**OBJECTIVE 6.3**

By 2014, establish at least one 'Asthma Center' based on the Rhode Island Lead Center model to serve the RiteCare population with high emergency room and hospitalization rates due to asthma.

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**DATA SOURCES:**

St. Joseph's Hospital, Harvard School of Public Health, Neighborhood Health Plan of Rhode Island, RICCC

**TARGET POPULATIONS:**

Children in low-income households, Hispanic and Black non-Hispanic children, RiteCare recipients

**ACTIVITIES:**

Continue to pilot and evaluate the 'Asthma Center' model to validate cost/benefit. (Key partners: HEALTH – Asthma Control Program, St. Joseph's Hospital)

Identify funding sources (e.g., CDC, Robert Wood Johnson Foundation). (Key partners: St. Joseph's Hospital, Harvard School of Public Health, Hasbro Children's Hospital)

Secure funding. (Key partners: St. Joseph's Hospital, Harvard School of Public Health, Hasbro Children's Hospital)

Implement the 'Asthma Center' model at St. Joseph's Hospital, Providence. (Key partners: St. Joseph's Hospital, Harvard School of Public Health, Hasbro Children's Hospital)

Evaluate the 'Asthma Center' model. (Key partners: St. Joseph's Hospital, Harvard School of Public Health, Hasbro Children's Hospital)

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**OBJECTIVE 6.4**

By 2014, increase the percentage of persons with asthma who report making changes in their home to reduce asthma triggers by 5% of the 2008 RI BRFSS Call-back Survey baseline rate. (Developmental)

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**DATA SOURCE:**

2008+ RI BRFSS Call-back Surveys

**TARGET POPULATIONS:**

All, with emphasis on disparate populations

**ACTIVITIES:**

Complete thorough review of literature documenting evidence-based and best practices related to healthy housing interventions and opportunities for linking asthma health outcomes to unhealthy housing conditions. (Key partner: HEALTH – Asthma Control Program)

Create a plan of action to implement best practices related to healthy housing interventions and opportunities for linking health outcomes to unhealthy housing conditions. (Key partners: HEALTH – Asthma Control and Healthy Homes/Communities Programs, RIACC, Rhode Island Healthy Housing Collaborative)

Train the state's minimum housing code and building code officials on actions to take to establish a standard consistent with healthy housing principles and improve the health/quality of Rhode Islanders' home environments. (Key partners: HEALTH – Asthma Control and Healthy Homes/Communities Programs, RIACC, Rhode Island Healthy Housing Collaborative)

Establish 'no smoking' policies for rental units in multi-unit housing, with emphasis on low-income and public housing. (Key partners: HEALTH – Asthma Control, Tobacco, and Healthy Homes/Communities Programs, RIACC, Rhode Island Healthy Housing Collaborative, American Lung Association of Rhode Island (ALARI), Newport Housing Authority)

Continue partnership with the Rhode Island Healthy Housing Collaborative. (Key partners: HEALTH – Asthma Control and Healthy Homes/Communities Programs, RIACC, Rhode Island Healthy Housing Collaborative)

Evaluate success of efforts through the RI BRFSS Call-back Surveys. (Key partner: HEALTH – Asthma Control Program)

## Environmental Health System: Built Environment

### GOAL 7

REDUCE EXPOSURE WITHIN SCHOOLS TO ENVIRONMENTAL ASTHMA TRIGGERS, IRRITANTS, AND ASTHMAGENS.

#### SCHOOLS

##### OBJECTIVE 7.1

By 2014, increase the number of 'High Performance' schools that adopt construction, maintenance, and cleaning practices from 0 in 2008 to 20.

##### DATA SOURCE:

Rhode Island Department of Education

##### TARGET POPULATION:

School-age children

##### ACTIVITIES:

Increase the number of RIACC members that partner with and are members of groups that address the environmental health of schools. (Key partners: HEALTH – Asthma Control Program, Rhode Island Department of Education, High Performance School Workgroup, Apeiron Institute, US Green Building Council of Rhode Island, RIACC)

Offer *Tools for Schools* and *Cleaning for Health* programs to schools, targeting High Performance Schools. (Key partners: HEALTH – Asthma Control Program, Rhode Island Departments of Education and Environmental Management, RIACC, High Performance School Workgroup, Inform, Inc.)

Conduct yearly evaluations of High Performance Schools. (Key partner: Rhode Island Department of Education)

## Environmental Health System: Built Environment

### GOAL 8

REDUCE EXPOSURE WITHIN WORKSITES TO ENVIRONMENTAL ASTHMA TRIGGERS, IRRITANTS, AND ASTHMAGENS.

#### WORKSITES

##### OBJECTIVE 8.1

By 2014, increase the number of Rhode Island Asthma Control Coalition members who are represented on worksite wellness committees, unions, and other groups that address the environmental health of worksites. (Developmental)

##### DATA SOURCE:

HEALTH – Asthma Control Program

##### TARGET POPULATION:

Adults

##### ACTIVITIES:

Identify worksite wellness committees, unions, and other groups that address the environmental health of worksites. (Key partners: HEALTH – Asthma Control and Worksite Wellness Programs and Healthy Homes and Environment Team, RIACC, Rhode Island Committee on Occupational Safety and Health)

Recruit RIACC members to participate on the identified wellness committees, unions, and other groups that address the environmental health of worksites. (Key partners: HEALTH – Asthma Control Program, RIACC)

Evaluate measures to define 'asthma-friendly' worksites. (Key partner: HEALTH – Asthma Control Program)

*High Performance Schools provide high quality learning environments, conserve natural resources, consume less energy, are easier to maintain, and provide an enhanced community resource.*



# Environmental Health System: Outdoor Environment

## GOAL 9

REDUCE EXPOSURE TO OUTDOOR AIR POLLUTANTS THAT TRIGGER ASTHMA EXACERBATIONS AND MAY RESULT IN OTHER ADVERSE HEALTH EFFECTS.

