



2011 – 2015

MISSISSIPPI STATE ASTHMA PLAN

Addressing Asthma in Mississippi Through A Collaborative Public Health Approach



2011 – 2015

MISSISSIPPI STATE ASTHMA PLAN

A Collaborative Health Approach



For more information or for additional copies of this plan, please contact:

Mississippi State Department of Health
Office of Health Data and Research
Mississippi Asthma Program
570 East Woodrow Wilson Drive
Osborne 200
Jackson, MS 39216
Phone 601-576-7415
24-hour information: 1-866-HLTHY4U (866-458-4948)
Fax 601-576-8168
www.msdh.ms.gov

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Letter from State Health Officer



MISSISSIPPI STATE DEPARTMENT OF HEALTH

July 29, 2011

Dear Mississippi Residents,

The Mississippi State Department of Health (MSDH) is happy to support the Mississippi State Asthma Plan 2011-2015. Asthma is a chronic respiratory disease affecting over 240,000 Mississippians. Although it is one of the leading chronic health conditions among children and adults, responsible for lower quality of life and undesirable health outcomes, asthma can be managed and controlled with proper treatment.

The State Asthma Plan is developed as a tool for persons interested in addressing asthma from a public health perspective and using surveillance data to develop activities. With this approach, we can seek to accomplish the mission of MSDH, which is to promote and protect the health of all Mississippians.

For the past five years, the MSDH Asthma Program along with The American Lung Association of Mississippi and The Asthma Coalition of Mississippi has had a great deal of success in improving asthma care. Based on successes and lessons learned, the plan has been updated and fine tuned to improve the treatment of this disease.

We appreciate those who served on the committees and contributed their time and expertise to the revision of this plan. Together, we can reduce asthma morbidity and mortality in Mississippi to enhance the quality of life for asthma sufferers.

Sincerely,

Mary Currier, MD, MPH
State Health Officer

Letter from Governor



HALEY BARBOUR
GOVERNOR

STATE OF MISSISSIPPI OFFICE OF THE GOVERNOR

February 22, 2011

It is my pleasure to recognize the hard work and dedication of the Asthma Coalition of Mississippi as they present the newly developed Mississippi State Asthma Plan. This plan which was developed by asthma experts, community organizations, government agencies, and individuals with asthma represents a vision of Mississippi communities working together to improve the quality of life for people with asthma.

As Governor, I am proud to say I signed a bill into passage, effective July 1, 2010, pertaining to comprehensive asthma education in schools. It is now required for all school employees and nurses to receive asthma education, actions be taken by schools to reduce asthma triggers in the school setting, and most importantly individual asthma action plans must be submitted to school personnel for those students with asthma in grades K-12.

Asthma places a heavy burden on those with the disease, as well as those who offer support. The Mississippi State Asthma Plan is an urgent, coordinated call to action, challenging us to work toward a common cause. By striving to achieve the plan objectives and strategies we can reduce the public health burdens caused by asthma.

I applaud the many organizations for their efforts in developing the Mississippi State Asthma Plan.

Sincerely,

A handwritten signature in black ink that reads "Haley Barbour".

Haley Barbour
Governor

Letter from State Senator

HOUSE OF REPRESENTATIVES



STATE OF MISSISSIPPI

STEVE HOLLAND
 District 18
 Lee County
 P. O. Box 2
 Plantersville, Mississippi 39862

 Bus (662) 840-5000
 Res (662) 844-2004
 sholland@house.ms.gov

COMMITTEE ASSIGNMENTS:
 Public Health and Human Services,
 Chairman
 Appropriations
 Subcommittee on Health and
 Medicaid, Chairman
 Congressional Redistricting
 Gaming
 Judiciary A
 Legislative Budget Committee
 Legislative reapportionment
 Medicaid

February 18, 2011

I am pleased to endorse Mississippi's Asthma Coalition's Statewide Asthma Plan. As one who lives with a lung disease, I am very encouraged to see the hard work and dedication of so many organizations and individuals that have contributed toward this impressive and comprehensive document.

As I have served as the chairman of the House Public Health and Human Services committee, it was a great privilege to serve on the Asthma Study Committee formed in 2006. Our committee submitted our findings in a report to the Speaker of the House revealing the public health impact asthma has on our state and policy change that can improve the quality of life for those living with asthma, especially children in our public schools. I am proud to say the Mississippi State Legislature passed a bill pertaining to comprehensive asthma education in schools in 2010. Governor Barbour signed into law effective July 1, 2010 and it is now required for all school employees and nurses to receive asthma education, actions be taken to reduce asthma triggers in the school setting, and most importantly individual asthma action plans must be submitted to school personnel for those students with asthma in grades K-12.

I look forward to seeing the plan move into action and urge all Mississippians to closely examine the impact asthma has on the lives of individuals, especially children. The work of the ACM will decrease the burden of asthma for people with the disease, their families and friends and for the state of Mississippi.

Sincerely,

Steve Holland

Letter from ALA CEO

The American Lung Association, *Plains-Gulf Region* is proud to be an active partner of the Mississippi Asthma Program and a leader in the development of the Mississippi State Asthma Plan.

The mission of the American Lung Association is to save lives by promoting lung health and preventing lung disease. Our organization works tirelessly to ensure that the air Mississippians breathe is clean and safe. It is our belief that a comprehensive and collaborative approach will alleviate the burden of asthma on Mississippians.

It is my pleasure to recognize the hard work and dedication of several American Lung Association, *Plains-Gulf Region* staff members as they present the second edition of the Mississippi State Asthma Plan. This plan provides extensively researched, sound recommendations for reducing the difficulties of asthma in Mississippi.

We extend our appreciation to the committed partners who helped develop this plan and are working with the American Lung Association to create a healthier Mississippi. Together, we can better manage the asthma epidemic and improve the quality of life for the individuals and families affected by this disease.

I look forward to seeing this plan in action and strongly urge all Mississippians to join the American Lung Association in our fight for clean and healthy air.

Sara Dreiling
Chief Executive Officer
American Lung Association, *Plains-Gulf Region*

Special Acknowledgements

SPECIAL ACKNOWLEDGEMENTS

As this document will make clear, the Mississippi State Department of Health and the American Lung Association, Plains-Gulf Region have many partners to thank for their insightful and instructive dedication to developing this document. We gratefully acknowledge the following individuals and organizations for contributing their time and expertise to developing the Mississippi State Asthma Plan 2011- 2015.

Daniel Luna Venarske, MD

Mississippi Asthma and Allergy Clinic, P.A.

Eugenia King, MPH

Health Promotions Coordinator

American Lung Association, Plains-Gulf Region

Erin Eveker

Vice President of Communications

American Lung Association, Plains-Gulf Region

Jennifer Cofer, MPH, CHES, AE-C

Vice President of Public Policy

American Lung Association, Plains-Gulf Region

Judith N. Winford, MSN, CPHQ

Asthma Resource Nurse

Center for Community and Economic Development, Delta State University

Leah Pylate, MS, CHES

Health Promotions Coordinator

American Lung Association, Plains-Gulf Region

Monica Stinson, MS, CHES, MSDH

Asthma Program Manager

Asthma Coalition of Mississippi

American Lung Association, Plains-Gulf Region

Mississippi State Department of Health

Mississippi Asthma and Allergy Clinic

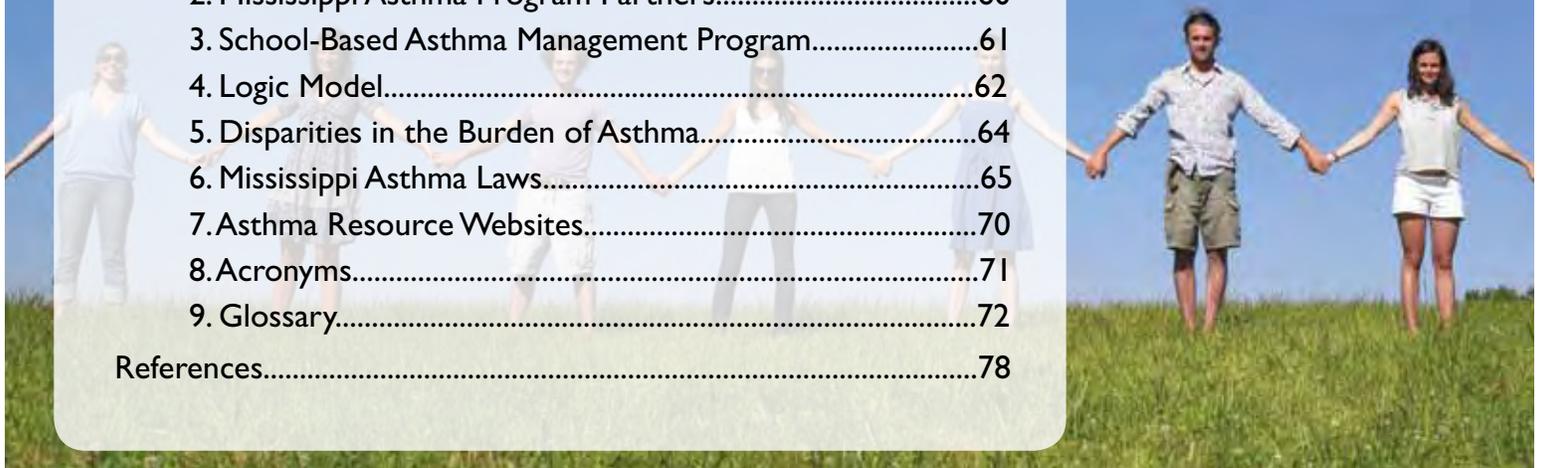
Mississippi Department of Education: Office of Healthy Schools

Mississippi Department of Environmental Quality

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Executive Summary

EXECUTIVE SUMMARY

The epidemic of asthma has become one of the most critical public health threats for Mississippi. The impact of asthma is felt in many different ways – health care costs associated with treatment and medication, long-term management, and indirect cost incurred by time lost from school and work that affects the economic future of the state, as well as the financial and emotional impact on patients and their families. Asthma is a controllable condition that affects quality of life. With proper control, individuals living with asthma can live relatively normal and healthy lives.

To address this important issue in Mississippi, the Mississippi State Department of Health (MSDH) and the American Lung Association (ALA) coordinated a strategic planning process involving a broad array of stakeholders and experts. The Mississippi State Asthma Plan is the result of a collaborative effort and a coordinated process involving input from hundreds of stakeholders and interested partners across the state. Their insights provided substance and shape to this revised plan, and a consensus on the issues to be addressed.

Over the past five years, equipped with asthma data and funding from the Centers for Disease Control and Prevention (CDC), the Asthma Coalition of Mississippi (ACM) and organizations in Mississippi have utilized the State Asthma Plan to direct their efforts related to asthma. The revised state plan reflects the priorities of the partners and the opportunities available over the next five years. While using this Plan, the following priorities should be taken into consideration: reducing asthma disparities, fostering asthma awareness and education, focusing on long term management, changing systems and policies, and creating asthma friendly environments. The Mississippi State Asthma Plan highlights goals, objectives, priorities and strategies.

The goals and objectives of the plan are based on the Healthy People 2020 asthma goals (See Appendix 1). The overall goals of the 2011-2015 State Asthma Plan are to:

- Reduce asthma deaths
- Reduce the burden of asthma on Mississippians
- Decrease asthma disparities in all Public Health Districts
- Reduce asthma hospitalization rates among children and adults.
- Reduce hospital emergency department visits for asthma.
- Reduce activity limitations among persons with current asthma.
- Increase provider and patient education and care according to National Asthma Education and Prevention Program (NAEPP) guidelines.

As a whole, the Mississippi State Asthma Plan will guide efforts to reduce the burden of asthma and the associated cost. These goals will be accomplished through the ACM and active statewide and local partnerships.

Executive Summary

ABOUT THE MISSISSIPPI STATE DEPARTMENT OF HEALTH ASTHMA PROGRAM

The MSDH Asthma Program finds its roots in a South Central Public Health Leadership Institute (SCPHLI) project. The project team composed of MSDH staff, collected, analyzed, and reported data on Mississippi asthma hospital visits in 1997 and 1998, recommending that a statewide asthma surveillance system be developed.

At the time, no funding or staff were available to take on a task of this scope. The MSDH applied for funds from the American Lung Association (ALA) and received funding for two years to begin development of the asthma surveillance system.

After the first year of ALA funding, the MSDH was awarded funding from the National Center for Environmental Health (Air Pollution and Respiratory Health Branch) at CDC. Without the support of ALA and the CDC's National Asthma Control Program, Mississippi's Asthma Program would not exist.

September 2010 began the eighth year of Asthma Program work through CDC funding.

Providing information is an important part of the Asthma Program's education and awareness effort. In this capacity, the program responds to many requests for materials, data and programmatic support from both consumers and health professionals. Other efforts have involved important collaborations with national and state professional organizations. In collaboration with ALA, the program has assisted in providing continuing medical education (CME) to physicians, nurses, respiratory therapists, health educators and childcare staff.

Mississippi Asthma Program Vision

To improve quality of life for Mississippians with asthma.

Mississippi Asthma Program Staff

Lei Zhang, PhD, MSc, MBA
Director, Principal Investigator
Office of Health Data and Research

Nimish Valvi, MPH
Asthma Epidemiologist

Jennifer Cofer MPH, CHES, AE-C
Vice President of Public Policy
American Lung Association, Plains-Gulf Region

Monica Stinson, MS, CHES
Asthma Program Manager

Karen King
Asthma Surveillance Specialist

WC Lloyd Jr., MBA
Asthma Program Evaluator

Eugenia King, MPH
Asthma Program Coordinator
American Lung Association, Plains-Gulf Region

Executive Summary

THE ASTHMA COALITION OF MISSISSIPPI

The Asthma Coalition of Mississippi (ACM) was established in 2005 by the ALA in conjunction with the MSDH. The Asthma Coalition consists of over 500 individuals representing more than 200 organizations throughout the state. ACM members include physicians, nurses, parents, governmental agencies, respiratory therapists, health educators, persons living with asthma and others who are concerned about controlling asthma.

Mississippi has nine public health districts. Asthma Coalitions were formed specifically for each district. Each of these local coalitions feeds into Mississippi's statewide asthma coalition. This structure allows a more geographically diverse representation, and has been a highly effective alternative to forming a large, singular statewide group.

Purpose of ACM:

To bring together people in Mississippi who have an interest in asthma, both at the state and regional level.

ACM's Vision:

Improved quality of life among Mississippians with asthma.

ACM's Mission:

To promote education, prevention, and management of asthma throughout the State of Mississippi.

ACM's Goals:

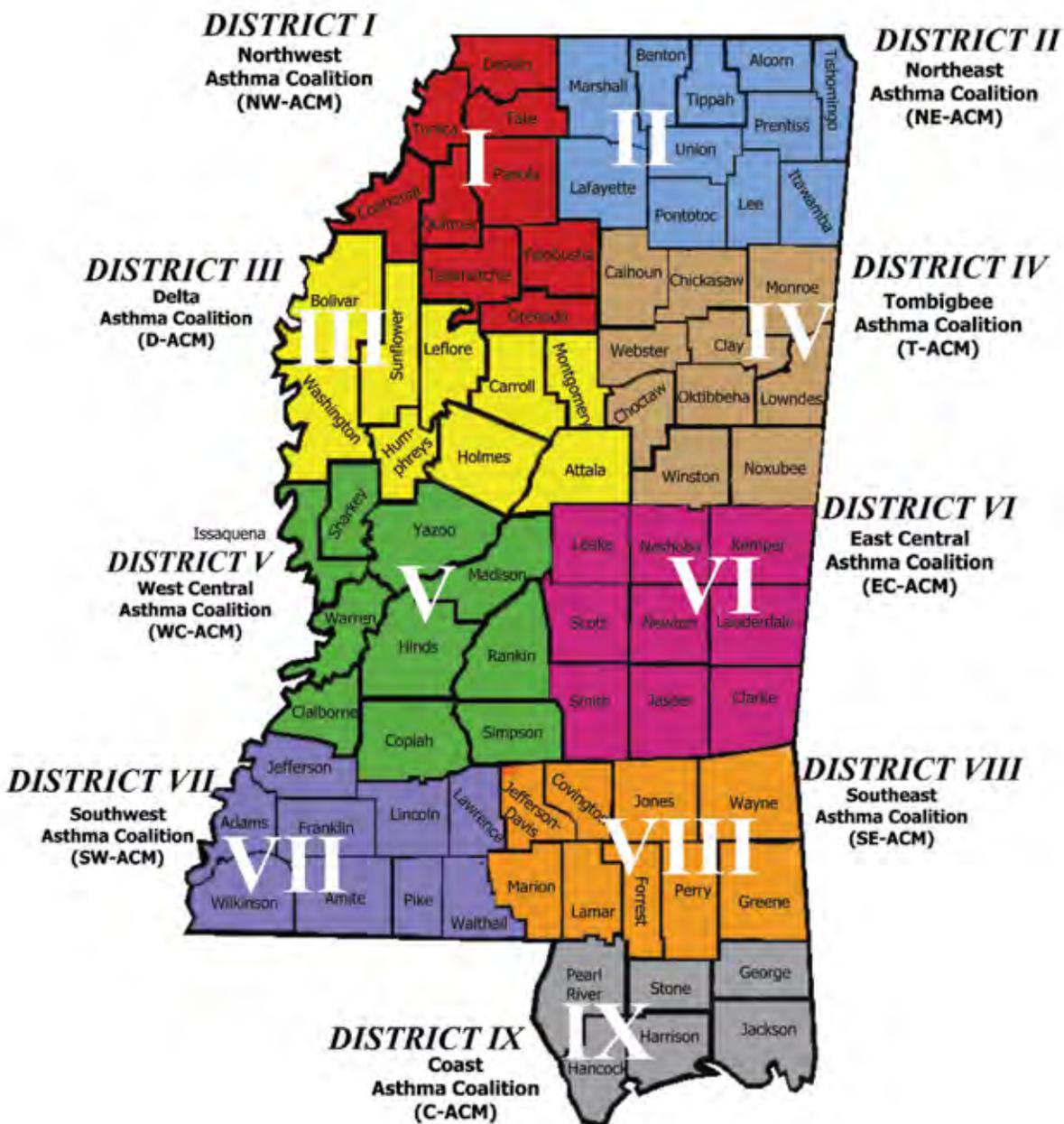
- Reduce asthma hospitalization rates
- Eliminate asthma disparities in all public health districts in Mississippi
- Reduce impact on people with asthma
- Increase provider education and patient education
- Encourage the use of Patient-specific Asthma Action Plans
- Assist in the implementation of the Mississippi State Asthma Plan

The coalitions are as follows:

1. Northwest Asthma Coalition of Mississippi (NW-ACM)
2. Northeast Asthma Coalition of Mississippi (NE-ACM)
3. Delta Asthma Coalition of Mississippi (D-ACM)
4. Tombigbee Asthma Coalition of Mississippi (T-ACM)
5. West Central Asthma Coalition of Mississippi (WC-ACM)
6. East Central Asthma Coalition of Mississippi (EC-ACM)
7. Southwest Asthma Coalition of Mississippi (SW-ACM)
8. Southeast Asthma Coalition of Mississippi (SE-ACM)
9. Coast Asthma Coalition of Mississippi (C-ACM)

Executive Summary

State of Mississippi: Public Health Districts and Asthma Coalition Regions



Executive Summary

Workgroups

Workgroups are needed for coalition members to address specific concerns related to asthma. Workgroup topics were voted upon by Lead Team members and are listed below:

- **ADVOCACY AND POLICY** – Members work to institute policies, regulations, and laws that support asthma management and asthma friendly environments.
- **COMMUNITY** – Members work with partners in their local communities to positively impact asthma management through various approaches.
- **DATA AND SURVEILLANCE** – Members collaborate to propose and implement varied methods of data collection, analysis, and reporting.
- **HEALTH CARE** – Members work to improve the health care system to provide care for asthma patients.
- **SCHOOL HEALTH** – Members strive to positively impact school environments and policies supporting asthma awareness and management.
- **ENVIRONMENT** – Members join forces to identify and mitigate the harmful effects of the environment on asthma, and to educate Mississippians about asthma triggers.

