



STATE OF MARYLAND
DHMH

Maryland Department of Health and Mental Hygiene
201 W. Preston Street • Baltimore, Maryland 21201

Martin O'Malley, Governor – Anthony G. Brown, Lt. Governor – Laura Herrera Scott, MD, MPH, Acting Secretary

January 20, 2015

The Honorable Martin O'Malley
Governor
100 State Circle
Annapolis, MD 21401-1991

The Honorable Joan Carter Conway, Chair
Senate Education, Health, and Environmental
Affairs Committee
2 West Wing, Miller Senate Office Building
Annapolis, MD 21401-1991

The Honorable Kumar P. Barve, Chair
House Environment and Transportation
Committee
House Office Building, Room 251
Annapolis, MD 21401-1991

Children's Environmental Health and Protection Advisory Council
Dr. Clifford S. Mitchell, Chair
201 W. Preston Street
Baltimore, MD 21201

RE: HB 420 (Ch. 366) of the Acts of 2002 - 2014 Legislative Report of the Maryland Asthma Control Program

Dear Governor O'Malley, Chair Conway, Chair Barve, and Dr. Mitchell:

Pursuant to House Bill 420, Chapter 366 of the Acts of 2002, the Department of Health and Mental Hygiene is directed to submit this annual legislative report on the activities of the Maryland Asthma Control Program.

If you should have any questions or comments, please do not hesitate to contact Ms. Allison Taylor, Director of Governmental Affairs at 410-767-6480.

Sincerely,

Laura Herrera Scott, M.D., M.P.H.
Acting Secretary

Enclosure

cc: Allison Taylor, Director, Office of Governmental Affairs
Michelle Spencer, Director, Prevention and Health Promotion Administration
Sarah Albert, MSAR #1594

DEPARTMENT OF HEALTH AND MENTAL HYGIENE

Maryland Asthma Control Program

2014 ANNUAL REPORT
HOUSE BILL 420, CHAPTER 366, OF THE ACTS OF 2002

Martin O'Malley
Governor

Anthony G. Brown
Lieutenant Governor

Laura Herrera Scott, M.D., M.P.H.
Acting Secretary

Background

Asthma is a serious but controllable chronic lung disease caused by airway inflammation and constriction, which results in wheezing, chest tightness, cough, and shortness of breath.¹ Individuals with asthma can typically manage their condition through the avoidance of triggers (e.g., dust mites, cockroaches, pet dander), appropriate use of medications, and receipt of primary health care, with specialty consultation as needed. Uncontrolled asthma can lead to frequent and often preventable emergency department visits, hospitalizations, and even death. In 2012, an estimated 606,500 (13.4%) Maryland adults and 232,100 (17.3%) Maryland children had a history of asthma.²

Pursuant to Health-General Article, §§13-1701--06, Annotated Code of Maryland, the Department of Health and Mental Hygiene (the Department) established the Maryland Asthma Control Program (the Program). The Program is mandated to:

1. Establish a Statewide asthma coalition composed of individuals and organizations with an interest in asthma;
2. Develop and finalize a comprehensive Statewide asthma plan;
3. After finalization of the development of the Statewide asthma plan, implement a Statewide asthma intervention program;
4. Develop and organize collaborative relationships with asthma control and stakeholders within other State and local agencies and in the private sector;
5. Develop and implement an asthma surveillance system;
6. Identify mechanisms for the utilization of surveillance data in identifying interventions to control asthma;
7. Identify and promote educational programs for providers, parents, guardians, caregivers, and asthma patients that include information on identifying symptoms of asthma, effective treatment for asthma, and methods of preventing asthma; and
8. Identify sources of grant funding for the Asthma Control Program.

The Program's goals are to: (1) decrease the prevalence of asthma and the occurrence of its complications in Maryland; and (2) decrease disparities in health outcomes related to asthma in all parts of the State. In an effort to achieve these goals the Program has developed an asthma control plan, built a surveillance system, and implemented several initiatives.

The Program is administered by the Environmental Health Bureau of the Prevention and Health Promotion Administration at the Department. Until August of 2014, funding for asthma activities was provided primarily through a grant awarded by the Centers for Disease Control and Prevention (CDC) to address asthma from a public health perspective. In September 2014, grant funding was not renewed. Half of all previously funded CDC asthma programs across the country were not re-funded in September 2014, including those in Maryland.

¹ Centers for Disease Control and Prevention, National Center for Environmental Health, Air Pollution and Respiratory Health Branch, National Asthma Control Program. Asthma Breathing Easier. Accessed in 2014 at http://www.cdc.gov/asthma/pdfs/breathing_easier_brochure.pdf.