### COMMUNITY PLANNING & DESIGN AND AIR QUALITY

#### OBJECTIVE 9.1

By 2014, increase the number of Rhode Island Asthma Control Coalition members who are represented on other coalitions and groups that address the impact of community planning and design, building practices, and public transit/transportation choices on health. (Developmental)

#### DATA SOURCE:

HEALTH – Asthma Control Program

#### TARGET POPULATIONS:

All

#### ACTIVITIES:

Identify coalitions or groups that address outdoor air pollutants in Rhode Island (e.g. New Public Transit Alliance (NuPTA), Rhode Island Environmental Justice League). (Key partners: HEALTH – Asthma Control Program, RIACC)

Recruit RIACC members to participate on identified coalitions or groups that address outdoor air pollutants in Rhode Island (e.g., New Public Transit Alliance (NuPTA), Rhode Island Environmental Justice League). (Key partners: HEALTH – Asthma Control Program, RIACC)

#### OBJECTIVE 9.2

By 2014, increase the number of policies in Rhode Island that reduce exposure to diesel emissions. (Developmental)

#### DATA SOURCES:

HEALTH, Rhode Island Departments of Environmental Management and Education, Clean Water Action

#### TARGET POPULATIONS:

All populations and school-age children

#### ACTIVITIES:

Complete thorough review of literature documenting evidence-based and best practices related to development and enforcement of anti-idling regulations for implementation in Rhode Island. (Key partners: HEALTH, Rhode Island Departments of Environmental Management and Education)

Advocate for policies related to retrofitting vehicles according to US EPA standards. (Key partners: RIACC, ALARI, Clean Water Action, HEALTH, Rhode Island Departments of Environmental Management and Education)

Establish data collection tools to monitor adherence to and enforcement of diesel-related policies. (Key partners: RIACC, ALARI, Clean Water Action, HEALTH, Rhode Island Departments of Environmental Management and Education)

Identify schools and bus companies that are not adhering to anti-idling laws. (Key partners: RIACC, ALARI, Clean Water Action, HEALTH, Rhode Island Departments of Environmental Management and Education)

Establish policies in schools that are not adhering to anti-idling laws. (Key partners: RIACC, ALARI, Clean Water Action, HEALTH, Rhode Island Departments of Environmental Management and Education)

Evaluate and monitor adherence to anti-idling laws. (Key partners: RIACC, ALARI, Clean Water Action, HEALTH, Rhode Island Departments of Environmental Management and Education)

# Health Care System

## GOAL 10

PROMOTE AND ESTABLISH HIGH-QUALITY ASTHMA CARE AND EDUCATION AMONG PROVIDERS WHO SERVE PEOPLE WITH ASTHMA, WITH EMPHASIS ON PROVIDERS WHO SERVE POPULATIONS THAT ARE DISPARATELY AFFECTED BY ASTHMA.

### OBJECTIVE 10.1

By 2014, increase efforts to educate providers on the 2007 National Asthma Education and Prevention Program (NAEPP) Guidelines for the Diagnosis and Management of Asthma, from four activities per year to ten activities per year.

#### DATA SOURCE:

HEALTH – Asthma Control Program

#### TARGET POPULATIONS:

Primary care providers, pediatricians, general and family practitioners, gerontologists

#### ACTIVITIES:

Complete thorough review of literature documenting evidence-based and best practices related to professional workforce development to improve the quality of asthma care and education among providers. (Key partner: HEALTH – Asthma Control Program)

Identify gaps in professional education efforts related to the 2007 NAEPP Guidelines for the Diagnosis and Management of Asthma. (Key partners: HEALTH – Asthma Control Program, RIACC)

Provide pediatricians/family care practices with tools and education on: the need for Asthma Action Plans; referral to Certified Asthma Educators (AE-C) and Draw-A-Breath; communication with schools; referral to a specialist; cultural competence; heterogeneity of asthma; and the relationship between obesity and asthma. (Key partners: HEALTH – Asthma Control Program, RIACC, community and hospital-based health centers, health plans, Hasbro Children's Hospital, Rhode Island Association of Certified Asthma Educators, Rhode Island School Nurse Teachers Association, Rhode Island Department of Education)

Provide teachers and school nurses (preK–12) with tools and education on the school health regulations, Draw-A-Breath, communication with physicians, and the value of Asthma Action Plans. (Key partners: HEALTH – Asthma Control Program, RIACC, health plans, American Academy of Pediatrics – Rhode Island Chapter, Hasbro Children's Hospital, Rhode Island Association of Certified Asthma Educators, Rhode Island School Nurse Teachers Association, Rhode Island Department of Education)

Sponsor four professional development opportunities for clinicians per year in Rhode Island that provide information on the diagnosis, decision support, and specific components of the 2007 NAEPP Guidelines for the Diagnosis and Management of Asthma (e.g., use of Asthma Action Plans, compliance with controller medications, measuring asthma control, proper use of inhalers, peak flows, spirometers, relationship between asthma and obesity, etc.). (Key partners: HEALTH – Asthma Control Program, RIACC, Rhode Island Association of Certified Asthma Educators)

Develop and/or adopt standards of asthma care based on 2007 NAEPP Guidelines for the Diagnosis and Management of Asthma. (Key partners: HEALTH – Asthma Control Program, RIACC, St. Joseph's Hospital, Rhode Island Area Health Education Centers (AHEC), Rhode Island Association of Certified Asthma Educators)

Evaluate activities to determine change in knowledge of the 2007 NAEPP Guidelines for the Diagnosis and Management of Asthma among target audience. (Key partners: HEALTH – Asthma Control Program, RIACC, community and hospital-based health centers, health plans, Hasbro Children's Hospital, Rhode Island Association of Certified Asthma Educators, Rhode Island School Nurse Teachers Association, Rhode Island Department of Education)



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**OBJECTIVE 10.2**

By 2014, increase the number of Certified Asthma Educators from 32 in 2008 to 125.