No single individual, organization, agency, community, political jurisdiction, or elected official can bring about such far-reaching changes alone. Collaboration, teamwork and resource-sharing will be required at every level among state and local agencies, provider and consumer groups, business leaders, education and medical communities, advertising and marketing groups, the media and government.

Executive Summary

Leadership Team

The ALA's Asthma Coalition Coordinator collaborated with the MSDH Asthma Program Coordinator to develop the ACM's Executive Committee – which is called the Leadership Team (Lead Team). These members serve as advisors in writing the State Asthma Plan and are the governing body of the Asthma Coalitions.

Jennifer Cofer

Vice President of Public Policy, American Lung Association, Plains-Gulf Region

LaQuita Shanks-Cooper

MSDH, Genetic Services, Division Director

Erik Fleming

Hinds County Sheriff Dept., Former House of Representative

Tanya Funchess

MSDH, Bureau Director, Office of Tobacco Control and Prevention

Keith Head

MDEQ, Environmental Engineer, Air Division

Eugenia King

Asthma Program Coordinator, American Lung Association, Plains-Gulf Region

Sophia Leggett

Associate Professor, School of Health Sciences, Jackson State University

Christine Philley

MDE, School Health Administrator, Bureau of Coordinated School Health

Barry Pitts

Glaxo Smith Kline, Respiratory Care Educator

Jodi Rankin

MSDH, Bureau Director, Community and School Health

Monica Stinson

MSDH, Asthma Program Manager

Nimish Valvi

MSDH, Asthma Epidemiologist

Daniel Venarske, MD

MS Asthma and Allergy Clinic

Estelle Watts

MDE, State School Nurse Consultant, Office of Healthy Schools



Executive Summary

Regional Officers

Emily Ashworth, RN
Northwest ACM- District I
Desoto County Schools

Kathy Haynes, BS, RRT-NPS, AE-C
Northeast ACM-District II
North Mississippi Medical Center

Judith Winford, MSN, CPHQ
Delta ACM- District III
Delta State University

Eileen Carr-Tabb
Tombigbee ACM- District IV
District IV

Bobbie Coleman, RRT
East Central ACM- District VI
Neshoba County General Hospital

Tina Holland, RRT
Southwest ACM- District VII
Southwest MS Regional Medical Center

Marshae McNeal
Southeast ACM- District VIII
Pinebelt Mental Health Resource Center

Maci Pittman-Flautt, MS
Northwest ACM- District I
MSU Extension Service

Renee Pierce
Northeast ACM-District II
North Mississippi Medical Center

Sharon Wilson, RN
Delta ACM- District III
Greenville Public Schools

Michelle Cresap, RN
West Central ACM- District V
Children's Medical Group

Beverley Lilley
East Central ACM- District VI
Neshoba County General Hospital

Steven Pearson, PharmD, CDE
Southwest ACM- District VII
Southwest MS Regional Medical Center

Jackie Smith, RRT, BS
Coast ACM- District IX
Mississippi Gulf Coast Community College



Executive Summary

PARTNERSHIPS

Because there are many facets of asthma, no one organization can tackle this problem alone. To enhance its impact on the problem, the MSDH, the ALA and the ACM has always recognized the importance of enlisting partners with needed expertise and experience. Partnerships also allow the program to leverage additional resources and to coordinate the delivery of interventions related to asthma and its risk factors (See Appendix 2).

PURPOSE OF THE MISSISSIPPI STATE ASTHMA PLAN

The Mississippi State Asthma Plan has been a collaborative effort involving all of the workgroups of the ACM. The State Asthma Plan for Mississippi will serve as a guidebook for the ACM and those interested in reducing the burden of asthma in the home, school, and occupational environments in the state. Addressing asthma from a public health perspective through this plan entails disease tracking, science-based interventions, and statewide partnerships. Over the next five years, people and organizations in Mississippi will utilize the State Asthma Plan to direct their efforts related to asthma. Because the plan designates responsible parties for specific tasks, duplication of efforts will be minimized, resources will be leveraged more efficiently, and collaboration in asthma activities will be better coordinated.

REASONS FOR REVISING THE PLAN

The first Mississippi State Asthma Plan was released in 2006. There have been many successes since the implementation of the first state plan and revising the plan will provide further direction in continuing asthma efforts in Mississippi. The revised plan builds on components of the 2006 plan by refining objectives to focus on populations at highest risk for asthma associated morbidity and mortality, and to incorporate current NAEPP guidelines, initiatives, policies, data, and methods of education and outreach that were not available when the 2006 plan was written. Working together over the next five years, state agencies, nongovernmental organizations, communities, and concerned stakeholders can achieve many of the goals, objectives, and strategies outlined in this plan, making Mississippi a healthier place for everyone, especially people with asthma.

Introduction

INTRODUCTION

Asthma is a common chronic disease affecting children and adults. Asthma affects people of all ages, but most often starts in childhood. According to the National Heart, Lung and Blood Institute, in the United States, more than 22 million people are known to have asthma with nearly 6 million of these people being children. Asthma (AZ-ma) is a chronic (long-term) lung disease that inflames and narrows the airways. The airways are tubes that carry air into and out of the lungs. People who have asthma have inflamed airways. This makes the airways swollen and very sensitive. They tend to react strongly to certain substances that are inhaled.

When the airways react, the muscles around them tighten. This causes the airways to narrow, and less air flows to the lungs. The swelling also can worsen, making the airways even narrower. Cells in the airways may make more mucus than normal. Mucus is a sticky, thick liquid that can further narrow the airways.

This chain reaction can result in asthma symptoms. Symptoms can happen each time the airways are irritated. Asthma symptoms can affect a person's quality of life through disruption of sleep and usual daily activities, inability to attend school and work, and through severe attacks requiring urgent medical visits. Asthma affects individuals differently resulting in differing severity, symptoms and responsiveness to treatment.

Sometimes symptoms are mild and go away on their own or after minimal treatment with an asthma medicine. At other times, symptoms continue to get worse. When symptoms get more intense and/or additional symptoms appear, this is an asthma attack. Asthma attacks also are called flare ups or exacerbations. It is important to treat symptoms when first noticed. This will help prevent the symptoms from worsening and causing a severe asthma attack. Severe asthma attacks may require emergency care and can cause death.

Source: National Heart, Lung and Blood Institute, National Asthma Education and Prevention Program (2007). Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma, (NHLI Publication No. 07-4051)

Introduction

CAUSES OF ASTHMA

The exact cause of asthma is unknown. Researchers think a combination of factors interact to cause asthma to develop, most often early in life. These factors include:

- An inherited tendency to develop allergies, called atopy (AT-o-pe)
- Parents who have asthma
- Certain respiratory infections during childhood
- Contact with some airborne allergens or exposure to some viral infections in infancy or in early childhood when the immune system is developing

The risk of asthma is increased by environmental, hereditary, socioeconomic and behavioral factors. Airborne allergens and respiratory tract irritants found indoors, especially in substandard housing, and atmospheric pollutants contribute to asthma in two ways. First, they trigger asthma attacks in children and adults with chronic asthma. Second, children are sensitized early in life by environmental exposure, and this early sensitization is associated with the later development of chronic asthma. A family history of asthma increases the chances of developing asthma, while other genetic factors can affect responsiveness to asthma medications. In order for the genetic component of asthma to be manifested, there must be interaction with environmental factors. One theory researchers have for the cause of asthma is the “Hygiene Hypothesis.” They believe that our Western lifestyle, with its emphasis on hygiene and sanitation, has resulted in changes in our living conditions and an overall decline in infections in early childhood. Different factors may be more likely to cause asthma in some people than in others (See Appendix 5).

Many young children no longer experience the same types of environmental exposures and infections as children did in the past. This affects the way that the immune systems in today’s young children develop during very early childhood, and may increase their risk for atopy and asthma. This is especially true for children who have close family members with one or both of these conditions.

Common asthma symptoms include:

- Coughing
- Wheezing
- Chest tightness
- Shortness of breath

Not all people who have asthma have these symptoms. Likewise, having these symptoms does not always mean a diagnosis of asthma.

*Sources: National Heart, Lung and Blood Institute, National Asthma Education and Prevention Program (2007). Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma, (NHLI Publication No. 07-4051)
Ethnic Disparities in the Burden and Treatment of Asthma. Asthma and Allergy Foundation of America and the National Pharmaceutical Council, 2005 January.*

Introduction

DIAGNOSING ASTHMA

A lung function test along with a medical history and physical exam is the most effective way to diagnose asthma. However, this test is difficult to perform in children younger than five years. For children, doctors rely on medical history, signs and symptoms, and physical exams to make a diagnosis. Other tests may include:

- Allergy testing to find out which allergens, if any, affect an individual.
- Bronchoprovocation measures the sensitivity of the airways.
- Spirometry measures how much air a person can breathe in and out. It also measures how fast a person can blow air out.
- Testing can reveal other diseases with the same symptoms as asthma, such as reflux disease, vocal cord dysfunction, or sleep apnea.
- A chest x-ray or an EKG (electrocardiogram) can help determine if a foreign object or other disease may be causing symptoms.

TREATMENT

Asthma is a long-term disease that cannot be cured. The goal of asthma treatment is to control the disease. Asthma is treated with two types of medicines: long-term control and quick-relief medicines. Long-term control medicines help reduce airway inflammation and prevent asthma symptoms. Quick-relief, or “rescue,” medicines relieve asthma symptoms that may flare up. An asthma action plan gives guidance on taking medicines properly, avoiding factors that worsen asthma, tracking level of asthma control, responding to worsening asthma, and seeking emergency care when needed.

Source: National Heart, Lung and Blood Institute, National Asthma Education and Prevention Program (2007). Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma, (NHI Publication No. 07-4051)



Introduction

ASTHMA: A MAJOR PUBLIC HEALTH ISSUE

Asthma is widely considered an epidemic in the United States today. Asthma rates are rising for all age groups in urban and rural areas, regardless of race, income, and region of the country. The numbers of doctor's office visits, emergency room visits, and hospitalizations have also increased. The asthma death rate is increasing rapidly and financial costs of asthma are very high. In addition to the medical costs, asthma has enormous social and emotional costs. It affects the quality of life, keeping children out of school and adults out of work. It may limit occupational choices and physical activity.

The public health community and other asthma experts have very limited information about the precise cause of asthma and how to prevent it. Improved scientific understanding of asthma has led to significant improvements in asthma care, and the NAEPP has been dedicated to translating these research findings into clinical practice through publication and dissemination of clinical practice guidelines.

The purpose of this plan is to provide direction and guidance for public health officials, health care professionals, public policy experts, environmentalists and other members of the education, health and medical community who are concerned about asthma in Mississippi. Due to the changing needs of asthma and the growth and progress of the partnerships, the Mississippi Asthma Program and the partnerships are continually monitoring the burden of asthma to develop new strategies and implement evidence based interventions to be the most effective in reducing the burden of asthma in Mississippi.

Source: National Heart, Lung and Blood Institute, National Asthma Education and Prevention Program (2007). Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma, (NHL Publication No. 07-4051)



Introduction

KEY POINTS

- Asthma is a chronic (long-term) lung disease that inflames and narrows the airways and makes them more reactive to certain substances breathed in. The exact cause of asthma isn't known.
- Asthma affects people of all ages, but it most often starts in childhood. In the United States, more than 22 million people are known to have asthma. Nearly six million of these people are children.
- Asthma causes recurring periods of wheezing (a whistling sound when you breathe), chest tightness, shortness of breath, and coughing. The coughing often occurs at night or early in the morning.
- Sometimes symptoms are mild and go away on their own or after minimal treatment with an asthma medicine. Other times, the symptoms continue to get worse. When symptoms get more intense and/or additional symptoms appear, this is an asthma attack.
- It's important to treat asthma symptoms when you first notice them. This will help prevent the symptoms from worsening and causing a severe attack. Severe asthma attacks may require emergency care, and they can cause death.
- The doctor will diagnose asthma based on medical history, a physical exam, and results from tests. Asthma is difficult to diagnose in children younger than five years old.
- There's no cure for asthma. Asthma is a long-term disease that requires long-term care. Successful asthma treatment requires individuals to take an active role in managing asthma. Learn about self management, get ongoing care, and watch for signs that asthma symptoms are getting worse.
- The goal of asthma treatment is to control the disease by following the individualized asthma action plan, taking asthma medicines as prescribed, learning what things make asthma worse and taking steps to avoid exposure to them, tracking the level of asthma control, and responding quickly to worsening symptoms.
- Asthma is treated with two types of medicines: long-term control medicines and quick-relief medicines. Medication is administered through an inhaler. This device allows the medicine to go into the lungs.
- The amounts and types of medicine to treat asthma depend on an individual's level of control. Keeping asthma well controlled is determined by adherence to the individual's asthma action plan. This may change over time.
- Call 9-1-1 if you have trouble walking/talking due to shortness of breath, or lips or fingernails are blue.
- Track asthma symptoms by using a peak flow meter, and getting regular asthma checkups. Contact doctor if asthma symptoms get worse.
- Some aspects of treatment differ for people in certain age groups or those who have special needs.
- Most people who have asthma are able to manage the disease. They have few, if any, symptoms and can live normal, active lives.

Source: http://www.nhlbi.nih.gov/health/dci/Diseases/Asthma/Asthma_KeyPoints.html

National Institutes of Health Asthma Guidelines

NATIONAL INSTITUTES OF HEALTH ASTHMA GUIDELINES

To assist health care professionals in bridging the gap between current knowledge and practice, the NAEPP of the NHLBI, convened to prepare guidelines for the diagnosis and management of asthma. Expert Panel Report 3 (EPR-3): Guidelines for the Diagnosis and Management of Asthma – Full Report, 2007 provides new guidance for selecting treatment based on a patient’s individual needs and level of asthma control. The guidelines emphasize that while asthma can be controlled, the condition can change over time and differs among individuals and by age groups. Thus, it is important to regularly monitor the patient’s level of asthma control so that treatment can be adjusted as needed.

GUIDELINE PRIORITY MESSAGES

Use Inhaled Corticosteroids

Inhaled corticosteroids are the most effective medications for long-term management of persistent asthma, and should be utilized by patients and clinicians as is recommended in the guidelines for control of asthma.

Use Written Asthma Action Plans

All people with asthma should receive a written asthma action plan to guide their self-management efforts.

Assess Asthma Severity

All patients should have an initial severity assessment based on measures of current impairment and future risk in order to determine type and level of initial therapy needed.

Assess and Monitor Asthma Control

At planned follow-up visits, asthma patients should review their level of asthma control with their health care provider based on multiple measures of current impairment and future risk in order to guide clinician decisions to either maintain or adjust therapy.

Schedule Follow-up Visits

Patients who have asthma should be scheduled for planned follow-up visits at periodic intervals in order to assess their asthma control and modify treatment if needed.

Control Environmental Exposures

Clinicians should review each patient’s exposure to allergens and irritants and provide a multi-pronged strategy to reduce exposure to those allergens and irritants to which a patient is sensitive and exposed, that is, that make a patient’s asthma worse.

Source: National Asthma Education and Prevention Program Guidelines Implementation Panel Report: Partners Putting Guidelines Into Action, http://www.nhlbi.nih.gov/guidelines/asthma/gip_rpt.pdf

National Institutes of Health Asthma Guidelines

HIGHLIGHTS OF MAJOR CHANGES IN EPR—3: FULL REPORT 2007

New focus on monitoring asthma control as the goal for asthma therapy and distinguishing between classifying asthma severity and monitoring asthma control.

- Severity: the intrinsic intensity of the disease process. Assess asthma severity to initiate therapy.
- Control: the degree to which the manifestations of asthma are minimized by therapeutic interventions and the goals of therapy are met. Assess and monitor asthma control to adjust therapy.

New focus on impairment and risk as the two key domains of severity and control, and multiple measures for assessment. The domains represent different manifestations of asthma, they may not correlate with each other, and they may respond differently to treatment.

- Impairment: frequency and intensity of symptoms and functional limitations the patient is experiencing currently or has recently experienced.
- Risk: the likelihood of either asthma exacerbations, progressive decline in lung function (or, for children, lung growth), or risk of adverse effects from medication.

Modifications in the stepwise approach to managing asthma long term.

- Treatment recommendations are presented for three age groups (0–4 years of age, 5–11 years of age, and youths ≥ 12 years of age and adults). The course of the disease may change over time; the relevance of different measures of impairment or risk and the potential short- and long-term impact of medications may be age related; and varied levels of scientific evidence are available for these three age groups.
- The stepwise approach expands to six steps to simplify the actions within each step. Previous guidelines had several progressive actions within different steps; these are now separated into different steps.
- Medications have been repositioned within the six steps of care.
- Inhaled corticosteroids (ICSs) continue as preferred long-term control therapy for all ages.
 - Combination of long-acting beta₂-agonist (LABA) and ICS is presented as an equally preferred option, with increasing the dose of ICS in step 3 care, in patients 5 years of age or older. This approach balances the established beneficial effects of combination therapy in older children and adults with the increased risk for severe exacerbations, although uncommon, associated with daily use of LABA.
 - Omalizumab is recommended for consideration for youths ≥ 12 years of age who have allergies or for adults who require step 5 or 6 care (severe asthma). Clinicians who administer omalizumab should be prepared and equipped to identify and treat anaphylaxis that may occur.

Source: Expert Panel Report 3—Guidelines for the Diagnosis and Management of Asthma: www.nhlbi.nih.gov/guidelines/asthma

National Institutes of Health Asthma Guidelines

New emphasis on multifaceted approaches to patient education and to the control of environmental factors or comorbid conditions that affect asthma.

- Patient education for a partnership is encouraged in expanded settings.
 - Patient education should occur at all points of care: clinic settings (offering separate self-management programs as well as integrating education into every patient visit), emergency departments (EDs) and hospitals, pharmacies, schools and other community settings, and patients' homes.
 - Provider education should encourage clinician and health care systems support of the partnership (e.g., through interactive continuing medical education, communication skills training, clinical pathways, and information system supports for clinical decision making).
- Environmental control includes several strategies:
 - Multifaceted approaches to reduce exposures are necessary; single interventions are generally ineffective.
 - Consideration of subcutaneous immunotherapy for patients who have allergies at steps 2–4 of care (mild or moderate persistent asthma) when there is a clear relationship between symptoms and exposure to an allergen to which the patient is sensitive. Clinicians should be prepared to treat anaphylaxis that may occur.
 - Potential benefits to asthma control by treating comorbid conditions that affect asthma.

Modifications to treatment strategies for managing asthma exacerbations. These changes:

- Simplify the classification of severity of exacerbations.
- Encourage development of pre-hospital protocols for emergency medical services to allow administration of albuterol, oxygen, and, with medical oversight, anticholinergics and oral systemic corticosteroids.
- Modify recommendations on medications:
 - Add levalbuterol
 - Add magnesium sulfate or heliox for severe exacerbations unresponsive to initial treatments.
 - Emphasize use of oral corticosteroids. Doubling the dose of ICS for home management is not effective
 - Emphasize that anticholinergics are used in emergency care, not hospital care
 - Add consideration of initiating ICS at discharge

The complete version of the most recent NHLBI guidelines is available on the web at:
<http://www.nhlbi.nih.gov/guidelines/index.htm>

National Asthma Data

NATIONAL ASTHMA DATA

Asthma is one of this country's most common chronic conditions. Asthma affects approximately 23 million people including 6.2 million children and is one of the leading causes of school absenteeism, accounting for more than 14 million missed school days annually. Children with asthma miss an average of twice as many school days as other children. According to the United States Environmental Protection Agency, asthma is the most common long term childhood disease. Asthma accounts for nearly 17 million physician office and hospital visits, and nearly 2 million emergency department visits each year. According to the CDC, asthma is the third ranking cause of hospitalizations among those younger than 15 years of age. Annual expenditures for health and lost productivity due to asthma are estimated at nearly \$20 billion, according to the NHLBI.



Mississippi Asthma Data

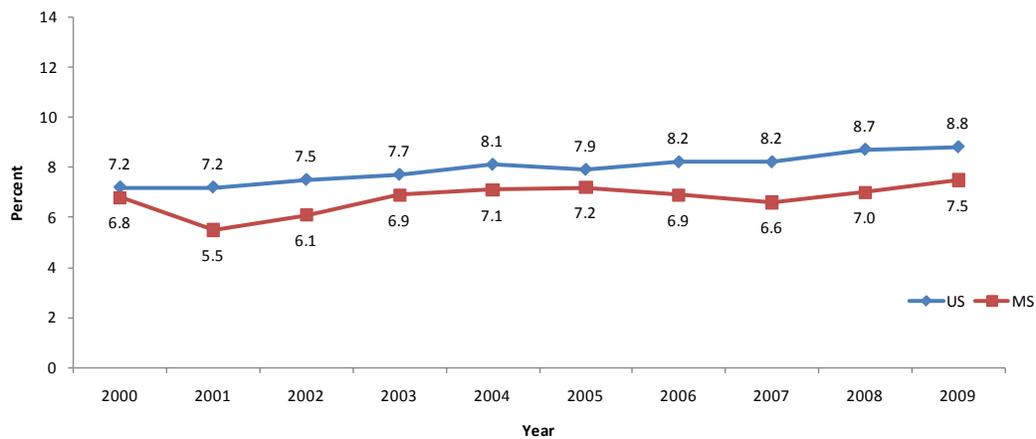
MISSISSIPPI ASTHMA DATA

ASTHMA PREVALENCE

The prevalence of a chronic disease, such as asthma, is an indicator of the burden and distribution of the disease. In Mississippi, the prevalence of asthma is estimated from telephone surveys of randomly selected Mississippi residents. The prevalence for current asthma among children and adults has been measured from the Mississippi BRFSS.

- Approximately 76,710 (10.4%) Mississippi children ages 0-17 years and 163,015 (7.5%) Mississippi adults ages 18 and above currently have asthma.
- The prevalence of asthma is significantly higher among adult females than adult males.
- The prevalence of asthma is significantly higher among male children than female children.
- The prevalence of asthma is significantly higher among black children than white children.
- Adults without a high school diploma and with an annual income less than \$25,000 have a higher prevalence of current asthma than those with higher levels of education and income.

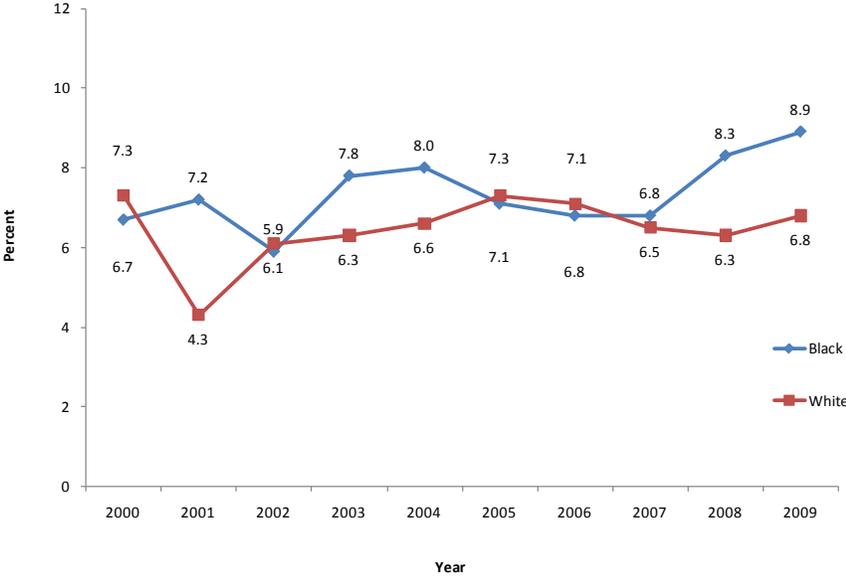
FIGURE I.1.
ADULT CURRENT ASTHMA PREVALENCE, MISSISSIPPI VS. U.S., 2000-2009



Source: Behavioral Risk Factor Surveillance System

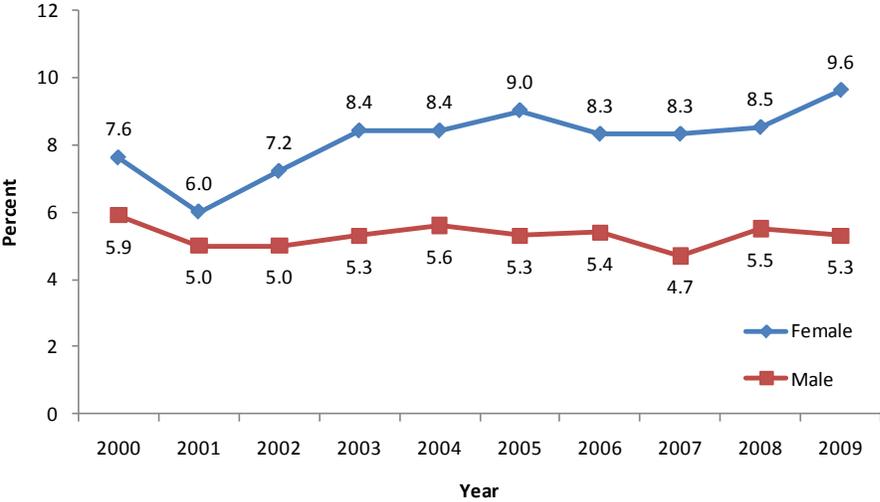
Mississippi Asthma Data

FIGURE I.2. ADULT CURRENT ASTHMA PREVALENCE BY RACE, MISSISSIPPI, 2000-2009



Source: Behavioral Risk Factor Surveillance System

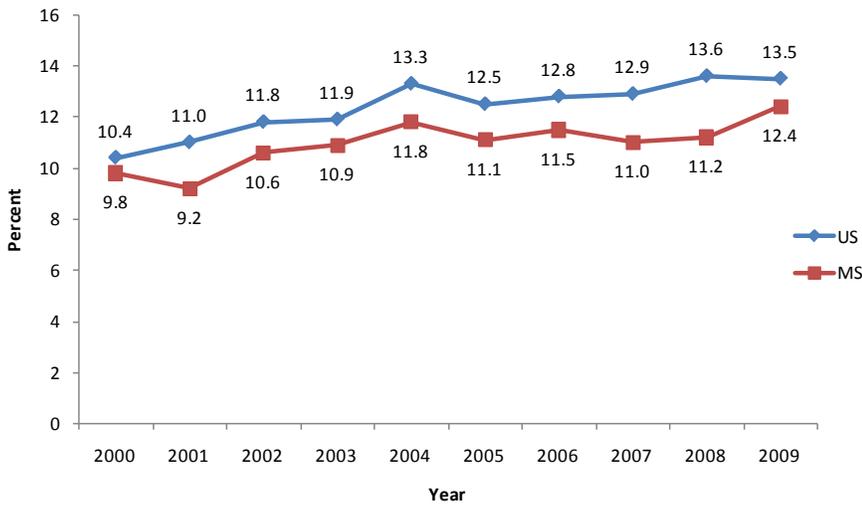
FIGURE I.3. ADULT CURRENT ASTHMA PREVALENCE BY SEX, MISSISSIPPI, 2000-2009



Source: Behavioral Risk Factor Surveillance System

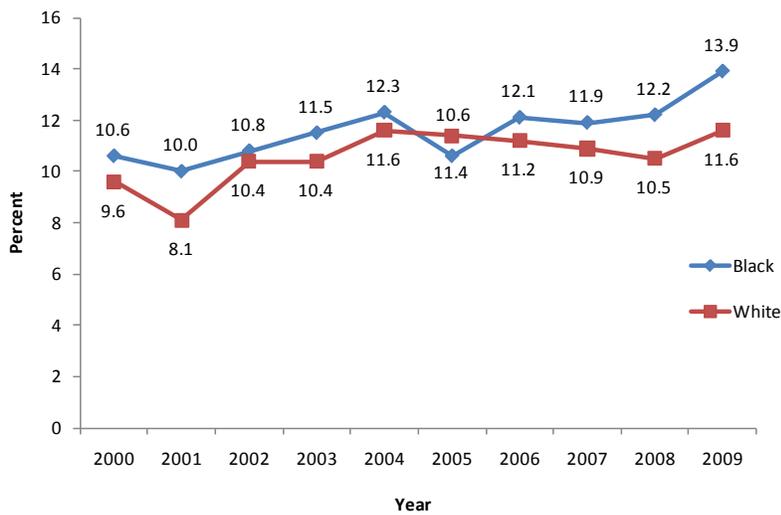
Mississippi Asthma Data

FIGURE I.4. ADULT LIFETIME ASTHMA PREVALENCE, MISSISSIPPI VS. U.S., 2000-2009



Source: Behavioral Risk Factor Surveillance System

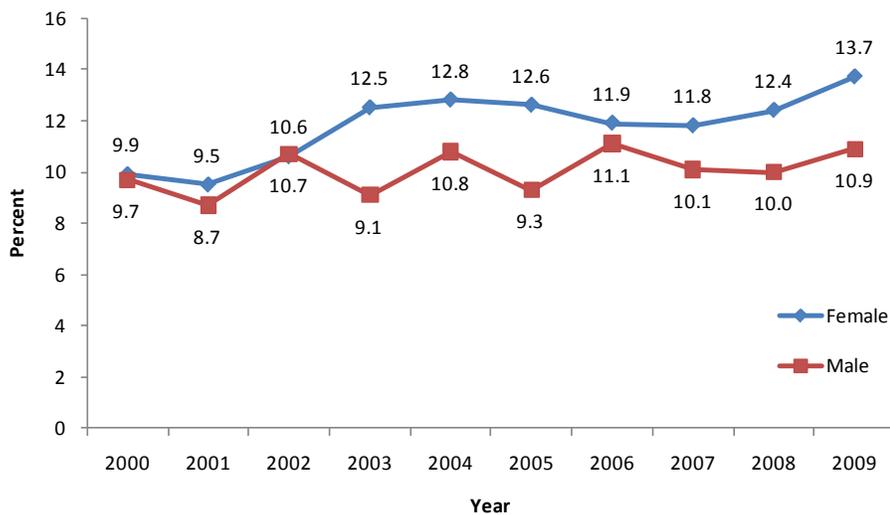
FIGURE I.5. ADULT LIFETIME ASTHMA PREVALENCE BY RACE, MISSISSIPPI, 2000-2009



Source: Behavioral Risk Factor Surveillance System

Mississippi Asthma Data

FIGURE I.6. ADULT LIFETIME ASTHMA PREVALENCE BY SEX, MISSISSIPPI, 2000-2009



Source: Behavioral Risk Factor Surveillance System

ASTHMA SYMPTOMS AND DISEASE MANAGEMENT

Asthma signs and symptoms may include wheezing, coughing, difficulty breathing, and chest tightness. Asthma symptoms occur when an individual with asthma is exposed to certain triggers, such as allergens (e.g., pet dander, pollen, and mold) or irritants (e.g., tobacco smoke and strong odors). These symptoms can vary within an individual by time of day and can change throughout one's lifetime. Fortunately, asthma symptoms can be controlled, allowing many people with asthma to live healthy, active lives. However, poor asthma management can result in frequent symptoms, activity limitations, and decreased quality of life.

- Approximately 57% of adults with asthma had an attack in the past 12 months.
- Approximately 19% of adults with asthma experienced asthma symptoms every day in the past 30 days.
- Nearly one-fifth (18.3%) of adults with asthma reported difficulty sleeping because of asthma on 5 or more days in the past 30 days.

Source: The Burden of Asthma in Mississippi: Asthma Surveillance Summary Report, 2009

Mississippi Asthma Data

ASTHMA COMORBIDITIES

Asthma prevalence is related to comorbid conditions and behaviors, such as overweight/obesity and smoking.

- Asthma prevalence is higher among adults who are overweight or obese.
- Asthma prevalence is higher among adults who are current smokers.

HEALTH CARE ACCESS AND UTILIZATION

Health care access is the ability to obtain medical care, and is typically measured by indicators of health care coverage and the presence of a primary care provider. Health care utilization is the use of medical care, including routine preventive visits, emergency department (ED) visits, and hospitalizations. Access to health care and routine check-ups are essential to proper asthma management. The National Asthma Education and Prevention Program (NAEPP) recommends primary care visits at least every six months, to assess and monitor asthma symptoms and modify management plans as needed. However, asthma-related ED visits and hospitalizations are an indication of poorly controlled asthma. These acute care visits are often preventable through appropriate medication use and avoidance of identified triggers.

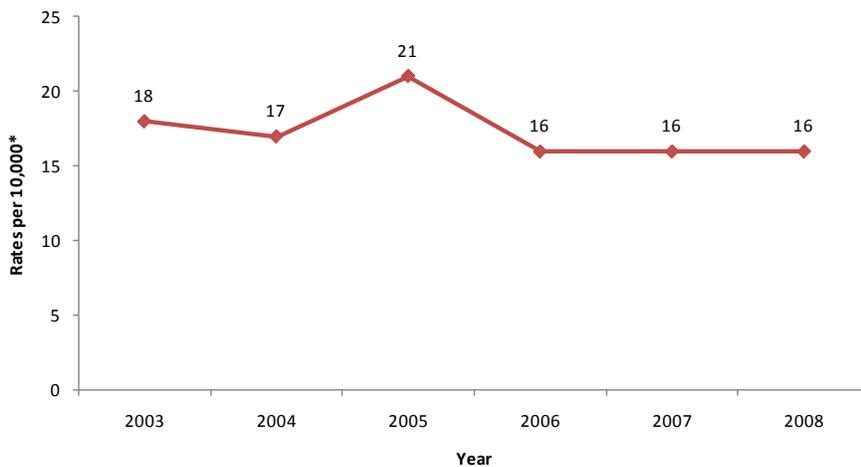
HOSPITAL DISCHARGES WITH ASTHMA AS THE FIRST LISTED DIAGNOSIS

- Asthma hospital discharge rates are higher among black Mississippians than among white Mississippians.
- Male children have a higher asthma hospital discharge rate than female children.
- Adult females have a higher asthma hospital discharge rate than adult males.
- Children 0-4 years have the highest asthma hospital discharge rates.
- Hospital discharges with asthma as the first listed diagnosis peak in the winter months of November, December and January.
- At-risk based asthma hospital discharge rates do not significantly differ among demographic groups, indicating that differences in population-based rates may be driven by differences in disease prevalence.

Source: *The Burden of Asthma in Mississippi: Asthma Surveillance Summary Report, 2009*; MSDH, *Asthma, Obesity, and Exercise Fact Sheet, 2004-2006*; MSDH, *Asthma Surveillance Summary: Emergency Department Visits, 2008*

Mississippi Asthma Data

FIGURE I.7. ESTIMATED ASTHMA HOSPITALIZATIONS, MISSISSIPPI, 2003-2008



Source: *Mississippi Asthma Hospital Discharge Database, 2003-2008*

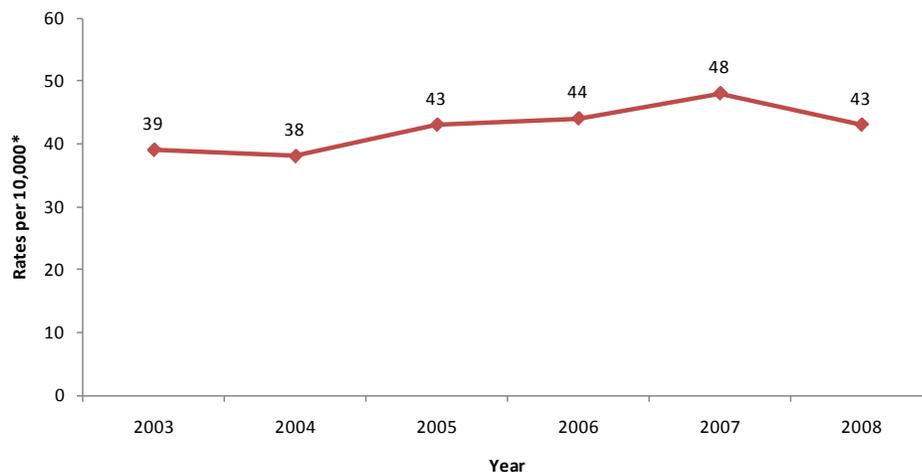
EMERGENCY DEPARTMENT DISCHARGES WITH ASTHMA AS THE FIRST LISTED DIAGNOSIS

- Asthma emergency department discharge rates increased by 23% from 2003 to 2008.
- Asthma emergency department discharge rates are more than four times higher among black Mississippians compared to white Mississippians.
- Male children have a higher asthma emergency department discharge rate than female children.
- Adult females have a higher asthma emergency department discharge rate than adult males.
- Children ages 0-4 years have the highest asthma emergency department discharge rate of any age group.
- Asthma emergency department discharges peak in the late autumn and early winter months of October and December.
- At-risk based asthma emergency department discharge rates do not significantly differ among demographic groups, indicating that differences in population-based rates may be driven by differences in disease prevalence.

Source: *The Burden of Asthma in Mississippi: Asthma Surveillance Summary Report, 2009; MSDH, Asthma Surveillance Summary: Asthma Hospitalizations, 2008*

Mississippi Asthma Data

FIGURE 1.8. ESTIMATED ASTHMA EMERGENCY DEPARTMENT DISCHARGE RATES, MISSISSIPPI, 2003-2008



Source: Mississippi Asthma Hospital Discharge Database; 2003-2008

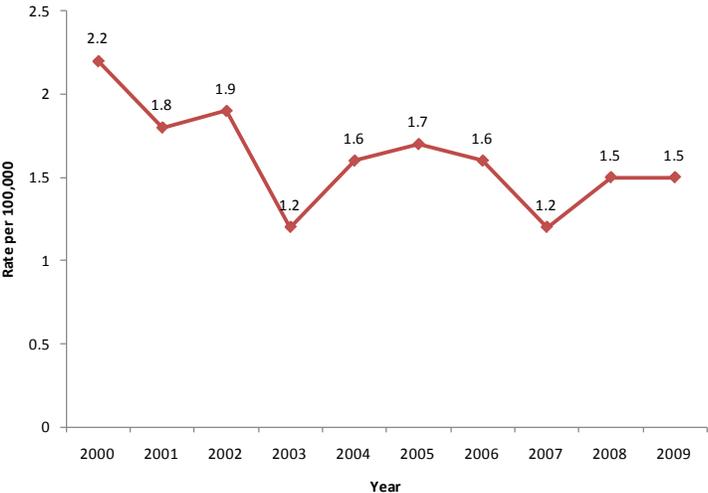
ASTHMA MORTALITY

Asthma-related deaths represent the most extreme result of asthma and are usually related to improper control and treatment of the disease. An asthma-related death is defined as a death with asthma listed as the primary cause. The information on death was obtained from official death certificates submitted to the MSDH as required by statute and regulation. Responsibility for the preparation of death certificates was shared by hospitals, nursing homes and other institutions which provide care or custody, such as funeral homes, physicians, medical examiners, and medical examiner investigators.

The following figures include mortality rates per 100,000 population. All rates are age-adjusted using the United States 2000 Standard Population.