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**DATA SOURCE:**

National Asthma Educator Certification Board (NAECB)

**TARGET POPULATIONS:**

Nurses, nurse practitioners, respiratory therapists, pulmonary function technologists, pharmacists, social workers, health educators, individuals who have greater than 1,000 hours providing asthma education and counseling in a clinical setting, with emphasis on asthma educators who serve people within priority populations

**ACTIVITIES:**

Evaluate past and future preparatory courses to determine the number and demographics of participants who attended the course, took the NAECB exam, and passed the exam. (Key partners: Rhode Island Association of Certified Asthma Educators, HEALTH – Asthma Control Program, RIACC)

Provide at least one preparatory course per year for clinicians to prepare for the NAECB exam. (Key partner: ALARI)

Provide mentoring for clinicians to take the preparatory course and the NAECB exam. (Key partners: Rhode Island Association of Certified Asthma Educators, HEALTH – Asthma Control Program, RIACC, Rhode Island Area Health Education Centers (AHEC))

Provide at least one state-of-the-art educational opportunity per year for Certified Asthma Educators. (Key partners: Rhode Island Association of Certified Asthma Educators, HEALTH – Asthma Control Program, RIACC)

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**OBJECTIVE 10.3**

By 2014, increase the number of Spanish-speaking Certified Asthma Educators from 2 in 2008 to 20.

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**DATA SOURCE:**

Rhode Island Association of Certified Asthma Educators

**TARGET POPULATIONS:**

Spanish-speaking nurses, nurse practitioners, respiratory therapists, pulmonary function technologists, pharmacists, social workers, health educators, individuals who have greater than 1,000 hours providing asthma education and counseling in a clinical setting

**ACTIVITIES:**

Evaluate past and future preparatory courses to determine the number and demographics of participants who attended the course, took the NAECB exam, and passed the exam. (Key partners: Rhode Island Association of Certified Asthma Educators, HEALTH – Asthma Control Program, RIACC)

Target Spanish-speaking clinicians for participation in the preparatory course for the NAECB exam. (Key partners: ALARI, Rhode Island Association of Certified Asthma Educators, HEALTH – Asthma Control Program, RIACC)

Provide funding opportunities for Spanish-speaking clinicians to prepare for and take the NAECB Exam. (Key partners: Rhode Island Association of Certified Asthma Educators, HEALTH – Asthma Control Program, RIACC, AHEC)

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**OBJECTIVE 10.4**

By 2014, increase membership of the Rhode Island Association of Certified Asthma Educators from 16 in 2008 to 100.

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**DATA SOURCE:**

Rhode Island Association of Certified Asthma Educators

**TARGET POPULATION:**

Certified Asthma Educators

**ACTIVITIES:**

Recruit 84 members to be part of the Rhode Island Association of Certified Asthma Educators by 2014. (Key partners: Rhode Island Association of Certified Asthma Educators, HEALTH – Asthma Control Program)

Develop methods to evaluate and monitor the quality of asthma care and education by Certified Asthma Educators. (Key partners: Rhode Island Association of Certified Asthma Educators, HEALTH – Asthma Control Program)



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**OBJECTIVE 10.5**

By 2014, integrate Certified Asthma Educators into the Certified Chronic Disease Educator System in Rhode Island.

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**DATA SOURCE:**

HEALTH – Chronic Care and Disease Management Team

**TARGET POPULATIONS:**

Certified Asthma Educators, Certified Heart Disease and Stroke Educators, Certified Diabetes Outpatient Educators

**ACTIVITIES:**

Research other certification efforts in other states to establish a workforce of Certified Chronic Disease Educators. (Key partners: HEALTH – Asthma Control Program and Chronic Care and Disease Management Team)

Work with other HEALTH Chronic Disease Programs to increase the number of clinicians who are certified to educate patients on multiple chronic diseases. (Key partners: HEALTH – Chronic Care and Disease Management Team, Rhode Island Association of Certified Asthma Educators, Certified Diabetes Outpatient Educators, Certified Heart Disease and Stroke Educators)

Evaluate process and outcomes of Certified Chronic Disease Educator workforce. (Key partners: HEALTH – Asthma Control Program and Chronic Care and Disease Management Team)



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**OBJECTIVE 10.6**

By 2014, increase the number of Rhode Island Chronic Care Collaborative sites that integrate asthma from 7 in 2008 to 25.

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**DATA SOURCE:** HEALTH – Asthma Control Program

**TARGET POPULATIONS:**

People of low income, people of low income residing in core cities, Hispanic and Black non-Hispanic adults and children, women of low income 65 years and older, Medicaid and Medicare recipients

**ACTIVITIES:**

Review evaluation of current RICCC asthma sites and modify appropriately. (Key partner: HEALTH – Asthma Control Program and Chronic Care and Disease Management Team)

Secure funding (e.g., CDC, Robert Wood Johnson Foundation). (Key partner: HEALTH – Asthma Control Program)

Recruit sites. (Key partner: HEALTH – Asthma Control Program)

Increase the number of health plans that provide financial incentives for improved health outcomes of asthma patients treated in RICCC Asthma sites from zero to four. (Key partners: HEALTH – Asthma Control Program and Chronic Care and Disease Management Team, Hasbro Children’s Hospital)

Continue implementation of sustaining RICCC asthma sites. (Key partners: HEALTH – Asthma Control Program and Chronic Care and Disease Management Team, Hasbro Children’s Hospital)

Integrate asthma into new RICCC sites. (Key partners: HEALTH – Asthma Control Program and Chronic Care and Disease Management Team, Hasbro Children’s Hospital, Rhode Island Health Center Association, Quality Partners of Rhode Island)

Maintain and expand RICCC Asthma Database. (NOTE: RICCC Asthma Databases are stored in CDEMS, PECS, or electronic medical records populated and maintained by each individual RICCC site.) (Key partners: HEALTH – Asthma Control Program and Chronic Care and Disease Management Team, RICCC Asthma sites)

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**OBJECTIVE 10.7**

By 2014, complete assessment of initiatives in the health care system that aim to improve patient access to asthma tools, medications, and resources.

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**DATA SOURCE:** HEALTH – Asthma Control Program

**TARGET POPULATIONS:**

People of low income, people of low income residing in core cities, Hispanic and Black non-Hispanic adults and children, children, women of low income 65 years and older, Medicaid and Medicare recipients, uninsured and underinsured population

**ACTIVITIES:**

Identify existing resources for uninsured and underinsured patients to obtain asthma tools, medications, and resources, including programs that address co-morbidities and behaviors related to asthma (e.g., obesity, tobacco). (Key partners: HEALTH – Asthma Control Program, RIACC)

Identify existing resources for uninsured and underinsured patients to obtain asthma medications. (Key partners: HEALTH – Asthma Control Program, RIACC)

Determine the capacity to establish an Asthma Resource Center. (Key partners: HEALTH – Asthma Control Program, RIACC)

Integrate healthy housing interventions into the ‘Community Resource’ component of RICCC sites. (Key partners: HEALTH – Asthma Control Program, RIACC)

# Health Care System

## GOAL 11

IMPROVE PATIENT ACCESS TO ASTHMA MANAGEMENT RESOURCES, TOOLS, AND MEDICATIONS.