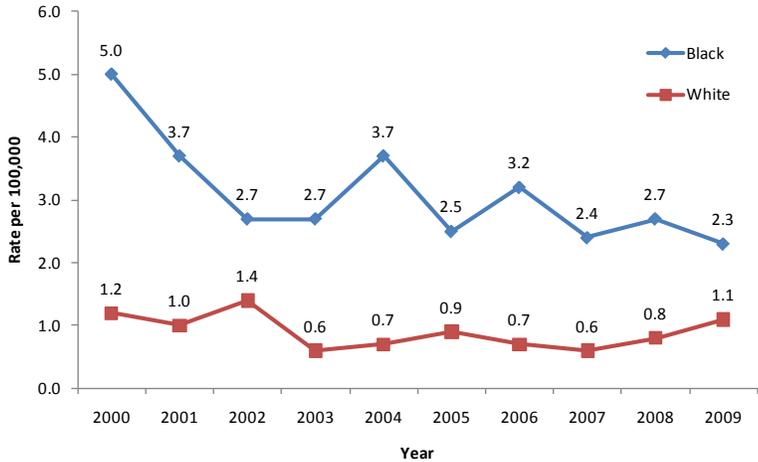
Mississippi Asthma Data

FIGURE I.9. RATE OF ASTHMA DEATHS PER 100,000 POPULATION BY YEAR, MISSISSIPPI, 2000-2009



Source: Mississippi Vital Statistics

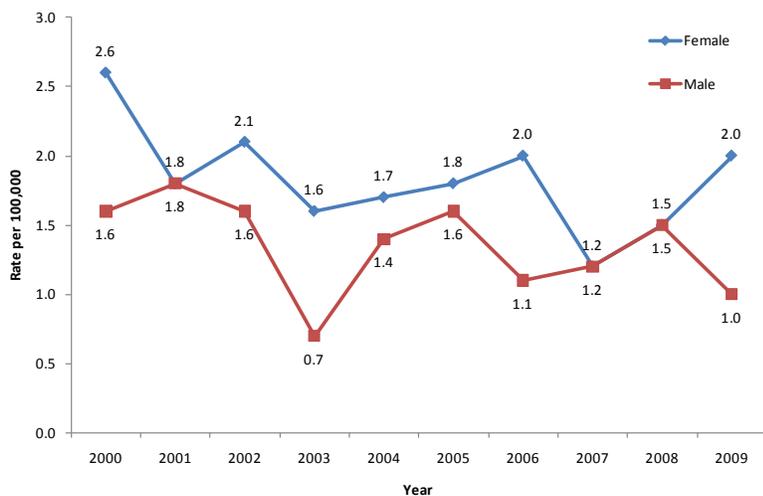
FIGURE I.10. RATE OF ASTHMA DEATHS PER 100,000 POPULATION BY YEAR AND RACE, MISSISSIPPI, 2000-2009



Source: Mississippi Vital Statistics

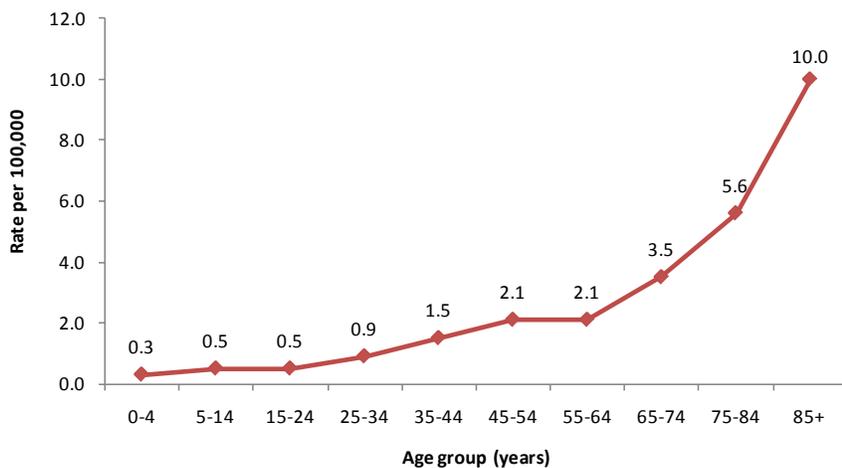
Mississippi Asthma Data

FIGURE I.11. RATE OF ASTHMA DEATHS PER 100,000 POPULATION BY YEAR AND SEX, MISSISSIPPI, 2000-2009



Source: Mississippi Vital Statistics

FIGURE I.12. RATE OF ASTHMA DEATHS PER 100,000 POPULATION BY AGE GROUP, MISSISSIPPI, 2003-2009*



*Aggregate data used to increase reliability of estimates

Source: Mississippi Vital Statistics

Mississippi Evaluation Plan

MISSISSIPPI ASTHMA PROGRAM'S EVALUATION PLAN

Program evaluation is important and necessary to improve program operations, measure program achievement or progress, demonstrate accountability to stakeholders, manage program resources, focus program priorities, and advocate for the program. With asthma prevalence increasing in our state, the MSDH determined that a coordinated approach to the problem was necessary. Effective evaluation will allow the asthma program to make necessary modifications as it evolves and give it the needed flexibility to respond to emerging issues and other circumstances.

The CDC requested that each state that receives funds from the Addressing Asthma from a Public Health Perspective cooperative agreement funds, evaluate at least one initiative from each of the following components: Interventions, Partnerships, and Surveillance. The guidance and range of these evaluations were to be guided by the CDC publication, Learning and Growing through Evaluation.

The purpose and intent of the Mississippi Asthma Program's Evaluation Plan is to provide a systematic way to improve and account for public health actions by involving procedures that are useful, feasible, ethical, and accurate.

The CDC has specific guidelines under which its funded organizations should evaluate. These guidelines are called "The Framework for Program Evaluation in Public Health." The framework is composed of six steps that must be taken in order to complete any evaluation. The steps are as follows:

Step 1: Engaging stakeholders

Step 2: Describe the program

Step 3: Focus the evaluation design

Step 4: Gather credible evidence

Step 5: Justify conclusions

Step 6: Ensure use and share lessons learned

Mississippi Evaluation Plan

At the completion of the Five-Year Evaluation, Mississippi's Asthma Program will be able to identify the many barriers and gaps that may exist and are stifling the full amount of success that the program could achieve. The Mississippi Asthma Program's Five-Year Evaluation Plan will allow for the collection and analysis of data throughout the program's duration so that when the evaluations are completed, program staff, stakeholders, and any other entity that may benefit from its findings will have access to the findings as we attempt to reduce the burden of asthma in Mississippi.

PROCESS EVALUATION

This evaluation component involves tracking progress towards objectives and activities designed to bring about changes directly linked to the program's goals. The process evaluation will determine:

- The extent to which the plan is being implemented as intended;
- The degree to which objectives are progressing toward completion over the course of the five-year plan, including the assessment of strengths, weaknesses and lessons learned during plan implementation; and
- How the program appropriately focuses asthma interventions towards priority populations.

OUTCOME EVALUATION

The outcome evaluation determines whether changes are occurring and what their impact on the state might be. Intermediate outcomes may include community changes such as new services or policies or increased knowledge. The outcome evaluation will:

- Determine changes in behavior, services and policies that have occurred as a result of the plan;
 - Assess the inroads in addressing health disparities;
 - Measure increases in public awareness of asthma (e.g., its signs and symptoms) as a result of educational interventions;
 - Track the changes occurring in the state's asthma disease burden and risk factors over time (as measured primarily through vital statistics, hospital discharge data, and the BRFSS); and
 - Track the extent to which changes in the outcomes contribute to achieving the Healthy People 2020 objectives.
-

Supporting Frameworks

SUPPORTING FRAMEWORKS

Mississippi State Asthma Plan relies on two supporting frameworks: The Social Ecological Model and the EPA's System-Based Model for Creating and Sustaining an Effective Asthma Program.

THE SOCIAL ECOLOGICAL MODEL

The Social Ecological Model recognizes that improving asthma control is not the sole responsibility of the person with asthma. Instead, many factors affect a person's asthma: the quality of health care they receive, the environmental exposures in the home, school, child care or work environment, the air they breathe and their own individual behaviors. To truly reduce disparities in asthma outcomes and improve the quality of life for all people with asthma, we need to take collective action on multiple levels (individual, family, organizations, community, and society) and in multiple settings (health care clinics, homes, schools, child care settings, work, and outdoor).



Source: ICADV, *Public Health Strategy*, retrieved February 2011 from <http://www.icadvinc.org/prevention/for-service-providers/public-health-strategy/>

Individual level influences are personal factors (i.e. age, education and income) or characteristics that influence behaviors such as knowledge, attitudes, beliefs and personality traits.

Interpersonal relationship level influences are factors that increase risk due to relationships with peers and family members.

Community level influences are factors that increase risk based on individual experiences and relationships with community and social environments such as schools, workplaces, and neighborhoods.

Societal level influences are local, state, and federal policies and laws that regulate or support healthy actions.

Source: Adapted from Centers for Disease Control and Prevention: <http://www.cdc.gov/ncipc/DELTA/default.htm>.

Supporting Frameworks

THE SYSTEM FOR DELIVERING HIGH-QUALITY ASTHMA CARE

The System for Delivering High-Quality Asthma Care is a conceptual framework that identifies the core elements of successful asthma programs and the processes that drive their implementation, continuous improvement, and sustainability. The System is flexible and any asthma program, regardless of its size, institutional home (e.g., health plan, health care provider, community program), budget, target community, or level of development, can use the System to guide its work.



Building the System

- Ensure Mission-Program Alignment
- Build Evaluation in From the Start
 - Establish a process to collect the data you need to track program results
- Let the Data Guide Program Planning Design, and Implementation
- Conduct Needs-Based Planning
 - Seek input from the community
- Start Small to Get Big—Pilot test new approaches
- Align Incentives with Goals
- Focus on the Resource Strategy at Every Step

Evaluating the System

- Evaluate Program Implementation
 - Use data to evaluate whether program is being implemented as planned and to identify what works so you can continuously find ways to improve program delivery
- Evaluate Program Impact
- Use Evaluation Data to Demonstrate the Business Case
 - Assign costs to the program's elements and its outcomes

Sustaining the System

- Use Data to Demonstrate Program's Value
 - Demonstrate the need for the program
 - Demonstrate the program's impact
- Be Visible: Funders Support What They Know
- Make it Easy to Support the Program
 - Let funders support individual program elements if they are not ready to support the entire program
- Promote Institutional Change for Sustainability

Source: AsthmaCommunityNetwork.org

Healthy People 2020

HEALTHY PEOPLE 2020

The CDC National Asthma Control Program aims to reduce the number of deaths, hospitalizations, emergency department visits, school or work days missed, and limitations of activities due to asthma.

Healthy People 2020 Objectives

- Reduce hospitalizations for asthma.
- Reduce hospital emergency department visits for asthma.
- Reduce activity limitations among persons with current asthma.
- Reduce asthma deaths.
- Reduce the number of school- or workdays missed among persons with current asthma.
- Increase the proportion of persons with current asthma who receive appropriate asthma care according to National Asthma Education and Prevention Program (NAEPP) guidelines.

(See Appendix 1 for outline of Healthy People 2020 Goals and Objectives related to asthma)



Data and Surveillance

DATA AND SURVEILLANCE

The first step in addressing asthma as a public health problem is to establish a surveillance system. Public health surveillance is the ongoing, systematic collection, analysis, interpretation, and dissemination of health data essential to the planning, implementation, and evaluation of public health practice, closely integrated with the timely dissemination of these data to those who need to know. Surveillance is important because knowledge of the epidemiologic aspects of asthma (e.g., geographic distribution, identification of groups with higher prevalence and mortality) is crucial to planning, implementation, and evaluation of programs to address the burden of asthma in the state.

Data currently collected to support the MSDH Asthma Program includes:

- Behavioral Risk Factor Surveillance System (BRFSS)
- Youth Risk Behavior Survey (YRBS)
- Mississippi Asthma Program's Hospital Discharge Database
- Mississippi Vital Statistics

The surveillance system includes data on asthma mortality, prevalence, symptoms, disease management, comorbidities, and health care access and utilization.



Data and Surveillance

GOALS AND OBJECTIVES

GOAL 1: MAINTAIN AND EXPAND THE CURRENT STATEWIDE ASTHMA SURVEILLANCE SYSTEM.

ANTICIPATED OUTCOME: BY AUGUST 2014, RESEARCH ACTIVITIES RELATED TO ASTHMA WILL HAVE INCREASED.

OBJECTIVE 1: *By December 2012, improve asthma surveillance by identifying gaps in data and determining new ways to collect data.*

TASK 1: By August 2011, identify key users of asthma data and determine their gaps and needs.

TASK 2: By December 2011, identify interventions and programs that will be tracked to obtain statewide outcomes.

TASK 3: By August 2012, identify key partners conducting asthma studies in Mississippi.

OBJECTIVE 2: *By December 2011, collect asthma hospitalizations data from all Mississippi hospitals utilizing a web-based surveillance system.*

TASK 1: By May 2011, the MSDH Asthma Program will determine the status of the web-based asthma surveillance system testing.

OBJECTIVE 3: *Between 2011 and 2015, update and disseminate asthma data from the surveillance system.*

TASK 1: By August 2013, update burden document.

TASK 2: Between 2011 and 2015, ensure public access to current asthma surveillance data through websites, bulletins, fact sheets, reports and presentations.

TASK 3: Between January 2011 and August 2015, disseminate results to key targeted groups in a timely manner in newsletters, fact sheets, statistical briefs, and surveillance reports.

GOAL 2: ANALYZE AND INTERPRET ASTHMA SURVEILLANCE DATA TO IDENTIFY DISPARITIES, PRIORITY POPULATIONS, DIRECT PROGRAM INTERVENTIONS, AND EVALUATE PROGRAMS.

ANTICIPATED OUTCOME: BY AUGUST 2015, ASTHMA DISPARITIES ARE HIGHLIGHTED IN ALL SURVEILLANCE REPORTS WITH RECOMMENDATIONS.

OBJECTIVE 1: *By August 2013, collaborate with chronic disease programs to develop a system to collect, analyze and share data.*

TASK 1: By March 2012, educate ACM on the uses of surveillance data in planning and evaluation of asthma activities and interventions.

TASK 2: By August 2012, identify preliminary data needed by local partners.

Data and Surveillance

OBJECTIVE 2: *By August 2012, investigate asthma data collection capacity among Mississippi Schools surveillance system.*

TASK 1: Between April and August 2011, ACM will update and disseminate questionnaire to schools/school districts to collect and analyze asthma data from schools participating in the John D. Bower, MD, School Health Network.

TASK 2: By December 2011, ACM members will develop a brief report of the findings with recommendations to be presented back to ACM and statewide partners.

OBJECTIVE 3: *By December 2012, investigate asthma related data collections capacity among data sources such as Medicaid, Medicare, other insurance providers, and pharmaceutical claims to identify data and fill information gaps.*

TASK 1: By April 2012, ACM members will contact the Commissioner of Insurance to determine data capacity, what data variables may be shared, and identify contacts with Mississippi insurers.

TASK 2: August 2012, ACM members will contact Medicaid and Medicare departments to determine data capacity and what data variables they are willing to share.

TASK 3: By October 2012, will develop a database to house insurance information or establish data linkage agreements.

TASK 4: By December 2012, ACM members will report on data capacity and determine next steps.

GOAL 3: DEVELOP AND SUBMIT AT LEAST FIVE ASTHMA RELATED ARTICLES/POSTER ABSTRACTS TO VARIOUS REVIEWERS.

ANTICIPATED OUTCOME: BY AUGUST 2015, THE MISSISSIPPI ASTHMA PROGRAM WILL PUBLISH AT LEAST TWO ARTICLES/MANUSCRIPTS AND PROVIDE THREE PRESENTATIONS REGARDING ASTHMA IN MISSISSIPPI.

OBJECTIVE 1: *By August 2015, the ACM will host an asthma symposium to allow ACM members, state and local partners to share data analysis, current interests, reports and key findings to foster communication among researchers.*

TASK 1: Between January 2011 and August 2015, the ACM Coordinator will encourage ACM members to publish asthma related information in peer reviewed journals and to present at professional meetings.

TASK 2: Between January 2011 and August 2015, ACM members will report any asthma related journal submissions or asthma presentations to ACM Coordinator.

Advocacy and Policy

ADVOCACY AND POLICY

Advocacy is the act or process of advocating or supporting a cause or proposal. A policy is a defined course or method of action selected from among alternatives and in light of given conditions to guide and determine present and future decisions; a high level overall plan embracing the general goals and acceptable procedures, especially of a government body. Establishing new policies often involves collaborating with diverse constituencies, raising public awareness, identifying key stakeholders and advocates and taking advantage of windows of opportunity.



GOAL 1: EDUCATE POLICY MAKERS AND DEVELOP POLICIES THAT PROMOTE THE IMPLEMENTATION OF INTERVENTIONS TO DECREASE THE BURDEN OF ASTHMA IN MISSISSIPPI.

ANTICIPATED OUTCOME: BY AUGUST 2015, THE ACM WILL HAVE COMPLETED AT LEAST THREE ADVOCACY ACTIVITIES/INTERVENTIONS RELATED TO THEIR SUBJECT AREA.

OBJECTIVE 1: *By August 2011, the advocacy and policy workgroup will identify three methods to make annual contact to provide ongoing support to committees implementing advocacy activities.*

TASK 1: By January 2011, develop short training on legislation for ACM members.

TASK 2: By March 2011, the advocacy and policy workgroup will identify key advocacy groups with complementary purposes.

OBJECTIVE 2: *By April 2012, the advocacy and policy workgroup will have completed at least one advocacy activity/intervention related to their subject area.*

TASK 1: By March 2011, the advocacy and policy workgroup will identify areas of need for policy change.

TASK 2: By November 2011, the advocacy and policy workgroup will have identified strengths and weaknesses of potential legislation.

TASK 3: By January 2012, the advocacy and policy workgroup will increase awareness among legislators.

Advocacy and Policy

GOAL 2: PROMOTE EFFECTIVE ASTHMA MANAGEMENT IN SCHOOLS.

ANTICIPATED OUTCOME: BY AUGUST 2015, 90% OF SCHOOLS AND SCHOOL DISTRICTS WILL BE IN COMPLIANCE WITH STATE ASTHMA LAWS AND POLICIES.

OBJECTIVE 1: *By August 2014, 80% of schools and school districts will be in compliance with the Comprehensive School Asthma Law §41-79-31, MISSISSIPPI CODE OF 1972, which requires schools to take certain actions regarding students with asthma.*

TASK 1: By August 2012, establish comprehensive asthma protocols in school districts to ensure the health and well being of students with asthma inside the school facility.

TASK 2: By August 2013, disseminate asthma protocol/compliance materials to schools.

TASK 3: By December 2014, conduct survey to identify compliance of schools and school districts.

OBJECTIVE 2: *Enforce the Healthy Student Physical Activity state law for grades K-6 that requires 30 minute of physical activity.*

TASK 1: By August 2013, collaborate with medical and other health care providers who use BMI to disseminate physical activity and asthma related information.

TASK 2: By August 2014, collaborate with school nurses and other health care providers to increase the use of counseling and education regarding obesity and asthma.

TASK 3: By August 2014, collaborate with key partners to develop and disseminate model nutrition and physical activity guidelines and policies for schools as it relates to asthma management.

TASK 4: By December 2014, ACM will identify ways to support capital improvement projects that increase opportunities for physical activity in areas with poor outdoor air qualities.

GOAL 3: ENCOURAGE VARIOUS ORGANIZATIONS TO ESTABLISH AND/OR ENFORCE POLICIES THAT ENHANCE CARE OF PEOPLE WITH ASTHMA.

ANTICIPATED OUTCOME: BY AUGUST 2015, DISSEMINATE AN OCCUPATIONAL ASTHMA TOOLKIT.

OBJECTIVE 1: *By December 2015, identify existing policies and resources to identify and control asthma triggers in the work place.*

TASK 1: By August 2013, create a state profile of risk factors for work related asthma.

TASK 2: By December 2013, identify work sites with risk factors for occupational asthma.

TASK 3: By December 2013, disseminate existing policies and resources to at risk work places.

TASK 4: By August 2014, provide education on strategies to change policies and enhance work site environments.

OBJECTIVE 2: *By December 2014, establish a standardized asthma education training program to address occupational related asthma and tools to establish asthma friendly work environments.*

TASK 1: By August 2013, collaborate with asthma program epidemiologist to determine the burden of

Advocacy and Policy

occupational related asthma.

TASK 2: By August 2013, identify consistent educational messages and existing protocols to address occupational related asthma.

TASK 3: By December 2013, identify five workplace wellness programs to pilot occupational asthma awareness program.

OBJECTIVE 3: *By December 2013, MSDH, ALA and ACM will collaborate with planning, building inspection and other stakeholders to increase legal advocacy services and programs for tenants with asthma who live in unhealthy housing conditions.*

TASK 1: By August 2012, identify existing projects and partners working to improve asthma control among children and others currently residing in multifamily housing.

TASK 2: By December 2012, implement program that will address building and inspection codes that contribute to the improvement of indoor air quality.

TASK 3: By August 2013, provide education on strategies to change policies and advocate for healthy housing conditions.

GOAL 4: PROMOTE A STATEWIDE SMOKEFREE POLICY.

ANTICIPATED OUTCOME: BY AUGUST 2015, MISSISSIPPI LEGISLATURE WILL PASS A STATEWIDE SMOKEFREE POLICY.

OBJECTIVE 1: *Beginning 2015, support advocacy efforts that promote comprehensive local ordinances and comprehensive statewide law regarding smokefree public places.*

TASK 1: By December 2011, collaborate with partner organizations and community advocates to submit educational editorial pieces in support of smokefree legislation.

TASK 2: By August 2012, identify civic and community organizations in target cities for which partner organizations and ACM members can make presentations about the smokefree ordinance and required activities.

TASK 3: By August 2012, ACM members will distribute smokefree air signage and literature to municipalities.

TASK 4: By 2014, increase the number of comprehensive smokefree air ordinance passed by municipalities.

OBJECTIVE 2: *By August 2015, create an ongoing statewide media campaign to increase awareness of various factors that impact people with asthma.*

TASK 1: By August 2012, collaborate with partners to identify human interest stories for use in media and legislative outreach.

TASK 2: By March 2011, ACM members will create message specifically for target populations in Mississippi.

TASK 3: By December 2012, MSDH, ALA and ACM will produce a media campaign related to asthma.

Advocacy and Policy

GOAL 5: INVESTIGATE POTENTIAL POLICY CHANGE THAT RELATES TO MEDICATION COMPLIANCE AND DEPOSITION TO IMPROVE QUALITY OF LIFE AMONG PEOPLE WITH ASTHMA ACCORDING TO NHLBI, NAEPP EPR 3.

ANTICIPATED OUTCOME: BY AUGUST 2015, AN ASTHMA COMPREHENSIVE CARE BENEFIT IS DEFINED AND FINANCED WITHIN THE MEDICAL SYSTEM.

OBJECTIVE 1: *By August 2015, increase the number of asthma patients with asthma related insurance coverage.*

TASK 1: By August 2012, convene an advisory committee of insurers, physicians and certified asthma educators to discuss an outreach plan that includes a list of actions to be implemented and indicators to be evaluated for ensuring insurance coverage for patients with asthma.

TASK 2: By August 2013, the ACM will disseminate documentation that supports the clarification of asthma benefits coverage and Medicaid coverage information.

TASK 3: By August 2014, the ACM will develop recommendations for a comprehensive care benefit package for patients with asthma in accordance with model benefits packages for essential asthma services.

OBJECTIVE 2: *By August 2015, advocate that physicians prescribe spacers in conjunction with MDI's.*

TASK 1: By August 2013, disseminate document to physicians regarding patient's rights to state health plan coverage for asthma drugs, devices and services.

TASK 2: By December 2013, develop and disseminate document to promote public awareness of patient rights regarding state health plan coverage for asthma drugs, devices and services.

TASK 3: By January 2014, introduce legislation to require physicians to prescribe spacers with MDI's.

Health Care

HEALTH CARE

Health care providers are the first line of defense when it comes to diagnosing and treating asthma patients. Failure to control asthma inflicts a considerable burden on patients, families, and health care systems. For health care professionals who deliver care to individuals with asthma and their families, unplanned acute-care visits for asthma also disrupt practice schedules, and shift patient care from primary care settings to emergency rooms and hospital beds.

In the current system of asthma care, patient may not receive adequate education due to the health care provider's lack of time during the visit, or because a certified asthma educator does not provide education. There can also be a lack of integration between the primary care office and pharmacy, school, work, urgent care clinics, emergency department, inpatient settings and specialists. All of these factors can interfere with the care someone with asthma receives, thus impacting the management of their asthma. Increasing awareness of asthma symptoms, available treatments and treatment goals among patients and/or caregivers, school teachers, school nurses, coaches, and the general public is crucial to improving health care related to asthma in Mississippi.



Health Care

GOAL 1: IMPROVE HEALTH CARE ACCESS, UTILIZATION AND QUALITY.

ANTICIPATED OUTCOME: BY AUGUST 2015, MSDH, ALA AND THE ACM WILL PROVIDE LEADERSHIP AND COLLABORATE WITH HEALTH CARE PROVIDERS ON SYSTEM CHANGE INTERVENTIONS RESULTING IN OPTIMAL ASTHMA DIAGNOSIS, TREATMENT AND MANAGEMENT CONSISTENT WITH NATIONAL GUIDELINES.

OBJECTIVE 1: *By August 2015, health care provider's adherence to NAEPP guidelines will increase by 30%.*

TASK 1: By December 2012, establish baseline for the number of health care providers adhering to and or utilizing NAEPP guidelines.

TASK 2: By December 2012, determine best methods to communicate NAEPP guidelines.

TASK 3: By August 2013, establish a protocol to provide standardized ongoing communication of NAEPP guidelines.

OBJECTIVE 2: *By December 2012, identify barriers related to diagnosis, treatment and medications that impact asthma management and related health outcomes.*

TASK 1: By December 2011, identify and increase awareness of cultural barriers to asthma care.

TASK 2: By August 2012, identify available resources to patients and providers to encourage the underinsured and uninsured to seek appropriate care.

TASK 3: Between September 2010 and August 2015, ACM members will disseminate culturally sensitive education materials to health care providers and asthma patients/caregivers.

TASK 4: By August 2013, ACM will disseminate information regarding programs that pay for prescriptions.

TASK 5: By August 2015, MSDH, ALA and ACM members will collaborate to develop a pharmacy education program.

GOAL 2: IMPROVE QUALITY HEALTH CARE BY IMPROVING ASTHMA KNOWLEDGE AND COMPETENCY AMONG HEALTH CARE PRACTITIONERS.

ANTICIPATED OUTCOME: BY AUGUST 2015, THERE WILL BE FIVE CERTIFIED ASTHMA EDUCATORS IN EACH PUBLIC HEALTH DISTRICT.

OBJECTIVE 1: *By August 2015, develop an ongoing system to provide information and/or education tools about asthma.*

TASK 1: By August 2013, identify 18 champion health care practitioners providing asthma care.

TASK 2: By December 2013, collaborate with health care practitioners to develop best practice learning tools for the care and treatment of asthma.

TASK 3: By August 2015, provide at least 50 health care providers with trainings and/or education materials about asthma.

Health Care

OBJECTIVE 2: *By August 2015, increase number of certified asthma educators to 100 through support of the National Asthma Educator Certification Board (NAECB).*

TASK 1: Between September 2011 and September 2015, ALA and MSDH will conduct at least 10 regional Asthma Educator Institutes.

TASK 2: By August 2011, ALA and MSDH will develop a scholarship to assist health care practitioners with the NAECB Exam.

TASK 3: By August 2011, ALA and MSDH will develop a study guide to assist health care practitioners with the NAECB Exam.

TASK 4: By August 2014, develop cost saving plan to reimburse for asthma education.

GOAL 3: INCREASE COMMUNICATION AND CONSISTENCY OF PATIENT DISCHARGE INSTRUCTIONS FROM THE EMERGENCY DEPARTMENT AND INPATIENT SETTING.

ANTICIPATED OUTCOME: BY AUGUST 2015, 50% OF HOSPITALS IN MISSISSIPPI WILL BE USING A STANDARDIZED ASTHMA DISCHARGE PROTOCOL TOOL.

OBJECTIVE 1: *By August 2015, 50% of Mississippi hospitals will be trained on a standardized asthma discharge protocol tool.*

TASK 1: Between September 2011 and August 2015, ACM members will distribute consistent and concise patient education materials and programs to Mississippi hospitals.

TASK 2: Between September 2011 and August 2015, ALA and ACM members will provide 25 hospitals with appropriate asthma management trainings to avoid unnecessary hospital visits.

OBJECTIVE 2: *By August 2015, MSDH and ALA will work with hospitals to implement follow up procedures for patients discharged with asthma diagnosis to improve asthma self management.*

TASK 1: By August 2011, implement a chronic disease management approach to asthma within the health care delivery system.

TASK 2: By August 2011, ALA and ACM will assist hospitals with identifying a department and contact person to conduct asthma education and provide feedback to ALA and MSDH.

TASK 3: By December 2011, ACM members will collaborate with hospital contacts to improve marketing of asthma management services.

GOAL 4: DEVELOP WEB-BASED ASTHMA CONTINUING MEDICAL EDUCATION.

ANTICIPATED OUTCOME: BY AUGUST 2015, ASTHMA PRACTITIONERS WILL HAVE ACCESS TO WEB-BASED CME.

OBJECTIVE 1: *By August 2015, web-based asthma education will be available.*

TASK 1: By December 2013, identify partners for collaboration in development of web-based CME.

TASK 2: By August 2014, develop/identify appropriate web-based education module.

TASK 3: By August 2014, develop method of tracking successful completion of modules.

Community

COMMUNITY

Reducing the public health burden of asthma through improved asthma control is a goal shared by state and local leaders, patients and their families, and other community stakeholders. Despite scientific advances in asthma management, avoidable hospitalizations, disability, and lost productivity due to asthma remain high. According to NHLBI, asthma will cost the United States a projected \$20.7 billion in 2010.

Asthma-friendly communities champion improvements that put evidence-based asthma guidelines into practice by health care professionals, community organizations, and larger networks, environments, and care systems. Locally, it means increasing the capacity of clinics, medical offices, hospitals, emergency departments, pharmacies, homes, and schools and child care settings, to educate patients, families, and caregivers to monitor asthma control, use asthma medications, manage environmental triggers, and prevent or control asthma flare-ups.

Source: National Heart, Lung, and Blood Institute. The Morbidity & Mortality: Chart Book on Cardiovascular, Lung, and Blood for 2009. Available at: <http://www.nhlbi.nih.gov/resources/docs/cht-book.htm>



Community

GOAL 1: INCREASE ASTHMA AWARENESS AND COMMUNITY INVOLVEMENT IN ASTHMA EDUCATION PROGRAMS.

ANTICIPATED OUTCOME: BY AUGUST 2015, EACH REGIONAL ACM WILL COLLABORATE WITH PARTNERS TO IMPLEMENT FOUR ASTHMA AWARENESS EVENTS EACH YEAR.

OBJECTIVE 1: *Between September 2011 and August 2015, ACM members will identify and initiate new partnerships with at least three local organizations per year.*

TASK 1: By August 2011, ACM members will identify organizations that support environmental and educational interventions that relate to asthma management.

TASK 2: Between September 2011 and August 2015, ACM members will disseminate consistent materials and messages about asthma to community groups, schools, businesses, and policy makers.

OBJECTIVE 2: *By 2015, integrate asthma awareness and education into the activities/programs of faith-based organizations (FBOs), community-based/civic organizations (CBOs), schools, and health care organizations.*

TASK 1: Between September 2011 and August 2015, ACM members will collaborate with community partners and local health departments to build public awareness of the signs and symptoms of asthma and when to call 911 through educational initiatives.

TASK 2: By December 2011, ACM members will develop and implement an asthma education program specifically for FBOs.

TASK 3: By December 2011, ACM members will identify FBOs in their region with health ministries.

TASK 4: Between September 2011 and August 2015, ACM members will work with local churches to provide asthma information during conferences and meetings.

TASK 5: By December 2012, ACM members will partner with CBOs to integrate asthma awareness/education into at least two activities/programs per year.

TASK 6: Between September 2011 and August 2015, ACM members will educate CBOs to adopt asthma friendly policies.

TASK 7: Between September 2011 and August 2015, ALA and MSDH will encourage health educators in each public health district to integrate asthma education into at least two of their chronic disease or tobacco education presentations/programs per year.

Community

GOAL 2: INCREASE PUBLIC AWARENESS, EDUCATION AND UNDERSTANDING OF ASTHMA.

ANTICIPATED OUTCOME: BY AUGUST 2015, MISSISSIPPI RESIDENTS WILL RECOGNIZE ASTHMA AS A SIGNIFICANT PUBLIC HEALTH ISSUE BY SUPPORTING ASTHMA-RELATED EVENTS, ACTIVITIES AND EDUCATIONAL OPPORTUNITIES.

OBJECTIVE 1: *By August 2015, ACM members will improve public awareness and sensitivity to the needs of persons with asthma by planning and promoting at least three asthma outreach activities and events in each public health district.*

TASK 1: Between September 2011 and August 2015, ACM members will coordinate with community groups/coalitions in planning specific activities or events to raise awareness of the asthma burden and need to improve asthma management.

TASK 2: Between September 2011 and August 2015, ACM members will conduct at least three presentations about asthma for community-based organizations per year.

TASK 3: Between September 2011 and August 2015, ACM members will support World Asthma Day and initiate activities specifically for asthma awareness month.

TASK 4: Between September 2011 and August 2015, ACM members will contact at least 10 newspapers and/or organizations that publish newsletters each year to be assured that asthma articles or weekly kids' pages will be included, i.e., letters to editor/ press releases, coloring sheets, word finds and crossword puzzles.

OBJECTIVE 2: *By August 2015, develop an asthma resource guide.*

TASK 1: By August 2013, ACM members will collect, review, and evaluate recommended asthma educational materials, websites, programs, and other resources to include in the asthma resource guide.

TASK 2: By August 2013, ACM members will develop a distribution plan that addresses mechanisms for making the guide available to persons with asthma, families, health care professionals and the community.

TASK 3: By December 2013, ACM members will collaborate with health care, education and community service partners/organizations to assist in promoting awareness of the guide.

TASK 4: By December 2013, ACM members will develop an assessment tool to evaluate the effectiveness of the asthma resource guide.

OBJECTIVE 3: *By August 2013, launch a statewide public awareness campaign to increase the understanding of asthma as a public health issue.*

TASK 1: By December 2011, develop at least one asthma-focused public service announcement.

TASK 2: By March 2012, implement a coordinated media plan using the public service announcement.

TASK 3: By December 2012, collaborate with a media specialist to launch a multi-channel public awareness campaign.

TASK 4: By December 2011, ACM members will identify and train one or more individuals to serve as statewide spokesperson(s) to promote asthma awareness during the media campaign.

Community

GOAL 3: SUPPORT ENVIRONMENTAL CHANGES WITHIN COMMUNITIES THAT WILL BE CONDUCTIVE TO HEALTHY LIFESTYLES.

ANTICIPATED OUTCOME: BY AUGUST 2015, MISSISSIPPI COMMUNITIES WILL BE ENGAGED IN COMMUNITY POLICY AND SYSTEM CHANGES TO REDUCE THE BURDEN OF ASTHMA IN THEIR COMMUNITY.

OBJECTIVE 1: *By August 2015, form avenues for people to cope with asthma in communities.*

TASK 1: By August 2011, ACM members will identify organizations that support environmental and educational interventions that relate to asthma management.

TASK 2: By December 2011, ACM members, community partners and health care facilities will develop at least three asthma support groups.

TASK 3: By August 2012, ACM members will identify and train neighborhood associations on asthma triggers and initiate a healthy homes training.

TASK 4: By December 2015, ACM members will partner with community groups and universities to promote environmental awareness and identify environmental justice issues that impact healthy communities.

School Health

SCHOOL HEALTH

According to NHLBI, nearly one in every 10 children under the age of 18 has asthma, making it one of the leading chronic childhood diseases in the United States, and a major cause of childhood disability and school absenteeism. Asthma can limit a child's ability to play, learn, and sleep which are all critical to his or her development.

The CDC has identified six strategies for schools and districts to consider when addressing asthma within a coordinated school health program. These strategies can be effective whether your program is for the entire school district or just one school.

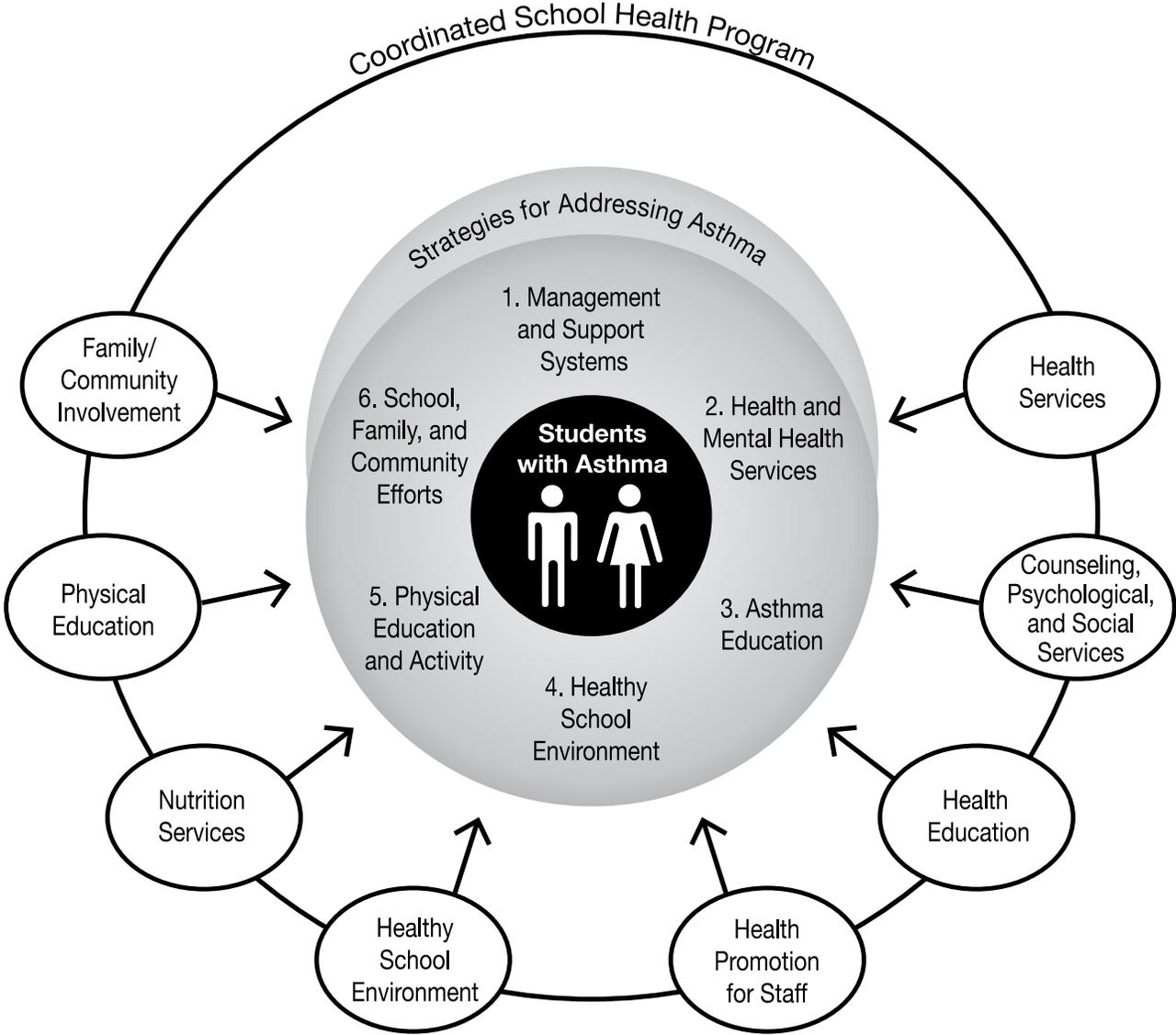
- 1. Establish management and support systems for asthma-friendly schools.**
- 2. Provide appropriate school health and mental health services for students with asthma.**
- 3. Provide asthma education and awareness programs for students and school staff.**
- 4. Provide a safe and healthy school environment to reduce asthma triggers.**
- 5. Provide safe, enjoyable physical education and activity opportunities for students with asthma.**
- 6. Coordinate school, family, and community efforts to better manage asthma symptoms and reduce school absences among students with asthma.**

Source: Centers for Disease Control and Prevention. *Strategies for Addressing Asthma within a Coordinated School Health Program.* Available at [Http://www.cdc.gov/healthyYouth/asthma/strategies.htm](http://www.cdc.gov/healthyYouth/asthma/strategies.htm)



School Health

ADDRESSING ASTHMA WITHIN A COORDINATED SCHOOL HEALTH PROGRAM



Source: Centers for Disease Control and Prevention. Strategies for Addressing Asthma within a Coordinated School Health Program. Available at <http://www.cdc.gov/healthyYouth/asthma/strategies.htm>

School Health

GOAL 1: PROVIDE ASTHMA EDUCATION AND PROMOTE SYSTEM CHANGE TO INCREASE ASTHMA FRIENDLY SCHOOLS AND SCHOOL DISTRICTS IN MISSISSIPPI.