### OBJECTIVE 11.1

By 2014, increase the number of Rhode Island health plans that provide reimbursement for services of Certified Asthma Educators from 2 in 2008 to 4.

#### DATA SOURCE:

HEALTH – Asthma Control Program

#### TARGET POPULATIONS:

Certified Asthma Educators and the people that they serve

#### ACTIVITIES:

Define codes and establish standard of care for credentialing and reimbursement from major health plans for asthma education services provided by Certified Asthma Educators. (Key partners: HEALTH – Asthma Control and Diabetes Programs, RIACC, St. Joseph’s Hospital, AHEC, Rhode Island Association of Certified Asthma Educators)

Present case to health plans. (Key partners: HEALTH – Asthma and Diabetes Programs, RIACC, St. Joseph’s Hospital, AHEC, Rhode Island Association of Certified Asthma Educators)

Negotiate with health plans for reimbursement for Certified Asthma Educators. (Key partners: HEALTH – Asthma Control Program and Rhode Island Association of Certified Asthma Educators)

### OBJECTIVE 11.2

By 2014, increase the number of Rhode Island health plans that provide reimbursement for services of Certified Chronic Disease Educators from 0 in 2008 to 4.

#### DATA SOURCE:

HEALTH – Chronic Care and Disease Management Team

#### TARGET POPULATIONS:

Certified Asthma Educators, Certified Heart Disease and Stroke Educators, Certified Diabetes Outpatient Educators and the people they serve

#### ACTIVITIES:

Conduct assessment of cost/benefit of being certified in multiple chronic diseases. (Key partners: HEALTH – Chronic Care and Disease Management Team, Rhode Island Association of Certified Asthma Educators, Certified Diabetes Outpatient Educators, Certified Heart Disease and Stroke Educators)

Define codes and establish standard of care for credentialing and reimbursement from major health plans for education services provided by Certified Chronic Disease Educators. (Key partners: HEALTH – Chronic Care and Disease Management Team, Certified Chronic Disease Educators)

Present case to health plans. (Key partners: HEALTH – Chronic Care and Disease Management Team, Certified Chronic Disease Educators)

Negotiate with health plans for reimbursement for Certified Chronic Disease Educators. (Key partners: HEALTH – Chronic Care and Disease Management Team, Certified Chronic Disease Educators)

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**OBJECTIVE 11.3**

By 2014, increase the number of health centers that employ a Certified Asthma Educator from 4 in 2008 to 20 health centers.

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**DATA SOURCE:**

HEALTH – Asthma Control Program

**TARGET POPULATIONS:**

People of low income, people of low income residing in core cities, Hispanic and Black non-Hispanic adults and children, children, women of low income 65 years and older, Medicaid and Medicare recipients, uninsured and underinsured populations

**ACTIVITIES:**

Target health center clinicians for participation in the preparatory course for the NAECB exam. (Key partners: HEALTH – Asthma Control Program, RIACC, AHEC, Rhode Island Association of Certified Asthma Educators, ALARI)

Provide funding opportunities for health center clinicians to prepare for and take the NAECB Exam. (Key partners: HEALTH – Asthma Control Program, RIACC, AHEC, Rhode Island Association of Certified Asthma Educators, ALARI)



*An important objective in the Asthma State Plan is to provide funding opportunities for health center clinicians to prepare for and take the National Asthma Education Certification Board Exam.*

# Health Care System

## GOAL 12

IMPROVE THE ABILITY OF ASTHMA PATIENTS AND THEIR FAMILIES TO SELF-MANAGE THEIR DISEASE.

### OBJECTIVE 12.1

By 2014, increase the percentage of asthma patients who complete an Asthma Management Plan with their health care provider from 36% in 2005 to 46%.

#### DATA SOURCES:

2005 RI BRFSS, 2008+ RI BRFSS Call-back Survey, RICCC Asthma Database

#### TARGET POPULATIONS:

All, with special emphasis on priority populations

#### ACTIVITIES:

Provide pediatricians/family care practices with tools and education on the need for Asthma Action Plans, referral to Certified Asthma Educators and Draw-A-Breath, communication with schools, referral to a specialist. (Key partners: HEALTH – Asthma Control Program, Rhode Island Association of Certified Asthma Educators, Hasbro Children’s Hospital, RIACC)

Provide teachers (preK–12) with tools and education on the school health regulations, Draw-A-Breath, communication with physicians, and value of Asthma Action Plans. (Key partners: HEALTH – Asthma Control Program, RIACC, health plans, American Academy of Pediatrics – Rhode Island Chapter, Hasbro Children’s Hospital, Rhode Island Association of Certified Asthma Educators, Rhode Island School Nurse Teachers Association, Rhode Island Department of Education)

Sponsor four professional development opportunities for clinicians per year in Rhode Island that provide information on the diagnosis, decision support, and specific components of the *2007 NAEPP Guidelines for the Diagnosis and Management of Asthma* (e.g., use of Asthma Action Plans, compliance with controller medications, measuring asthma control, proper use of inhalers, peak flows, spirometers, etc.). (Key partners: HEALTH – Asthma Control Program, RIACC)

Develop and disseminate standards of asthma care for school nurse teachers based on *2007 NAEPP Guidelines for the Diagnosis and Management of Asthma*. (Key partners: HEALTH – Asthma Control Program, RIACC, health plans, American Academy of Pediatrics – Rhode Island Chapter, Hasbro Children’s Hospital, Rhode Island Association of Certified Asthma Educators, Rhode Island School Nurse Teachers Association, Rhode Island Department of Education)

Evaluate success of efforts through the RI BRFSS Call-back Surveys and RICCC Asthma Databases. (Key partner: HEALTH – Asthma Control Program)