ANTICIPATED OUTCOME: BY AUGUST 2014, ALL SCHOOL DISTRICTS IN MISSISSIPPI WILL BE IN COMPLIANCE WITH THE MISSISSIPPI ASTHMA BILL THAT REQUIRES SCHOOLS TO TAKE CERTAIN ACTION IN REGARDS TO STUDENTS WITH ASTHMA.

OBJECTIVE 1: *Between September 2011 and August 2015, school health personnel will annually identify and maintain current information on all students with asthma.*

TASK 1: By December 2011, school health personnel will annually obtain information about asthma diagnosis from school health forms.

TASK 2: By December 2011, all students with asthma will have an asthma action plan on file.

TASK 3: By December 2011, all school districts will allow students to carry and self-administer their asthma medications (per state law) with proper physician documentation.

TASK 4: By December 2012, all school districts will adopt an emergency protocol that includes instructions for all school staff to follow in case of a major medical emergency for asthma.

TASK 5: By December 2012, all school districts will adopt an integrated pest management techniques to control pests.

GOAL 2: PROVIDE SCHOOL NURSES, SCHOOL PERSONNEL WITH ACCESS TO EDUCATION AND RESOURCES NECESSARY TO MANAGE ASTHMA IN SCHOOL SETTINGS.

ANTICIPATED OUTCOME: BY AUGUST 2015, SCHOOL PERSONNEL WILL BE ABLE TO IDENTIFY SIGNS AND SYMPTOMS OF ASTHMA AND ASSIST IN CONTROLLING ENVIRONMENTAL TRIGGERS FOR ASTHMA IN THEIR SCHOOL BUILDING.

OBJECTIVE 1: *By September 2012, ACM members and school health personnel will provide asthma education and asthma programs for students and staff throughout each school year.*

TASK 1: By December 2011, ALA, MSDH and MDE will create a schedule to provide ongoing asthma information and materials to all school districts.

TASK 2: By December 2011, ALA, MSDH and MDE will develop a system to identify schools in need of assistance to create an asthma friendly school.

TASK 3: By December 2011, ALA, MSDH and MDE will establish statewide standards for asthma education.

TASK 4: By December 2011, all schools will identify a school health liaison.

TASK 5: By December 2011, ACM members will partner with school health personnel to provide resources to school districts in their public health district.

School Health

OBJECTIVE 2: *By September 2015, ALA, ACM and MDE will develop outreach and educational material for distribution to school community to improve asthma awareness.*

TASK 1: By August 2012, ALA, MSDH and MDE will develop a tracking tool to monitor absenteeism of students with asthma and number of days a student is sent home from school due to asthma.

TASK 2: By August 2013, ALA, MSDH and MDE will implement a school-based program to provide individual case management for students with poorly controlled asthma.

TASK 3: By December 2012, ACM members will partner with school personnel to educate students about lung health and teach them how to support classmates with asthma.

TASK 4: By December 2013, ALA and MSDH will institute a specialized training for coaches, maintenance staff, food preparation workers and bus drivers.

TASK 5: By August 2012, ALA, MSDH and MDE will develop on-line asthma education training to make training more widely accessible to those who cannot attend scheduled trainings.

OBJECTIVE 3: *By December 2013, ALA, MSDH and MDE will initiate a system to collect and use information about school absences and nurse office visits to identify and help families of children whose treatment is not effective in controlling their asthma.*

TASK 1: By August 2012, ALA, MSDH and MDE will develop a tracking tool to monitor absenteeism of students with asthma and number of days a student is sent home from school due to asthma.

TASK 2: By August 2013, ALA, MSDH and MDE will implement a school based program to provide individual case management for students with poorly controlled asthma.

OBJECTIVE 4: *By December 2013, school health personnel will encourage physicians to become involved in supporting asthma management in the school setting throughout the year.*

TASK 1: By December 2012, ALA, MSDH and school health personnel will develop a system to foster ongoing communication between schools, parents and the student's medical provider.

TASK 2: By December 2012, ALA and ACM members will survey childcare facilities to assess needs and ensure they have necessary medications and equipment to manage asthma.

School Health

GOAL 3: PROVIDE A SAFE AND HEALTHY SCHOOL ENVIRONMENT TO REDUCE ASTHMA TRIGGERS.

ANTICIPATED OUTCOME: BY AUGUST 2015, 50% OF THE SCHOOL DISTRICTS IN MISSISSIPPI WILL BE RECOGNIZED AS ASTHMA FRIENDLY SCHOOLS.

OBJECTIVE 1: *By August 2015, promote participation in school-based programs that reduce exposure to asthma triggers.*

TASK 1: By August 2014, ALA, MSDH and MDE will develop a model policy requiring schools to conduct yearly environmental assessments to reduce asthma triggers in the school-based setting.

TASK 2: By August 2012, ALA and ACM members will provide technical assistance to schools for low-cost environmental solutions/resources.

TASK 3: By August 2014, ALA, MDE and MDEQ will work with schools to implement and enforce policies to minimize exposure of students and school staff to particulate fumes from idling school buses.

TASK 4: By August 2014, ALA, MSDH, MDE and MDEQ will work with schools to develop a school site plan for implementing alternative activities and protocols on bad air days.

TASK 5: Between September 2011 and August 2015, ALA, MSDH and MDE will partner with U.S. Environmental Protection Agency to provide district trainings on Indoor Air Quality Tools for Schools.

TASK 6: By August 2013, develop state guidelines for schools interested in developing asthma friendly environments.

TASK 7: By August 2013, ALA and ACM members will set up a statewide awards program to recognize schools as asthma friendly schools.

GOAL 4: INCREASE ASTHMA TRAINING OPPORTUNITIES AND RESOURCES AVAILABLE TO CHILD CARE STAFF.

ANTICIPATED OUTCOME: BY AUGUST 2015, ALA WILL ESTABLISH A SET OF COMPREHENSIVE AND COORDINATED ASTHMA POLICIES AND PROCEDURES FOR CHILDCARE SETTINGS.

OBJECTIVE 1: *By August 2013, ALA and ACM members will establish a statewide standard to provide child care facilities with annual asthma education and resources.*

TASK 1: By August 2012, ALA and ACM members will create a schedule to provide all child care facilities with asthma education trainings and asthma resources.

TASK 2: By December 2012, ALA and ACM members will survey childcare facilities to assess needs and ensure they have necessary mediations and equipment to manage asthma.

TASK 3: By August 2013, ALA, MSDH and ACM members will develop an online trainings program that offers continuing education credits for childcare staff.

TASK 4: Between September 2011 and August 2015, ALA and ACM members will work to ensure that laws and regulations for licensed child care facilities adequately address asthma-related indoor and outdoor environmental quality issues.

Environment



Six out of 10 Americans live in areas where air pollution reaches unhealthy levels. At the American Lung Association, we work to ensure that the air you breathe is clean and safe.

Ozone and particulate matter make up the majority of what is commonly considered air pollution. Ozone pollution is especially dangerous between May and October when higher temperatures, increased sunlight, and stagnant atmospheric conditions transform air pollutants into ozone. **Children spend 50% more time outdoors than do adults, which amplifies their risk of breathing harmful air.**

The American Lung Association leads the fight for healthy air every day. We fight for stronger clean air standards, lower power plant emissions, and cleaner fuel sources and vehicles. Strict national clean air standards and enforcement of laws like the Clean Air Act can dramatically improve air quality.



Environment

ENVIRONMENT

One key aspect of successful management of a person's asthma is recognizing the impact of the environment on their condition. Management of asthma requires attention to environmental exposures both indoors and outdoors. Americans spend 90% of their time indoors, where they have a greater ability to modify their environment. The indoor environment contains both pollutants (eg, particulate matter, nitrogen dioxide, secondhand smoke, and ozone) and allergens from furred pets, dust mites, cockroaches, rodents and molds. Outdoor air pollutants that impact asthma include particulate matter, ozone, nitrogen dioxide and sulfur dioxide, and guidelines recommend that individuals with asthma avoid exertion outdoors when these pollutants are elevated. Exposures in the workplace can aggravate pre-existing asthma or can cause new-onset asthma. Although there is no cure for asthma, it can be controlled with medical treatment and management of triggers.

GOAL 1: IDENTIFY AND REDUCE EXPOSURE TO ENVIRONMENTAL ASTHMA TRIGGERS AND IRRITANTS ON PEOPLE WITH EXISTING AND POTENTIAL ASTHMA.

ANTICIPATED OUTCOME: REDUCED EXPOSURE TO ENVIRONMENTAL ASTHMA TRIGGERS AND IRRITANTS.

OBJECTIVE 1: *By August 2015, prevent and reduce exposure to outdoor environmental asthma triggers.*

TASK 1: Between September 2011 and August 2015, increase education and media efforts to create a better environment for people with asthma.

TASK 2: By August 2013, ACM members will create a resource list to promote ways communities can identify and reduce outdoor asthma triggers.

TASK 3: By August 2013, create or adapt an environmental intervention checklist for asthmatics to utilize in combination with indoor checklist to ensure safe surroundings.

TASK 4: By August 2015, ACM members and lead partners will ensure that outdoor environmental and disaster guidelines is protective of people with asthma.

OBJECTIVE 2: *By August 2015, improve indoor air quality and increase understanding of asthma trigger exposures in home environments.*

TASK 1: Between September 2011 and August 2015, increase educational opportunities that address environmental triggers in the home.

TASK 2: By August 2011, ACM members and lead partners will make voluntary indoor environmental assessment and best practice solutions available to Mississippi residents.

TASK 3: Between September 2011 and August 2015, ACM members and lead partners will develop and disseminate resource guides and other tools promoting healthy homes and asthma friendly environments.

TASK 4: Between September 2011 and August 2015, ACM members and lead partners will provide resources and seek funding for provision of allergen control resources for multi-unit housing and low income populations.

TASK 5: By December 2014, ACM members and lead partners will analyze existing state and local health codes to determine how existing codes can be utilized to determine improvements.

Environment

OBJECTIVE 3: *By August 2015, ACM members will partner with school/day care staff to improve indoor air quality and increase understanding of asthma trigger exposures in the school/childcare setting.*

TASK 1: Between September 2011 and August 2015, lead partners will offer trainings on an annual basis focused on strategies to improve school/childcare environments.

TASK 2: By December 2013, ACM members and lead partners will evaluate compliance with laws and regulations to ensure asthma friendly environments.

TASK 3: By December 2011, ACM members will identify schools and day cares in greatest needs of health hazards remediation.

TASK 4: By December 2015, lead partners will increase the number of school wellness policies that include measures to improve the school environment.

OBJECTIVE 4: *By August 2015, improve indoor air quality and increase understanding of asthma trigger exposures in workplaces.*

TASK 1: By August 2013, ACM members will develop a trainings program that provides learning opportunities on work related asthma.

TASK 2: By August 2013, create a profile of risk factors for work related asthma.

TASK 3: By August 2013, identify occupations or industries at risk for work related asthma.

TASK 4: By December 2013, ACM members will establish partnerships with work site wellness programs to implement asthma training programs.

OBJECTIVE 5: *By August 2015, improve understanding of asthma trigger exposures and assess effectiveness of exposure reduction interventions.*

TASK 1: By August 2012, ACM members will promote the uses of integrated pest management for eliminating/reducing pest problems in the home/work/school/childcare setting.

TASK 2: By August 2015, ACM will partner with research organizations on studies of asthma triggers.

GOAL 2: DEVELOP AND IMPLEMENT A STATEWIDE STRATEGY TO INCREASE PUBLIC AWARENESS AND UNDERSTANDING ABOUT ENVIRONMENTAL ASTHMA TRIGGERS.

ANTICIPATED OUTCOME: BY AUGUST 2015, THERE WILL BE A CONSISTENT MESSAGE ABOUT ENVIRONMENTAL TRIGGERS AND ITS LONG TERM EFFECT ON PEOPLE WITH ASTHMA.

OBJECTIVE 1: *By August 2015, implement a statewide strategy to increase public awareness and understanding of asthma.*

TASK 1: By August 2011, ACM members will identify groups/partners addressing environmental issues.

TASK 2: By December 2011, ACM members will develop strategies to support environmental interventions and disseminate a plan to educate the public.

TASK 3: By August 2012, ACM members will link asthma initiatives with other chronic disease and environmental initiatives.

TASK 4: By August 2015, Mississippi residents will have access to skill development resources to help assess their behaviors and home environment to better control asthma triggers.

Preparedness

PREPAREDNESS

PREPARE TO MANAGE ASTHMA DURING EMERGENCIES

Emergencies can occur without warning. Preparation is the key to surviving an emergency and managing the chaos that occurs afterwards. There are many tips for preparing for a disaster that are applicable to all families. If you have asthma, you need to prepare to care for yourself during emergency situations like hurricanes, tornadoes or ice storms. Your family should have a Disaster Plan. Download an example at:

http://www.healthmys.com/msdhsite/_static/resources/2071.doc.

WHAT CAN YOU DO TO PREPARE FOR EMERGENCIES?

Gather the supplies you need to care for yourself if asked to evacuate (if you can't evacuate, have these supplies on hand for persons with asthma). Pack the items into a small, light, waterproof bag (your Asthma "To-Go" Bag) to store or carry.

PREPARE AN ASTHMA "TO-GO" BAG THAT INCLUDES:

- A one to two week supply of asthma medicine including pills, syrups, and inhalers (quick-relief and/or daily)
- Spacer
- Peak flow meter
- Battery powered nebulizer and batteries
- Mask for use with nebulizer or oxygen
- Addresses and phone numbers for your doctor, pharmacy, medical equipment provider, and nearest hospital.
- Prescriptions for refills of medicines (ask your doctor to leave the expiration date blank and use the words "as needed" in the prescription).
- Copy of your health insurance card
- A list of all medicines you use, how much you use, and how often (including non-respiratory medicines, vitamins, and herbal supplements)
- Cash for insurance co-pays and other costs

Collaborative Approach

COLLABORATIVE APPROACH

A CALL TO ACTION

Everyone has a role to play in the management of asthma. While each role is important, the parts played by those who influence or legislate decisions affecting communities across the state are critical. The governor, state legislators, health care leaders, employers and local officials all must become involved in promoting and implementing policy and systems changes at both the state and community levels.

A COLLABORATIVE APPROACH

Your role as a/an....

Hospital

You can...

- Assure asthma is treated according to national guidelines.
- Provide meeting space for asthma support groups.
- Collaborate to sponsor community education programs.
- Participate in the Mississippi Asthma Coalition.

Local Health Department

You can...

- Provide asthma awareness information to residents.
- Collaborate in community information campaigns.
- Make asthma information available at your clinics.
- Promote asthma-friendly homes and trigger management.
- Encourage schools to develop asthma-friendly guidelines.

Community Organization

You can...

- Provide asthma awareness information to constituents.
- Encourage participation in asthma education classes.
- Provide information and consultation on trigger management.
- Promote asthma-friendly homes, schools and communities.
- Collaborate to provide community prevention programs.

Organization

You can...

- Provide continuing education credits on asthma topics.
- Include asthma-control information in meeting agendas.
- Form speakers' bureaus to provide asthma education.
- Train facilitators for asthma support groups.
- Provide a representative to the Asthma Coalition of Mississippi.

Collaborative Approach

School/University

You can...

- Include asthma-prevention messages in health classes.
- Provide an asthma-friendly environment.
- Make your entire campus a smokefree environment.
- Provide asthma education through your health services.
- Encourage asthma research.

Employer

You can...

- Establish a smokefree work place policy.
- Encourage employees to increase physical activity.
- Provide asthma education to employees.
- Make asthma information available.
- Use health plans that provide asthma disease management.

Faith Based Organization

You can...

- Provide asthma prevention information to members.
- Create a smokefree environment in the facility.
- Explore creating an asthma-friendly environment.

Physician

You can...

- Know the Guidelines for Diagnosis and Management of asthma published by the NAEPP.
- Refer patients to smoking cessation classes.
- Find ways to provide thorough asthma education to patients.
- Find out how to enroll patients in asthma classes.
- Refer patients to pulmonary and allergy specialists.

Mississippian

You can...

- Stop smoking or never start.
- Learn about triggers and decrease your contribution to the trigger burden.
- Support smokefree environment legislation.
- If diagnosed, find out about control and relief medications.
- Show your support and care for those who are diagnosed.

(Adapted from the 2004 Ohio Statewide Asthma Plan)

Collaborative Approach

DISSEMINATING THE STATE PLAN AND UPDATING AND CHARTING PROGRESS

As this state plan has made evident, everyone has a role to play in managing asthma in Mississippi. To facilitate such involvement, the Mississippi State Asthma Plan will be distributed to all partners and key stakeholders and to anyone requesting a copy. As the state plan unfolds over the next five years, the Mississippi Asthma Program, in regular consultation with its partners and with continued support from the CDC, will evaluate progress. This evaluation will determine the extent to which the plan is being implemented as intended and the degree to which objectives are moving toward completion. The plan's strengths and weaknesses will be charted as will other lessons learned during implementation. Evaluation activities also will examine how the program appropriately focuses asthma management efforts, especially toward priority populations. Working with its collaborating partners, the Mississippi Asthma Program will use evaluation results to develop and refine annual work plans relating to its settings and objectives. The entire plan will be updated every five years, again with input from partners throughout the state.

SUSTAINABILITY

The goals and objectives of the Mississippi Asthma Program will continue to be addressed and implemented through activities in the State Asthma Plan, and by partners at the grass roots level. Through data collection findings, the Mississippi Asthma Program plans to demonstrate the impact and effectiveness of its program. The ACM will make strong efforts to be visible in each of the nine public health districts focusing on strengthening partnerships and increasing collaboration, publicizing asthma activities and providing resources to the community. The Mississippi State Asthma Plan will serve as a guide in garnering support from new partners, which creates opportunities for new funding sources in order to sustain the program.

Appendix I— Healthy People 2020 Asthma Goals and Objectives

HEALTHY PEOPLE 2020 GOALS AND OBJECTIVES RELATED TO ASTHMA

I: REDUCE ASTHMA DEATHS.

1:1 Children and adults under age 35 years. Target: Not applicable.	Baseline: 3.4
1:2 Adults aged 35 to 64 years old. Target: 6.0 deaths per million.	Baseline: 11.0
1:3 Adults aged 65 years and older. Target: 22.9 deaths per million.	Baseline: 43.3

2: REDUCE HOSPITALIZATIONS FOR ASTHMA.

2.1 Children under age 5 years. Target: 18.1 hospitalizations per 10,000.	Baseline: 41.4
2.2 Children and adults aged 5 to 64 years. Target: 8.6 hospitalizations per 10,000.	Baseline: 11.1
2.3 Adults aged 65 years and older. Target: 20.3 hospitalizations per 10,000.	Baseline: 25.3

3: REDUCE HOSPITAL EMERGENCY DEPARTMENT (ED) VISITS FOR ASTHMA.

3.1 Children under age 5 years. Target: 95.5 ED visits per 10,000.	Baseline: 132.7
3.2 Children and adults aged 5 to 64 years. Target: 49.1 ED visits per 10,000.	Baseline: 56.4
3.3 Adults aged 65 years and older. Target: 13.2 ED visits per 10,000.	Baseline: 21.0

4: REDUCE ACTIVITY LIMITATIONS AMONG PERSONS WITH CURRENT ASTHMA.

Target: 10.2 percent.	Baseline: 12.7 percent
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5: REDUCE THE PROPORTION OF PERSONS WITH ASTHMA WHO MISS SCHOOL OR WORK DAYS.

5.1 Reduce the proportion of children aged 5 to 17 years with asthma who miss school days. Target: 48.7 percent.	Baseline: 58.7 percent
5.2 Reduce the proportion of adults aged 18 to 64 years with asthma who miss work days. Target: 26.8 percent.	Baseline: 33.2 percent

Appendix I— Healthy People 2020 Asthma Goals and Objectives

6: INCREASE THE PROPORTION OF PERSONS WITH CURRENT ASTHMA WHO RECEIVE FORMAL PATIENT EDUCATION.