*Asthma Management Plans are completed by the physician of a person with asthma to help the patient better manage their asthma, and know how to respond to an asthma episode.*



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**OBJECTIVE 12.2**

By 2014, increase the number of asthma patients who receive quality asthma education through a Certified Asthma Educator. (Developmental)

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**DATA SOURCE:**

Rhode Island Association of Certified Asthma Educators

**TARGET POPULATIONS:**

All, with special emphasis on priority populations

**ACTIVITIES:**

Develop a Certified Asthma Educator referral system for clinicians and patients. (Key partners: HEALTH – Asthma Control Program, Rhode Island Association of Certified Asthma Educators)

Provide pediatricians/family care practices with tools and education on the need for asthma action plans, referral to Certified Asthma Educators and Draw-A-Breath, communication with schools, and referral to a specialist. This includes programs that address co-morbidities and behaviors related to asthma (e.g., obesity, tobacco). (Key partners: HEALTH – Asthma Control Program, RIACC, health plans, American Academy of Pediatrics – Rhode Island Chapter, Hasbro Children’s Hospital, Rhode Island Association of Certified Asthma Educators, Rhode Island School Nurse Teachers Association, Rhode Island Department of Education)

Evaluate success of efforts through data collected in the Certified Asthma Educator referral system. (Key partners: HEALTH – Asthma Control Program, Rhode Island Association of Certified Asthma Educators)

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**OBJECTIVE 12.3**

By 2014, increase the percentage of adults with asthma who report receiving a flu shot from 57% in 2007 to 65%.

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**DATA SOURCE:**

2007+ RI BRFSS

**TARGET POPULATIONS:**

All, with special emphasis on priority populations

**ACTIVITIES:**

Integrate asthma into flu campaign for individuals with chronic diseases, targeting Medicaid and Medicare recipients. (Key partners: HEALTH – Asthma Control, Cancer, Diabetes, Heart Disease and Stroke, and Immunization Programs)

Evaluate success of efforts through the RI BRFSS. (Key partners: HEALTH – Asthma and Immunization Programs)

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**OBJECTIVE 12.4**

By 2014, increase the percentage of adults hospitalized for asthma that report a health care professional talked to them about preventing a serious asthma attack in the future, by 5% of the 2008 RI BRFSS Call-back Survey baseline.

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**DATA SOURCE:**

2008+ RI BRFSS Call-back Survey

**TARGET POPULATIONS:**

All, with special emphasis on priority populations

**ACTIVITIES:**

Identify Rhode Island hospitals that have a system in place for patients to receive follow-up care after a hospitalization due to asthma. (Key partners: HEALTH – Asthma Control Program, RIACC)

Develop plan to increase the baseline number of systems in place by which patients are educated and receive follow-up care after a hospitalization due to asthma. (Key partners: HEALTH – Asthma Control Program, hospitals, RIACC)

Identify funding sources to implement evidence-based or best practice interventions (e.g., CDC, Robert Wood Johnson Foundation). (Key partners: HEALTH – Asthma Control Program, hospitals, RIACC)

Secure funding. (Key partners: HEALTH – Asthma Control Program, RIACC)

# Community System: Coalition & Partnership Development

## GOAL 13

ENSURE A BROAD AND STRONG ASTHMA CONTROL COALITION THAT HAS A SHARED VISION OF REDUCING THE BURDEN OF ASTHMA AND ENSURING THAT ALL PEOPLE WITH ASTHMA ACHIEVE THEIR OPTIMAL STATE OF HEALTH, WELLNESS, AND QUALITY OF LIFE.

### OBJECTIVE 13.1

By 2014, establish a governance structure for the Rhode Island Asthma Control Coalition.

#### DATA SOURCE:

RIACC

#### TARGET POPULATION:

RIACC

#### ACTIVITIES:

Adopt by-laws of RIACC. (Key partner: RIACC)

Provide at least two leadership trainings opportunities for RIACC members. (Key partners: RIACC, HEALTH – Asthma Control Program)

Evaluate by-laws yearly and modify as needed. (Key partner: RIACC)

### OBJECTIVE 13.2

By 2014, increase the number of Rhode Island Asthma Control Coalition members from 42 in 2008 to 60.

#### DATA SOURCE:

RIACC

#### TARGET POPULATION:

RIACC

#### ACTIVITIES:

Complete ongoing evaluation of current members and recruitment of new members. (Key partners: RIACC, HEALTH – Asthma Control Program)

Develop marketing/recruitment plan. (Key partners: RIACC, HEALTH – Asthma Control Program)

Meet with key agencies that serve priority populations. (Key partners: RIACC, HEALTH – Asthma Control Program)

Increase the diversity of members to better represent the state and target populations. (Key partners: RIACC, HEALTH – Asthma Control Program)

Evaluate membership yearly to fill gaps in expertise and representation from key partners and priority populations. (Key partners: RIACC, HEALTH – Asthma Control Program)

*Support and partner in initiatives within the Community, Health Care, Environmental Health, Communication, and Surveillance Systems that address common goals that impact people with asthma.*



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**OBJECTIVE 13.3**

By 2014, complete five projects that ensure visibility of the Rhode Island Asthma Control Coalition statewide and among potential partners.

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**DATA SOURCE:**

RIACC

**TARGET POPULATIONS:**

General population, priority populations identified, key stakeholders, policy makers, potential partners

**ACTIVITIES:**

Complete thorough review of literature documenting evidence-based and best practices related to asthma campaigns for implementation in Rhode Island. (Key partner: HEALTH – Asthma Control Program)

Develop social marketing plan. (Key partners: RIACC, HEALTH – Asthma Control Program)

Sponsor ‘Asthma Summit’ in 2010. (Key partners: RIACC, HEALTH – Asthma Control Program)

Conduct four integrated media campaigns with multiple HEALTH programs. (Key partners: HEALTH – Asthma Control Program, RIACC)

Media campaigns will focus on:

- obesity
- tobacco
- flu
- healthy housing

Evaluate each project to determine increased awareness and visibility of RIACC and its function. (Key partners: RIACC, HEALTH – Asthma Control Program)

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**OBJECTIVE 13.4**

By 2014, increase the number of Rhode Island Asthma Control Coalition members represented on external coalitions and groups working on common goals. (Developmental)

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**DATA SOURCE:**

RIACC

**TARGET POPULATION:**

RIACC members

**ACTIVITIES:**

Complete reviews of organizations and agencies in Rhode Island with common goals. (Key partners: RIACC, HEALTH – Asthma Control Program)

Support and partner in initiatives within the Community, Health Care, Environmental Health, Communication, and Surveillance Systems that address common goals that impact people with asthma. (Key partners: RIACC, HEALTH – Asthma Control Program)

# Community System: Patient / Public Education Through Schools, Community-Based Organizations, and Worksites

## GOAL 14

ENSURE THAT PEOPLE AFFECTED BY ASTHMA HAVE THE KNOWLEDGE AND SKILLS FOR ASTHMA SELF-MANAGEMENT AND THE TOOLS TO INCREASE AWARENESS AND ADVOCATE FOR CHANGE TO REDUCE THE BURDEN OF ASTHMA.

### SCHOOLS, DAY CARE CENTERS & EARLY CHILDHOOD EDUCATION CENTERS

#### OBJECTIVE 14.1

By 2014, reduce the number of school days missed due to asthma in the past month among children in Rhode Island with asthma from 3 days in 2006 to 2 days.

#### DATA SOURCES:

2006 RI BRFS, 2008+ RI BRFS Call-back Survey

#### TARGET POPULATION:

School-age children

#### ACTIVITIES:

Complete thorough review of literature documenting evidence-based and best practices related to asthma interventions within schools for implementation in Rhode Island. (Key partner: HEALTH – Asthma Control Program)

Develop standards of asthma care for school nurse teachers based on *2007 NAEP Guidelines for the Diagnosis and Management of Asthma*. (Key partners: HEALTH – Asthma Control Program, RIACC, health plans, American Academy of Pediatrics – Rhode Island Chapter, Hasbro Children’s Hospital, Rhode Island Association of Certified Asthma Educators, Rhode Island School Nurse Teachers Association, Rhode Island Department of Education)

Provide training for school nurse teachers on the use of asthma equipment, asthma medications, school health regulations on asthma inhaler use, and communication with students’ health care providers. (Key partners: HEALTH – Asthma Control Program, RIACC, health plans, American Academy of Pediatrics – Rhode Island Chapter, Hasbro Children’s Hospital, Rhode Island Association of Certified Asthma Educators, Rhode Island School Nurse Teachers Association, Rhode Island Department of Education)

Provide teachers, day care centers, and Head Start Programs with tools and education on asthma, school health regulations, Draw-A-Breath, communication with physicians, and value of Asthma Action Plans. (Key partners: HEALTH – Asthma Control Program, RIACC, health plans, American Academy of Pediatrics – Rhode Island Chapter, Hasbro Children’s Hospital, Rhode Island Association of Certified Asthma Educators, Rhode Island School Nurse Teachers Association, Rhode Island Department of Education)

#### OBJECTIVE 14.2

By 2014, increase the number of school districts that have a policy that follows the school health regulation on self-carry and self-administration of asthma inhalers, from 10% of baseline of 2009 School Nurse Teachers Survey.

#### DATA SOURCE:

2009 School Nurse Teachers Survey

#### TARGET POPULATION:

School-age children

#### ACTIVITIES:

Survey schools to get baseline and determine why regulations are not being followed. (Key partners: HEALTH – Asthma Control Program, RIACC, health plans, American Academy of Pediatrics – Rhode Island Chapter, Hasbro Children’s Hospital, Rhode Island Association of Certified Asthma Educators, Rhode Island School Nurse Teachers Association, Rhode Island Department of Education)

Create workplan based on assessment. (Key partners: HEALTH – Asthma Control Program, RIACC, health plans, American Academy of Pediatrics – Rhode Island Chapter, Hasbro Children’s Hospital, Rhode Island Association of Certified Asthma Educators, Rhode Island School Nurse Teachers Association, Rhode Island Department of Education)

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**OBJECTIVE 14.3**

By 2014, increase the number of school nurse teachers that report receiving Asthma Action Plans from the primary care providers from 10% of baseline of 2009 School Nurse Teachers Survey. (Developmental)

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**DATA SOURCE:**

2009 School Nurse Teachers Survey

**TARGET POPULATIONS:**

Pre-school and school-age children

**ACTIVITIES:**

Survey schools to obtain baseline. (Key partners: HEALTH – Asthma Control Program, RIACC, health plans, American Academy of Pediatrics – Rhode Island Chapter, Hasbro Children’s Hospital, Rhode Island Association of Certified Asthma Educators, Rhode Island School Nurse Teachers Association, Rhode Island Department of Education)

Provide pediatricians and family care practices with tools and education on the need for Asthma Action Plans, referral to Certified Asthma Educators and/or Draw-A-Breath, communication with schools, and referral to a specialist. (Key partners: HEALTH – Asthma Control Program, RIACC, health plans, American Academy of Pediatrics – Rhode Island Chapter, Hasbro Children’s Hospital, Rhode Island Association of Certified Asthma Educators, Rhode Island School Nurse Teachers Association, Rhode Island Department of Education)

Provide teachers (preK–12) with tools and education on the school health regulations, Draw-A-Breath, communication with physicians, and value of Asthma Action Plans. (Key partners: HEALTH – Asthma Control Program, RIACC, health plans, American Academy of Pediatrics – Rhode Island Chapter, Hasbro Children’s Hospital, Rhode Island Association of Certified Asthma Educators, Rhode Island School Nurse Teachers Association, Rhode Island Department of Education)

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**OBJECTIVE 14.4**

By 2014, increase the yearly number of elementary schools that provide Draw-A-Breath workshops to their students with asthma and their families from 17 in 2008 to 40.