Target: 14.4 percent.

Baseline: 12.1 percent

7: INCREASE THE PROPORTION OF PERSONS WITH CURRENT ASTHMA WHO RECEIVE APPROPRIATE ASTHMA CARE ACCORDING TO NATIONAL ASTHMA EDUCATION AND PREVENTION PROGRAM (NAEPP) GUIDELINES.

7.1 Persons with current asthma who receive written asthma management plans from their health care provider.
Target: 36.8 percent. Baseline: 33.4 percent

7.2 Persons with current asthma with prescribed inhalers who receive instruction on their use.
Target: Not applicable. Baseline: 95.9 percent

7.3 Persons with current asthma who receive education about appropriate response to an asthma episode, including recognizing early signs and symptoms or monitoring peak flow results.
Target: 68.5 percent. Baseline: 64.8 percent

7.4 Increase the proportion of persons with current asthma who do not use more than one canister of short-acting inhaled beta agonist per month.
Target: 90.2 percent. Baseline: 87.9 percent

7.5 Persons with current asthma who have been advised by a health professional to change things in their home, school, and work environments to reduce exposure to irritants or allergens to which they are sensitive.
Target: 54.5 percent. Baseline: 50.8 percent

7.6 (Developmental) Persons with current asthma who have had at least one routine follow-up visit in the past 12 months.

7.7 (Developmental) Persons with current asthma whose doctor assessed their asthma control in the past 12 months.

7.8 (Developmental) Adults with current asthma who have discussed with a doctor or other health professional whether their asthma was work related.

8: INCREASE THE NUMBERS OF STATES, TERRITORIES, AND THE DISTRICT OF COLUMBIA WITH A COMPREHENSIVE ASTHMA SURVEILLANCE SYSTEM FOR TRACKING ASTHMA CASES, ILLNESS, AND DISABILITY AT THE STATE LEVEL.

Target: 47 areas.

Baseline: 43 areas

Further information about the Healthy people 2020 can be found at www.healthypeople.gov

Appendix 2— Mississippi Asthma Program Partners

MISSISSIPPI ASTHMA PROGRAM PARTNERS

Abbott Laboratories	Diversified Health Solutions	Lyman Elementary	Pascagoula School District
Alpha Kappa Alpha Sorority, Inc. Rho	Division of Medicaid	Madison Avenue	Pass Road Elementary
Lambda Omega Chapter, Jackson, MS	Dream, Inc./Partnership For A Healthy	Madison County School District	Paul Armstrong Middle School
American Lung Association, <i>Plains-Gulf</i>	Mad	Magnolia Regional Health Center	Peace Childrens Clinic
<i>Region</i>	Ellisville State School	Mccomb School District	Pearl River Central School District
American Heart Association	EMA	Mckesson Health solutions	Pearl River Community College
Amedysys Home Health	Family Clinic	MDE -Office Of Healthy Schools	Pecan Park Elem.
American Cancer Society	Family Health Center	Merck	Pfizer
Armstrong Middle School	Family Practice/after Hours Clinic	Meridian Public Schools	Pine Belt Mental Healthcare Resources
Asthma & Allergy Clinic - Hattiesburg	Flowood Chamber of Commerce	Mississippi College	Pine Grove Mb/ Health & Wellness
Asthma Allergy Center Of North	FMRC	Moorhead Middle School	Preventative Care
Jackson	Forrest Co. Health Dept	Mississippi Academy of Family	Professional Research Solutions
Asthma Coalition of Mississippi	G A Carmichael Family Health Ctr	Physicians	Pulmonology Consultants
AstraZeneca	Genentech	Mississippi Alliance For School Health	R H Bearden Elem. School
Baptist Health Systems	Glade Elem./NE Jones Co.	Mississippi Asthma & Allergy Clinic	Rankin County School District
Bayou View Elementary	GlaxoSmithKline	Mississippi Chapter-American	Raymond Elementary
Beacham Hospital	Glover Medical-legal Consulting	Academy Pediatrics	Rite Aid Foundation
Benton County School District	Agency	Mississippi Chronic Illness Coalition	Ruleville Central
Biloxi Public Schools	GMHC - Dental	Mississippi Department of Human	Ruleville Middle School
Biloxi Regional Medical Center	Greater Meridian Health Clinic	Services	Safe Haven
Blue Cross Blue Shield of MS	Greenville Public Schools	Mississippi Hospital Association	Salvation Army
Blue Dot Medical	Gulfcoast Children's Clinic	Mississippi State Department of	Sharkey Issaquena Health Network
Bolivar County Medical Center	Habitat for Humanity	Environmental Quality/Air Division	Simpson Co. School District
Caffee, Caffee & Associates	Hancock Medical Center	Mississippi State Department Of	Social Science Research Center
Carroll County School District	Harrison County School District	Education	Sonny Montgomery VA Hospital
CATCH Kids	Hattiesburg Clinic	Mississippi State Department of	South Panola HS
Center For Excellence in Minority	Hazlehurst Elementary School	Health	South Pike School District
Health	Hinds Community College	Mississippi Division of Medicaid	Southern Miss Health Service
Center For Tobacco Prevention	Hinds County Project Headstart	Mississippi Emergency Management	Southern Pharmaceuticals/Oxycare
Children's Clinic	Hollandale School Dist.	Agency	Southwest Health Systems
Children's Medical Group	Holmes Community College	Mississippi Farm Bureau	Southwest MS Regional Medical Ctr.
Coahoma Co. Schools	Holmes County School District	Mississippi Health Partners	St. Dominic Hospital
Coastal Family Health Center	Hubsouth Medical Clinic	Mississippi Medicaid Disease Mgmt.	Starkville School District
Coleman Middle School	Independence High School	Mississippi Primary Health Care Assn.	Sudduth Elementary
Co-lin Community College	Information and Quality Healthcare	Mississippi Society For Respiratory	Sunflower Co. Schools
Columbus Housing Authority	Jackson Hinds Comprehensive Health	Care	Sunshore Medical Clinic
Community Bank	Center	Mississippi State Senate	Tate County Schools
Community Counseling Services	Itawamba Comm. College	Mississippi State University	The Children's Clinic
Contact Helpline	Jackson Public Schools	Mississippi State University Extension	Three Rivers Elementary
Continue Care Home Health	Jefferson County Hospital	Service	Thrift Homecare
COPD Pharmacy Consultants	Jackson State University School Of	Mississippi Tobacco Free Coalitions	Tobacco Nurse
Copiah Academy Frontline	Public Health	Monaghan Medical / Medical	Tri-lakes Medical Clinic
Davidson Elementary School	Jackson Pulmonary	Specialties	Tunica Medical Clinic
Dawson Indoor Environmental	Junior League Of Jackson	NAACP	Tupelo Public School District
Solutions	Kemper Co Schools	Natchez Community Hospital	University of MS Medical Center
Delisle/Pass Christian	Kings Daughter Medical Center	Neshoba County Hospital	University of Southern Mississippi
Delta Sigma Theta Sorority, Inc.	Laird Hospital	North MS Medical Center	W.A.T.C.H
Mississippi Gulf Coast Alumnae	Lafayette Co. School District	Natchez Public Schools	West Point School District
Chapter	Lakeview Family Medicine Center	Oak Grove Lower Elem.	Western Line School District
Delta SOPHE	Lawrence Co. Schools	Oak Grove Middle School	Westminster Academy
Delta Asthma & Allergy, Inc.	Leland School District	Oktibbeha County Hospital	William J Berry Elementary
Delta State University: Center for	Lincoln Co. School District	Otken Elementary School	Yazoo County School District
Community & Economic Development	Long Term Care Alternatives	Oxford School District	
District 72 House Representative	Lumberton Schools	Partnership for Healthy MS	

Appendix 3— School-Based Asthma Management Program

SCHOOL-BASED ASTHMA MANAGEMENT (SAM)

Delta Region
P.O. Box 3134
1417 College Street
Cleveland, MS 38733
662-846-4807

John J. Green, Ph.D., Director of the Center for Community and Economic Development
Judith Winford, MSN, RN, CPHQ Program Coordinator and Asthma Resource Nurse
Brenda Canady, Community Health Worker
Antoria Pates, AmeriCorps*VISTA Member
Kamaria Royster, AmeriCorps*VISTA Member
Alshunda Quinn, Mississippi Delta Service Corps/AmeriCorps Member

SCHOOL-BASED ASTHMA MANAGEMENT OVERVIEW (SAM)

SAM was established September 2009 by the Mississippi State Department of Health in partnership with the Center for Community and Economic Development at Delta State University. The Delta area component supports school nurses in 14 counties and 31 school districts. There are seven counties in the Delta service area that are designated as priority counties based on asthma rates that exceed the state average. These counties are Bolivar, Holmes, Humphries, Leflore, Quitman, Sunflower and Washington. There are seven additional high risk counties that Delta SAM services: Carroll, Coahoma, Desoto, Panola, Tallahatchie, Tate and Tunica. There are approximately 175 schools in this service area. SAM's objective is to provide effective case management tools to school nurses, connect students and parents to available resources, build capacity with school nurses, coordinate provider services, and collect and analyze data on scope and needs for effective asthma management over a five-year period. The basic premise of success is that while asthma cannot be cured, it can be controlled in the school population through assessment and monitoring, collaboration between stakeholders, appropriate use of medications and control of irritants and allergens.

DELTA STATE UNIVERSITY—CENTER FOR COMMUNITY AND ECONOMIC DEVELOPMENT

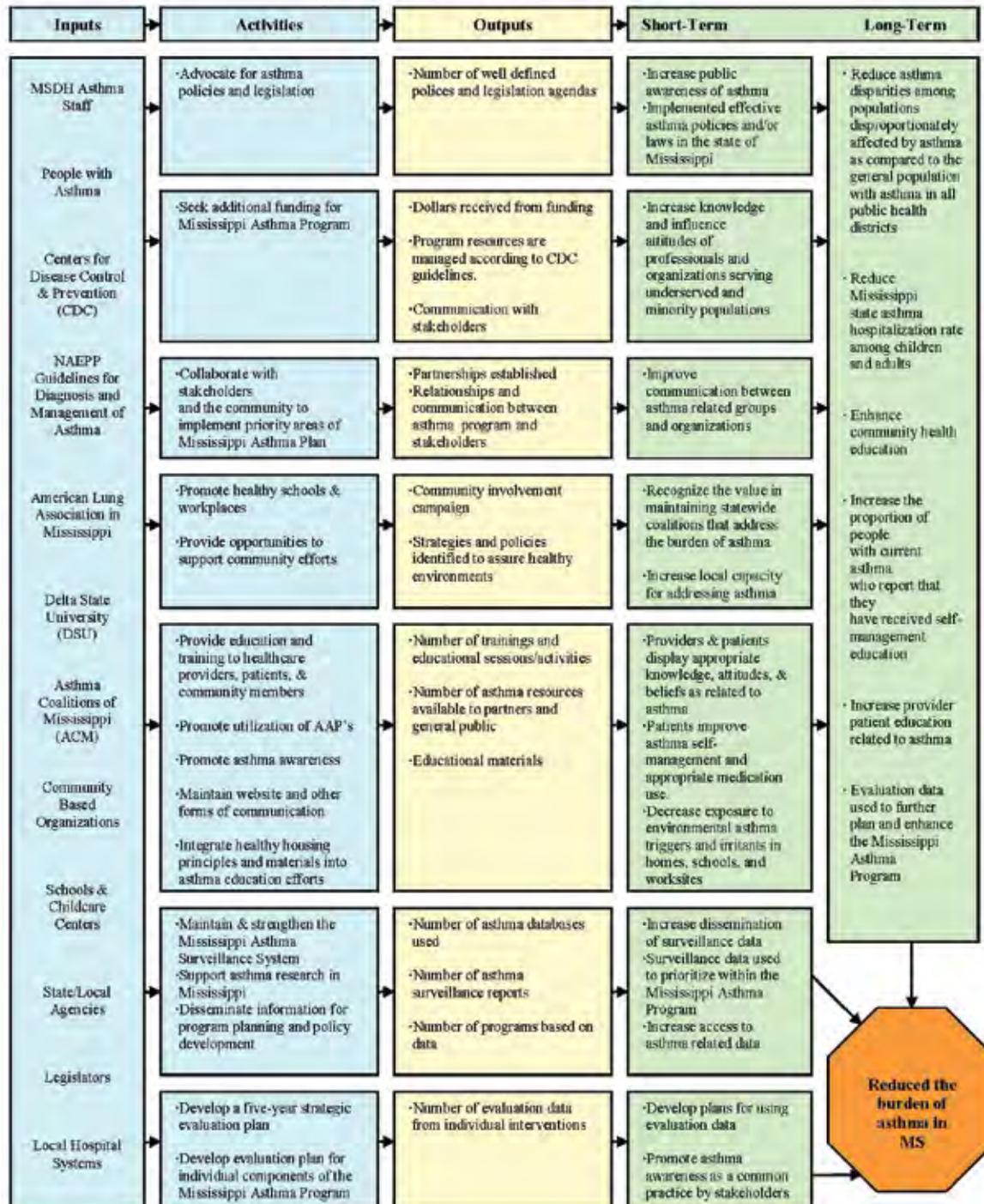
Since 1994 when founded, the Center has engaged in an active program of externally funded programs exceeding \$50 million in grants and contracts with more than 80 percent reinvested in Delta communities. Grass roots service areas of the Center show the scope of operations: AmeriCorps programs, leadership development, community and faith-based organization support, youth programs, school support services, health programs, entrepreneurial services, personal finance, banking, and tax services. Delta-wide, the Center manages and supports (a) extensive health related activities for awareness and services, (b) on-site, on-demand community leadership support, and (c) training and consultant services for faith-based and community organizations.

Appendix 4— Logic Model

LOGIC MODELS

Logic models provide a systematic way to visually depict a program. Key components include inputs (resources), outputs (activities and who is reached), and short-, intermediate- and long-term outcomes. The program currently uses logic models as tools for program design, management and evaluation. It will continue to incorporate the use of logic models for purposes of planning and evaluation.

Mississippi Asthma Program Logic Model 2009 Through 2014



Appendix 5—Disparities in the Burden of Asthma

DISPARITIES IN THE BURDEN OF ASTHMA

Not all things are equal when it comes to the burden of asthma. Consider these quick facts:

- The rates of hospitalizations and deaths due to asthma are both 3 times higher among African Americans than among whites. [1,2]
- Puerto Ricans have the highest rates of asthma attacks and deaths due to asthma. [1]
- Children have 2 times the rate of emergency department visits and hospitalizations for asthma as adults. [1]
- Compared to white children, asthma prevalence is higher in children who are Puerto Rican (2.4 times), African American (1.6 times), and American Indian/Alaska Native (1.3 times). [3]
- Women account for nearly two-thirds of all deaths due to asthma in the United States. [2]
- The percentage of people with asthma taking daily medicine to control asthma is lower among Hispanics (23.2%) and African Americans (25.1%) than among Whites (35.1%). [4]

Asthma is more common and more severe among children; women; low-income, inner-city residents; and African American and Puerto Rican communities. In general, these disadvantaged and at-risk populations experience above-average rates of emergency department visits, hospitalizations, and deaths that are much higher than differences in asthma prevalence would suggest.

The reasons for these disparities are complex, but cannot be attributed to genetic differences alone. Economic, social, and cultural factors—ranging from lack of access to quality health care to differences in health beliefs between patients and their doctors—add to the greater asthma burden among these groups. Individuals within disadvantaged populations also may face substandard housing and work conditions that place them at greater risk for frequent and prolonged exposure to environmental allergens and irritants that worsen asthma.

BRIDGING THE DISPARITY GAP

Despite their higher burden of disease, access to medical care for asthma and the quality of care provided is often lower among minority and socioeconomically disadvantaged populations. Disparities in the burden and care of asthma suggest that culturally competent clinical and educational approaches, such as those identified in the Guidelines Implementation Panel (GIP) Report, are needed to implement the EPR-3 asthma guidelines in high-risk groups and to improve access to quality asthma care. Examples of such approaches include the Physician Asthma Care Education (PACE) Program and multi-pronged strategies for addressing exposure to environmental factors that worsen asthma at home, school, or work.

Bridging this disparity gap is a challenge. It will require innovative and sustained efforts at multiple levels to translate, tailor, and deliver effective asthma care to diverse populations in line with the recommendations of the EPR-3 guidelines and its companion GIP Report. All stakeholders involved in controlling asthma have a role to play in reducing asthma-related health disparities.

Sources:

1. Centers for Disease Control and Prevention. *Asthma prevalence, health care use and mortality: United States, 2003-05.*

2. Heron MP, Hoyert DL, Murphy SL, Xu JQ, Kochanek KD, Tejada-Vera B. *Deaths: Final Data for 2006. National vital statistics reports; vol 57 no 14. Hyattsville, MD: National Center for Health Statistics. 2009.*

3. Akinbami LJ, Moorman JE, Garbe PL, Sondik EJ. *Status of Childhood Asthma in the United States, 1980–2007. Pediatrics. 2009 Mar;123 Suppl 3:S131-45.*

4. Chearley, FM. *Asthma Preventive Medicine in 2006—Who Takes Them? Statistical Brief #237. March 2009. Agency for Healthcare Research and Quality, Rockville, MD.*

Appendix 6— Mississippi Asthma Laws

MISSISSIPPI LAW ALLOWING STUDENTS TO SELF-ADMINISTER ASTHMA MEDICATION

MISSISSIPPI LEGISLATURE REGULAR SESSION 2003

By: Representatives Moody, Fleming

HOUSE BILL NO. 1072

(As Sent to Governor)

1 AN ACT TO PERMIT PUBLIC AND NON-PUBLIC SCHOOL STUDENTS TO
2 SELF-ADMINISTER ASTHMA MEDICATIONS, IF CERTAIN REQUIREMENTS ARE
3 MET;AND FOR RELATED PURPOSES.

4 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MISSISSIPPI:

5 **SECTION I.** (1) The school board of each local public school
6 district and the governing body of each private and parochial
7 school or school district shall permit the self-administration of
8 medications by a student if the student's parent or guardian:

9 (a) Provides written authorization for
10 self-administration to the school; and

11 (b) Provides a written statement from the student's
12 health care practitioner that the student has asthma and has been
13 instructed in self-administration of asthma medications. The
14 statement shall also contain the following information:

15 (i) The name and purpose of the medications;

16 (ii) The prescribed dosage;

17 (iii) The time or times the medications are to be
18 regularly administered and under what additional special
19 circumstances the medications are to be administered; and

20 (iv) The length of time for which the medications
21 are prescribed.

22 (2) The statements required in subsection (1) of this
23 section shall be kept on file in the office of the school nurse or
24 school administrator.

25 (3) The school district or the governing body of each
26 private and parochial school or school district shall inform the
27 parent or guardian of the student that the school and its
28 employees and agents shall incur no liability as a result of any
29 injury sustained by the student from the self-administration of
30 asthma medications. The parent or guardian of the student shall
31 sign a statement acknowledging that the school shall incur no
32 liability and the parent or guardian shall indemnify and hold
33 harmless the school and its employees against any claims relating
34 to the self-administration of asthma medications.

Appendix 6— Mississippi Asthma Laws

35 (4) The permission for self-administration of medications
 36 shall be effective for the school year in which it is granted and
 37 shall be renewed each following school year upon fulfilling the
 38 requirements of subsections (1) through (3) of this section.
 39 5) Upon fulfilling the requirements of this section, a
 40 student with asthma may possess and use asthma medications when at
 41 school, at a school-sponsored activity, under the supervision of
 42 school personnel or before and after normal school activities
 43 while on school properties including school-sponsored child care
 44 or after-school programs.
 45 **SECTION 2.** This act shall take effect and be in force from
 46 and after July 1, 2003.

MISSISSIPPI COMPREHENSIVE SCHOOL ASTHMA LAW

MISSISSIPPI LEGISLATURE REGULAR SESSION 2010

By: Senator(s) Carmichael, King, Burton, Watson, Jordan, Blount, Flowers, Harden, Lee (35th), Davis, Yancey, Hopson
 SENATE BILL NO. 2393 (As Sent to Governor)

1 AN ACT TO AMEND SECTION 41-79-31, MISSISSIPPI CODE OF 1972,
 2 TO CLARIFY THE POLICY FOR THE POSSESSION AND SELF-ADMINISTRATION
 3 OF PRESCRIPTION ASTHMA AND/OR ANAPHYLAXIS MEDICATION BY PUBLIC AND
 4 NON-PUBLIC SCHOOL STUDENTS WHILE ON SCHOOL PROPERTY OR AT SCHOOL
 5 ACTIVITIES; TO REQUIRE THE STATE DEPARTMENT OF EDUCATION TO
 6 REQUIRE ALL SCHOOL DISTRICTS TO TAKE CERTAIN ACTIONS RELATING TO
 7 CHILDREN WITH ASTHMA; AND FOR RELATED PURPOSES.
 8 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MISSISSIPPI:

9 **SECTION 1.** Section 41-79-31, Mississippi Code of 1972, is
 10 amended as follows:

11 41-79-31. (1) The school board of each local public school
 12 district and the governing body of each private and parochial
 13 school or school district shall permit the self-administration of
 14 asthma and anaphylaxis medication pursuant to the requirements of
 15 this section.

16 * * *

17 (2) As used in this section:

18 (a) "Parent" means parent or legal guardian.

19 (b) "Asthma and anaphylaxis medication" means inhaled
 20 bronchodilator and auto-injectable epinephrine.

21 (c) "Self-administration of prescription asthma and/or
 22 anaphylaxis medication" means a student's discretionary use of
 23 prescription asthma and/or anaphylaxis medication.

Appendix 6— Mississippi Asthma Laws

24 (3) A student with asthma and/or anaphylaxis is entitled to
 25 possess and self-administer prescription asthma and/or anaphylaxis
 26 medication while on school property, on school provided
 27 transportation, or at a school-related event or activity if:
 28 (a) The prescription asthma and/or anaphylaxis
 29 medication has been prescribed for that student as indicated by
 30 the prescription label on the medication;
 31 (b) The self-administration is done in compliance with
 32 the prescription or written instructions from the student's
 33 physician or other licensed health care provider; and
 34 (c) A parent of the student provides to the school:
 35 (i) Written authorization, signed by the parent,
 36 for the student to self-administer prescription asthma and/or
 37 anaphylaxis medication while on school property or at a
 38 school-related event or activity;
 39 (ii) A written statement, signed by the parent, in
 40 which the parent releases the school district and its employees
 41 and agents from liability for an injury arising from the student's
 42 self-administration of prescription asthma and/or anaphylaxis
 43 medication while on school property or at a school-related event
 44 or activity unless in cases of wanton or willful misconduct;
 45 (iii) A written statement from the student's
 46 physician or other licensed health care provider, signed by the
 47 physician or provider, that states:
 48 1. That the student has asthma and/or
 49 anaphylaxis and is capable of self-administering the prescription
 50 asthma and/or anaphylaxis medication;
 51 2. The name and purpose of the medication;
 52 3. The prescribed dosage for the medication;
 53 4. The times at which or circumstances under
 54 which the medication may be administered; and
 55 5. The period for which the medication is
 56 prescribed.
 57 (4) The physician's statement must be kept on file in the
 58 office of the school nurse of the school the student attends or,
 59 if there is not a school nurse, in the office of the principal of
 60 the school the student attends.
 61 (5) If a student uses his/her medication in a manner other
 62 than prescribed, he/she may be subject to disciplinary action
 63 under the school codes. The disciplinary action shall not limit
 64 or restrict the student's immediate access to the medication.
 65 **SECTION 2.** (1) The State Department of Education shall
 66 require each public school district to take the following actions
 67 relating to the management of asthma in the school setting:

Appendix 6— Mississippi Asthma Laws

- 68 (a) Recommend that each child with asthma have a
 69 current asthma action plan (AAP) on file at the child’s school for
 70 the 2010-2011 school year, and require that each child with asthma
 71 have a current AAP on file at the child’s school for the 2011-2012
 72 school year and each school year thereafter, for use by the school
 73 nurse, teachers and staff. Parents and guardians of a child with
 74 asthma are to have the child’s AAP developed and signed by the
 75 child’s health care provider. The AAP should include the child’s
 76 asthma severity classification, current asthma medication and
 77 emergency contact information. The AAP must be updated annually.
- 78 (b) Adopt an emergency protocol that includes
 79 instructions for all school staff to follow in case of a major
 80 medical emergency for asthma and all other life-threatening
 81 diseases.
- 82 (c) Fully implement Section 41-79-31, which authorizes
 83 the self-administration of asthma medication at school by
 84 students.
- 85 (d) Provide comprehensive, in-service training on
 86 asthma for teachers, assistant teachers, school nurses,
 87 administrators, and operations, maintenance and support staff.
 88 The training should include instruction on the use of AAPs, the
 89 requirements of Section 41-79-31, emergency protocols for asthma
 90 and policies in effect in that school relating to asthma.
- 91 (e) Require school nurses to attend certified asthma
 92 educators training. The cost of the training required for school
 93 nurses shall be paid by the American Lung Association.
- 94 (f) Require local school health councils to conduct a
 95 school health needs assessment that addresses and supports the
 96 implementation of the following: healthy school environment,
 97 physical activity, staff wellness, counseling/psychological
 98 services, nutrition services, family/community involvement, health
 99 education and health services. The results of the assessment must
 100 be used in the development of long-range maintenance plans that
 101 include specific indoor air quality components for each school
 102 building. The long-range maintenance plans must be included in
 103 the local school wellness policy. The long-range plans must be
 104 completed before January 1, 2012.
- 105 (g) Require local school health councils to adopt and
 106 support the implementation of a local school wellness policy that
 107 includes minimizing children’s exposure to dust, gases, fumes and
 108 other pollutants that can aggravate asthma in the school setting.
 109 The policy must require the air quality and ventilation systems of
 110 schools to be assessed annually, which assessment may be
 111 accomplished with the Environmental Protection Agency’s Tools for

Appendix 6— Mississippi Asthma Laws

112 Schools Indoor Air Quality Checklist. The policy also must
 113 prohibit the use of hazardous substances such as, but not limited
 114 to, chemical cleaning products and pesticides in and around school
 115 buildings during the hours that children are present at school.

116 The policy must require all school construction projects to
 117 implement containment procedures not later than July 1, 2012, for
 118 dusts, gases, fumes and other pollutants that trigger asthma.

119 (h) Implement an integrated pest management program
 120 that includes procedural guidelines for pesticide application,
 121 education of building occupants and inspection and monitoring of
 122 pesticide applications. The integrated pest management program
 123 may limit the frequency, duration and volume of pesticide
 124 application on school grounds.

125 (i) Require school bus operators to minimize the idling
 126 of school bus engines to prevent exposure of children and adults
 127 to diesel exhaust fumes.

128 (j) Require coaches and physical education teachers to
 129 participate in the American Lung Association Coaches Care/Asthma
 130 101 training by the 2011-2012 school year, subject to funding by
 131 the school district.

132 (2) This section shall stand repealed on July 1, 2014.

133 **SECTION 3.** This act shall take effect and be in force from
 134 and after July 1, 2010.

Appendix 7— Asthma Resource Websites

ASTHMA RESOURCE WEBSITES

Allergy and Asthma Network, Mothers of Asthmatics (AANMA)
www.aanma.org

American Academy of Allergy Asthma & Immunology (AAAAI)
www.aaaai.org

American Academy of Family Physicians (AAFP)
www.aafp.org

American Academy of Pediatrics (AAP)
www.aap.org

Asthma and Allergy Foundation of America (AAFA)
www.aafa.org

American College of Chest Physicians
www.chestnet.org/accp

American Thoracic Society
www.thoracic.org

CDC's National Center for Environmental Health (NCEH)
www.cdc.gov/nceh/

Global Initiative for Asthma
www.ginasthma.com

National Heart, Lung, and Blood Institute (NHLBI)
www.nhlbi.nih.gov

U.S. Environmental Protection Agency (EPA)
www.epa.gov

Appendix 8— Acronyms

ACRONYMS

Asthma Coalition of Mississippi	ACM
Asthma Action Plan	AAP
American Lung Association	ALA
Behavioral Risk Factor Surveillance System	BRFSS
Community Based Organizations	CBO
Centers for Disease Control and Prevention	CDC
Department of Environmental Quality	DEQ
Emergency Department	ED
Environmental Protection Agency	EPA
Expert Panel Report 3	EPR-3
Faith Based Organization	FBO
Forced Expiratory Volume in One Second	FEV1
Healthy People 2020	HP 2020
Indoor Air Quality	IAQ
Inhaled Corticosteroid	ICS
Integrated Pest Management	IPM
Long Acting Beta	LABA
Meter Dose Inhaler	MDI
Mississippi State Department of Education	MDE
Mississippi Department of Environmental Quality	MDEQ
Mississippi State Department of Health	MSDH
National Asthma Education and Prevention Program	NAEPP
National Asthma Educator Certification Board	NAECB
National Heart Lung and Blood Institute	NHBLI
National Institutes of Health	NIH
Primary Care Physician	PCP
Youth Risk Behavior Surveillance System	YRBSS

Appendix 9—Glossary

GLOSSARY

ACUTE

Having a short and relatively severe course.

ADHERENCE

The faithful following of an asthma management plan by the patient. It typically refers to the degree to which the patient takes his/her medication(s) as prescribed.

AIRWAY OBSTRUCTION

Reduced airflow in the airways. It can be caused by acute narrowing of the airways, or by edema, mucus plug formation, or airway remodeling.

AIRWAY REMODELING

Structural changes that are unlikely to be reversible, resulting from continued inflammation seen in chronic asthma. Permanent changes include continued loss of epithelial cells, deposition of subbasement membrane collagen, and increased muscle mass and blood vessels.

ALLERGEN

The source of an allergy-producing substance, the allergy-producing substance itself, or one or more of the specific proteins that make up the substance and provoke the immune response, including IgE antibodies. Allergens are often common, usually harmless substances such as pollen, mold spores, animal dander, dust, foods, insect venoms, and drugs.

ASTHMA

A chronic inflammatory disease of the airways characterized by airway obstruction, which is at least partially reversible with or without medication, and manifests as increased bronchial responsiveness to a variety of stimuli.

ASTHMA ACTION PLAN (AAP)

A written, easy-to-understand description of how to manage an asthma exacerbation, including information that outlines the early signs of worsening asthma, the medications to use and how to use them, and specific instructions for when to contact the clinician or emergency department.

ASTHMA SELF-MANAGEMENT

Provided with the necessary information, tools, resources, therapeutic regimen, and asthma care plan, the ability for an individual to exercise their knowledge of their condition and acquired skills to effectively monitor, make decisions, and implement appropriate measures regarding their asthma care, including when to seek further medical attention.

ATTACK

An acute episode of asthma in which the airways leading to the lungs become obstructed and breathing becomes difficult.

BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS)

A state-based, system of health surveys that collects information on health risk behaviors, preventative health practices and health care access primarily related to chronic disease and injury.

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BRONCHOPROVOCATION INHALATION TEST

A pulmonary function test performed on patients with a history of asthma who have normal pulmonary function at rest.

CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)

The lead federal agency of the U.S. for protecting the health and safety of people – at home and abroad, providing credible information to enhance health decisions, and promoting health through strong partnerships. CDC serves as the national focus for developing and applying disease prevention and control, environmental health, and health promotion and education activities designed to improve the health of the people of the United States.

CERTIFIED ASTHMA EDUCATOR (AE-C)

A certified asthma educator is a credential health care professional who has expertise and skills to educate patients about their asthma. This expertise and skills are verified through a national certification exam.

CHRONIC

Persisting over a long period of time.

CHRONIC OBSTRUCTIVE PULMONARY DISEASE

A group of chronic lung diseases characterized predominantly by an irreversible reduction in airflow. Emphysema and bronchitis are examples, while asthma is not.

COMMUNITY

A group of people who have common characteristics. Communities can be defined by location, race, ethnicity, age occupation, interest in particular problems or outcomes, or other common bonds. Ideally, there should be available assets and resources, as well as collective discussion, decision making, and action.

DISPARITY

Health disparities are differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups.

COALITION

A combination of groups drawn together, usually temporarily, for a common purpose.

DUST MITE

A microscopic, often transparent insect that lives in bedding, carpeting and stuffed toys. When inhaled it can produce an allergic reaction leading to inflammation in the lung.

ENVIRONMENTAL PROTECTION AGENCY (EPA)

The federal agency whose mission is to protect human health and to safeguard the natural environment — air, water, and land — upon which life depends. EPA provides leadership in the nation's environmental science, research, education and assessment efforts. EPA works closely with other federal agencies, state and local governments, and Indian tribes to develop and enforce regulations under existing environmental laws. EPA is responsible for researching and setting national standards for a variety of environmental programs and delegates to states and tribes responsibility for issuing permits, and monitoring and enforcing compliance.

EPIDEMIOLOGY

The study of the distribution and determinants of disease in populations.

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EPISODE

A significant event or occurrence in the course of an illness, such as an acute asthma attack.

EXACERBATION

Period of unstable, worsening asthma generally characterized by increased coughing, wheezing, and/or a decrease in pulmonary function.

EXERCISE-INDUCED ASTHMA

Asthma symptoms that are triggered by exercise or physical activity. These symptoms are usually noticed during or shortly after exercise.

FORCED EXPIRATORY VOLUME

The amount of air that is forcefully exhaled during the first second of exhalation after maximal inspiration. It is used as a measure of lung function.

HEALTH LITERACY

Health literacy is the degree to which individuals can obtain, process, and understand the basic health information and services they need to make appropriate health decisions

HEALTHY PEOPLE 2020 (HP 2020)

The national disease prevention and health promotion agenda that includes a statement of 476 national health objectives to be achieved by 2020. One of the two over arching goals is to eliminate health disparities.

HEALTH CARE PROFESSIONAL

Licensed and highly trained medical professionals such as physicians, certified nurse practitioners, pharmacist, physician assistants and nurses, who provide medical services in the areas of prevention, treatment and management of illness.

HOLDING CHAMBER

A device used with a metered-dose inhaler to increase the amount of active drug inhaled into the lungs and to decrease the amount deposited in the mouth and throat; also known as a “spacer.”

INHALED CORTICOSTEROID

The most potent and effective inhaled anti inflammatory agent currently available. Inhaled form is used as a controller medicine for long term control of asthma.

INFLAMMATION

A generally localized response to injury or destruction of tissues leading to a complex series of events such as tissue swelling and secretion of numerous substances, including mucus.

IRRITANT

Inhaled substance in the environment such as diesel exhaust, perfume, ETS and tobacco smoke that may cause an asthma attack.

LOGIC MODEL

A logic model is a planning tool to clarify and graphically display what a project intends to do and what it hopes to accomplish and impact.

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MEDICAID DATA

Information related to persons who receive medical aid as part of a program designed for those unable to afford regular medical service and that is financed jointly by the state and federal governments.

MEDICARE DATA

Information related to older persons, ie., generally over the age of 65 years, who receive medical care that is financially supported by the federal government.

MILD INTERMITTENT

A classification of asthma severity based on clinical features. Daytime symptoms occur two or fewer times per week and nighttime symptoms occur two or fewer times a month. Pulmonary function is normal. This is the mildest form of asthma.

MILD PERSISTENT A classification of asthma severity based on clinical features. Daytime symptoms occur three to six times per week, but pulmonary function is normal.

MODERATE PERSISTENT

A classification of asthma severity based on clinical features. Daytime and/or nighttime symptoms occur daily and/or pulmonary function is reduced to 60% to 80 % of normal.

MORBIDITY

Generally refers to the consequences of a disease or its treatment.

MUCUS

The slimy material of the mucous membranes that consists of various substances and cells. Often produced in excess during inflammation.

NATIONAL ASTHMA EDUCATION AND PREVENTION PROGRAM (NAEPP)

An initiative established by the National Heart Lung and Blood Institute (NHLBI) for the purpose of developing and disseminating guidelines for asthma diagnosis and management.

NATIONAL HEART LUNG AND BLOOD INSTITUTE (NHLBI)

A part of the National Institutes of Health that provides leadership for a national program in diseases of the heart, blood vessels, lung, blood, and sleep disorders. The Institute plans, conducts, fosters, and supports an integrated and coordinated program of basic research, clinical investigations and trials, observational studies, and demonstration and education projects.

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

A part of the Centers for Disease Control and Prevention (CDC), the National Institute for Occupational Safety and Health is the federal agency responsible for conducting research and making recommendations regarding the prevention of work-related disease and injury.

NATIONAL INSTITUTES OF HEALTH (NIH)

An agency of the Department of Health and Human Services, the National Institutes of Health is the steward of medical and behavioral research for the U.S. Its mission is science in pursuit of fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to extend healthy life and reduce the burdens of illness and disability.

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NEBULIZER

A device for creating and administering an aerosol spray through the mouth.

OZONE

A chemical derived from oxygen that is irritating and toxic to the respiratory system.

PEAK EXPIRATORY FLOW RATE

The maximum velocity with which air comes out of the lungs during a rapid expiration following a maximum inspiration.

PEAK FLOW METER

A hand-held instrument that measures peak expiratory flow rate and is used to monitor asthma course and treatment.

PEF VARIABILITY

The difference between the highest and lowest peak expiratory flow rates in a 24 hour period. It is used as a measure of asthma severity.

PERENNIAL INDOOR ALLERGENS

Substances found indoors year round that can cause an allergic reaction or exacerbate asthma, such as house dust mites, mold, mildew and cockroaches.

PREVALENCE

The number of people in a specified group with active disease, eg., asthma, within a defined period of time.

PREVALENCE DATA

Information related to the prevalence of a disease.

PREVENTION

Anticipatory action taken to prevent the occurrence of an adverse health event or to minimize its effects after it has occurred.

PULMONARY

Relating to the lungs.

SECONDHAND SMOKE

Passive exposure to smoke, usually tobacco.

SEVERE PERSISTENT

A classification of asthma severity based on clinical features. Daytime symptoms are “continual,” nighttime symptoms are “frequent,” and pulmonary function may be less than 60% of normal. This is the most severe form of asthma.

SPACER

A device used with a metered-dose inhaler to increase the amount of active drug inhaled into the lungs and to decrease the amount deposited in the mouth and throat; also known as a “holding chamber.”

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SPIROMETRY

The preferred method to measure airway obstruction and its degree of reversibility for the purpose of diagnosing and characterizing the severity of asthma.

STATEWIDE PARTNERSHIP

A group of organizations within a state with local, county, and state representation that work together for a common purpose.

SURVEILLANCE

The ongoing systematic collection, analysis, interpretation, and timely dissemination of health data for the purpose of monitoring trends in the disease and its management so as to improve, prevent or better control the disease within the population.

SURVEILLANCE SYSTEM

Adults designed to monitor the prevalence of the major behavioral risks associated with premature morbidity and mortality among adults.

SYSTEMS CHANGE

The process of improving the capacity of the public health system to work with many sectors to improve the health status of all people in a community.

TRIGGER

A factor that may bring on or increase the signs and symptoms of asthma.

WHEEZING

A whistling noise with a high pitch sometimes heard in asthma, especially during an acute attack. It is due to the movement of air through narrowed airways.

WORK RELATED ASTHMA

Asthma that develops after exposure to sensitizers or irritants in the workplace or aggravated by exposures in the workplace.

YOUTH RISK BEHAVIOR SURVEILLANCE (YRBSS)

A surveillance system developed by CDC that includes national, state, and local school-based surveys of middle- and high school students used to monitor priority health risk behaviors typically developed during childhood and early adolescence. These health risk behaviors contribute markedly to the leading causes of death, disability, and social problems among youth and adults in the United States.

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American Lung Association

Our Credo

We will breathe easier when the air in every American community is clean and healthy.

We will breathe easier when people are free from the addictive grip of tobacco and the debilitating effects of lung disease.

We will breathe easier when the air in our public spaces and workplaces is clear of secondhand smoke.

We will breathe easier when children no longer battle airborne poisons or fear an asthma attack.

Until then, we are fighting for air.



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MISSISSIPPI STATE ASTHMA PLAN

A Collaborative Health Approach