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**DATA SOURCE:**

Hasbro Children’s Hospital’s Draw-A-Breath Program

**TARGET POPULATION:**

Elementary school students

**ACTIVITIES:**

Identify funding sources to provide Draw-A-Breath workshops in schools (e.g., CDC, Robert Wood Johnson Foundation). (Key partners: HEALTH – Asthma Control Program, RIACC, American Academy of Pediatrics – Rhode Island Chapter, Hasbro Children’s Hospital, Rhode Island Association of Certified Asthma Educators)

Secure funding. (Key partners: HEALTH – Asthma Control Program, RIACC, American Academy of Pediatrics – Rhode Island Chapter, Hasbro Children’s Hospital, Rhode Island Association of Certified Asthma Educators)

Evaluate Draw-A-Breath workshops for number and demographics of children with asthma and their families that participated. (Key partners: HEALTH – Asthma Control Program and Hasbro Children’s Hospital)



## COMMUNITY-BASED ORGANIZATIONS

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### OBJECTIVE 14.5

By 2014, increase outreach efforts to community-based organizations (CBO) to ensure that CBOs assist people they serve in accessing asthma information, education, services, and resources that reflect best practices. (Developmental)

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#### DATA SOURCE:

HEALTH – Asthma Control Program

#### TARGET POPULATION:

Community-based organizations that serve priority populations

#### ACTIVITIES:

Complete thorough review of literature documenting evidence-based and best practices related to asthma education interventions and materials for implementation in Rhode Island. (Key partner: HEALTH – Asthma Control Program)

Determine gaps and needs within CBOs for asthma materials and resources. (Key partners: HEALTH – Asthma Control Program and Health Disparities and Access to Care Team, RIACC)

Provide ‘asthma tool kit’ for CBOs and worksites based on the determination of gaps and needs. ‘Tool kit’ will also address co-morbidities and behaviors related to asthma (e.g., obesity, tobacco, healthy housing). (Key partners: HEALTH – Asthma Control Program, RIACC)

Develop plan to replicate and implement the Diabetes Information, Referral and Education Specialists (DIRES) program for asthma. (Key partners: HEALTH – Asthma Control and Diabetes Programs)

Target CBOs that serve the people who are disparately affected by asthma. (Key partners: HEALTH – Asthma Control Program and Health Disparities and Access to Care Team, RIACC)

Evaluate ‘tool kit’ for number and demographics of people with asthma who receive and utilize it. (Key partner: HEALTH – Asthma Control Program)

## WORKSITES

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### OBJECTIVE 14.6

By 2014, reduce the percent of adults with current asthma in Rhode Island that report missing at least one or more days of work in the past year because of their asthma from 17% in 2006 to 10%.

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#### DATA SOURCES:

2005 RI BRFSS, 2008+ RI BRFSS Call-back Survey

#### TARGET POPULATION:

All worksites, with emphasis on worksites in core cities that employ people of low income, Hispanic and Black non-Hispanic adults

#### ACTIVITIES:

Complete thorough review of literature documenting evidence-based and best practices related to asthma education interventions and materials for implementation in Rhode Island. (Key partner: HEALTH – Asthma Control Program)

Develop plan to replicate and implement the Diabetes Information, Referral and Education Specialists (DIRES) program for asthma. (Key partners: HEALTH – Asthma Control and Diabetes Programs)

Increase outreach efforts to worksites to ensure that worksites assist people they serve in accessing asthma information, education, services, and resources that reflect best practices. (Key partners: HEALTH – Asthma Control Program, RIACC, Rhode Island Association of Certified Asthma Educators)

Provide ‘asthma tool kit’ for CBOs and worksites; ‘tool kit’ will also address co-morbidities and behaviors related to asthma. (Key partners: HEALTH – Asthma Control and Worksite Wellness Programs and Health Disparities and Access to Care Team, RIACC)

Evaluate ‘tool kit’ for number and demographics of people with asthma who receive and utilize it. (Key partner: HEALTH – Asthma Control Program)



# Glossary

**AE-C** – Certified Asthma Educator

**AHEC** – Rhode Island Area Health Education Centers (<http://med.brown.edu/ahec>)

**ALARI** – American Lung Association of Rhode Island ([www.lungri.org](http://www.lungri.org))

**ASTHMAGENS** – Substances in the broader built and natural environment that induce asthma symptoms. Asthmagens found in job settings are frequently called work-place asthmagens.

**BRFSS** – Behavioral Risk Factor Surveillance System

**CDC** – Centers for Disease Control and Prevention

**CORE CITY** – Rhode Island defines a core city as any city where the child poverty level is greater than 15%, according to the 2000 Census. These cities include: Central Falls, Newport, Pawtucket, Providence, West Warwick, and Woonsocket.

**HEALTH** – Rhode Island Department of Health ([www.HEALTH.ri.gov](http://www.HEALTH.ri.gov))

**HEALTH CARE SITES** – Examples of health care sites referred to in this document include emergency departments, hospitals, urgent care centers, community and hospital-based health centers, and physician practices.

**HEALTH DISPARITIES** – According to the US Centers for Disease Control and Prevention, health disparities are differences that occur by gender, race or ethnicity, education or income, disability, geographic location, or sexual orientation. ([www.cdc.gov/omhd/About/disparities.htm](http://www.cdc.gov/omhd/About/disparities.htm))

**HIGH-PERFORMANCE SCHOOL** – High performance schools provide high quality learning environments, conserve natural resources, consume less energy, are easier to maintain, and provide an enhanced community resource. ([www.ride.ri.gov/Finance/Funding/construction](http://www.ride.ri.gov/Finance/Funding/construction))

**LOW INCOME** – The term 'low income' used in this document is defined as a household income of less than \$25,000 a year.

**NAECB** – National Asthma Educator Certification Board ([www.naecb.org](http://www.naecb.org))

**NAEPP** – National Asthma Education and Prevention Program of the National Heart, Lung, and Blood Institute ([www.nhlbi.nih.gov/about/naepp/naep\\_pd.htm](http://www.nhlbi.nih.gov/about/naepp/naep_pd.htm))

**NuPTA** – New Public Transit Alliance

**PRIORITY POPULATIONS** – Priority populations have been identified based on Rhode Island asthma prevalence and hospitalization data. Priority populations are:

- » People of low income
- » Hispanic adults and children
- » Black non-Hispanic adults and children
- » Children
- » Women 65 years and older
- » Medicaid and Medicare recipients – adults and children
- » Adults and children of low income residing in the core cities, with special emphasis on the City of Providence

**RIACC** – Rhode Island Asthma Control Coalition

**RICCC** – Rhode Island Chronic Care Collaborative

**RiteCARE** – A Rhode Island Medicaid program. Individuals eligible for Rite Care include:

- » parents of Rite Care eligible children (up to age 18) with income under 185% of the Federal Poverty Level (FPL);
- » children under age 19 with family income under 250% of FPL; and
- » pregnant women with family income under 350% of FPL.

**SOCIAL DETERMINANTS OF HEALTH** – According to the US Centers for Disease Control and Prevention ([www.cdc.gov/sdoh](http://www.cdc.gov/sdoh)), social determinants of health are factors in the social environment that contribute to or detract from the health of individuals and communities. These factors include, but are not limited to the following:

- » Socioeconomic status
- » Transportation
- » Housing
- » Access to services
- » Discrimination by social grouping (e.g., race, gender, or class)
- » Social or environmental stressors

**YRBS** – Youth Risk Behavior Survey

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# Asthma State Plan: Logic Model

## RESOURCES

The following resources are available in order to complete these activities and products:

CDC Funding, Leadership, Expertise

Asthma State Plan

Asthma Burden Document

Expertise and leadership

- » HEALTH staff
- » RIACC members
- » RIACAE members
- » HH Collaborative members
- » RICCC
- » Asthma Regional Council

Partners, materials, resources

- » internal and external
- » local, state, regional, national

Communication specialists

Research/best practices

## OUTPUTS

Activities and products aim to reduce the burden of asthma in Rhode Island and are further defined in the *Asthma State Plan* to address priority populations and reduce asthma disparities.

**ACTIVITIES** including but not limited to:

### SURVEILLANCE & EVALUATION

Identify data gaps, needs, sources

Access and analyze data sets

Define key measures

Secure funding

Evaluate interventions

Design Asthma Surveillance System

Integrate asthma into Chronic Disease and Disparities Surveillance Systems

### HEALTH COMMUNICATION

Identify gaps and resources

Develop educational materials and campaigns

Expand website

Integrate asthma into multiple programs (e.g., healthy housing, RICCC, flu, tobacco) and vice versa

### ENVIRONMENTAL HEALTH

Complete literature review

Inventory existing resources and materials

Integrate healthy housing principles and materials into asthma education efforts

Evaluate, modify, and replicate *Healthy Residents*, *Healthy Homes* model

Continue to pilot and evaluate 'Asthma Center'

Secure funding for implementation of *Healthy Residents*, *Healthy Homes* and 'Asthma Center' models, *Tools for Schools/Cleaning for Health*

Train housing and building code officials

Establish smoke-free housing policies in multi-family housing

Establish policies related to diesel

### HEALTH CARE

Identify gaps in professional education efforts

Provide prep course for NAECB Exam, targeting Spanish-speaking clinicians

Develop methods to evaluate and monitor the quality of asthma care and education by Certified Asthma Educators

Recruit members of RIACAE

Integrate AE-Cs into 'Certified Chronic Disease Educators' System

Recruit RICCC Asthma Sites

Assess initiatives in the health care system that target asthma patients

Negotiate with health plans for reimbursement for AE-C services

Negotiate with health plans for RICCC Asthma Site incentives

Develop plan to increase patient education as follow-up to hospital or ED discharge

### COMMUNITY

Establish governance structure of RIACC

Recruit members of RIACC from key agencies that serve priority populations

Increase number of RIACC members that partner with and are members of groups that address goals common with the *Asthma State Plan*

Provide training for SNT, day care centers, and Head Start Programs

Survey schools on school health regulations on self-carry and use of asthma inhalers

Modify and implement DIRES for asthma

## OUTCOMES/IMPACT

### PRODUCTS including but not limited to:

#### SURVEILLANCE & EVALUATION

Asthma, Chronic Disease, and Disparities Surveillance Systems

Population-based reports for data-driven policies, programs, system changes

GIS Maps

Evaluation System of interventions and *Asthma State Plan*

#### HEALTH COMMUNICATION

Educational materials

Living Well participants with asthma expertise

Media campaigns

#### ENVIRONMENTAL HEALTH

Statewide housing database

Replicated *Healthy Residents, Healthy Homes* model

'Asthma Center' in Providence

Smoke free rental units

Healthy housing campaign

*Tools for Schools/Cleaning for Health* in schools

High Performance Schools

Diesel policies

#### HEALTH CARE

Professional development specific to the *2007 NAEPP Guidelines for Diagnosis and Management of Asthma*

Standards of care

Increased number of AE-Cs, English/Spanish speaking

'Certified Chronic Disease Educators' System

RICCC Asthma Sites

Community resources for asthma patients

Reimbursement for AE-C services

AE-C referral system

#### COMMUNITY

Broad and strong RIACC

Asthma Summit

Program adherence to school health regulations on self-carry and use of asthma inhalers

Draw-A-Breath workshops

'Asthma Tool Kit' for CBOs and worksites

DIRES program for asthma

#### INTERMEDIATE RESULTS

Increased access to asthma-related data

Improved products and outcomes of data-driven interventions and program

Increased quality of care

Increased visibility of RIACC

Increase awareness of and knowledge about living well with asthma

Improved asthma self-management

Improve appropriate medication use

Increased use of Asthma Management Plans

Increased access to medical home among people with asthma

Increased flu immunization

Reduced exposure to second-hand smoke

Decrease in exposure to environmental asthma triggers, irritants, and asthmagens in homes, schools, and worksites

#### LONG TERM RESULTS (BY 2014)

Improved asthma control

Improved quality of life (e.g., symptoms, sleep disturbance, activity limitations)

Reduced number of school and work days missed

Reduced asthma hospitalizations

Reduced ED visits due to asthma

Eliminated disparities between general and priority populations

## ACRONYMS

AE-C	Certified Asthma Educators
CBO	Community-Based Organization
CDC	Centers for Disease Control and Prevention
DIRES	Diabetes Information Resources Education
ED	Emergency Department
HEALTH	RI Department of Health
HH	Healthy Housing
NAECB	National Asthma Educator Certification Board
NAEPP	National Asthma Education and Prevention Program
RIACAE	RI Association of Certified Asthma Educators
RIACC	RI Asthma Control Coalition
RICCC	RI Chronic Care Collaborative

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Front cover: Narragansett Town Beach, Narragansett, RI  
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