² Maryland Department of Health and Mental Hygiene. Maryland Behavioral Risk Factor Surveillance System Data, 2001-2012. Baltimore, MD: Maryland Department of Health and Mental Hygiene; Accessed and analyzed in 2014.

Maryland Asthma Coalition

The Program works closely with the Maryland Asthma Coalition (the Coalition) to achieve its objectives. The Coalition promotes strong collaboration and partnership building among asthma stakeholders. Coalition members represent the health care community, public health agencies, health organizations, physician organizations, community health centers, and professionals in education. The Coalition's purpose is to provide a common vision for individuals, organizations, and communities to address the burden of asthma in Maryland through information sharing, networking, and teaching. The Coalition's primary functions include advising the Department on asthma-related issues, facilitating networking opportunities between asthma stakeholders, and increasing awareness of asthma and proper asthma management. In 2014, the Coalition carried out activities focused on outreach, education to clinical providers and caregivers, and trigger reduction in the environment. During meetings in the Spring of 2014, the Coalition discussed the pending changes in CDC funding and what this would mean for the Coalition. The loss of primary funding from the CDC will require the Coalition to take steps to becoming more independent from the Program in order to continue its work of improving asthma management and prevention efforts across the State.

Maryland Asthma Control Plan

Given changes brought about by health care reform and other State efforts, the Maryland Asthma Control Plan will need to be completely revised. The Program collected input from key stakeholders for inclusion in Maryland's current Asthma Control Plan, *Maryland Asthma Control Plan for 2010-2015: An Action Agenda*. The revised and updated version of the plan will be available online and will be more integrated with the State Health Improvement Process (SHIP) and local health improvement processes. Because of the lack of dedicated asthma funding, evolving Medicaid reimbursement policies and the need to re-engage stakeholders in the Maryland Asthma Control Plan revision, we anticipate the revised plan will be available in 2016.

Maryland Asthma Surveillance

Surveillance informs activities and outreach of the Maryland Asthma Control Program. Asthma-related surveillance data includes: prevalence estimates, emergency department visit rates, hospitalization rates, mortality rates, health disparity ratios, health behaviors, and health care costs. This data is collected, analyzed, and reported from the CDC Behavioral Risk Factor Surveillance System, the Behavioral Risk Factor Surveillance System Asthma Call Back Survey, the Maryland Health Services Cost Review Commission's outpatient and hospital discharge datasets, and the Maryland Vital Statistics Administration dataset. Asthma reports are created from these analyses and are available on the Maryland Asthma Control Program website: <http://phpa.dhmh.maryland.gov/mch/SitePages/asthma.aspx>.

Asthma is a chronic health problem with high prevalence, morbidity, and mortality rates throughout Maryland and nationwide. In 2012, the asthma prevalence among Maryland children (10.5%) was statistically comparable to the asthma prevalence among all children living in the

United States (8.9%).^{3,4} The 2012 age-adjusted asthma-related mortality rate in Maryland was 15.0 deaths per million population with asthma as an underlying cause only, and 23.6 deaths per million population with asthma as either an underlying or contributing cause.⁵ Asthma-related mortality affected a total of 229 Maryland residents in 2012.

Poorly managed asthma takes a substantial financial toll on individuals, the health care system, and society.⁶ In 2012, billed charges for hospitalizations due to asthma totaled \$63.8 million; billed charges for emergency department visits due to asthma totaled an additional \$36.6 million.⁷ These 2012 costs resulted from 42,289 asthma-related emergency department visits (age-adjusted rate of 75.4 per 10,000 residents) and 9,189 asthma-related hospitalizations (age-adjusted rate of 15.5 per 10,000 residents). The combined billed charges of \$100.4 million dollars are largely preventable with proper asthma care and control.

Asthma-related health disparities exist with respect to asthma prevalence and outcomes. Asthma affects persons of all ages, races, ethnicities, and genders. However, children, minorities, women, as well as those of lower socioeconomic status disproportionately bear the burden of asthma.⁸ In the United States, African Americans die from asthma at a rate more than twice that of Caucasians.⁹ African-American children are also more likely than Caucasian children to be diagnosed with asthma.¹⁰ In general, children less than five years old with asthma have disproportionate numbers of asthma-related hospitalizations and emergency department visits compared with older persons having asthma. In 2012, the hospitalization rate for children less than 5 years old was 37.6 per 10,000 population compared with 22.1 per 10,000 population for adults aged 65 years and older.¹¹ The emergency department visit rate for children less than 5 years old was 187.0 per 10,000 population in 2012 compared with an emergency department visit rate of 18.7 per 10,000 population for adults aged 65 years and older.

Public health interventions are essential to reducing both the health and financial burden of asthma. The Department shares data briefs and surveillance reports with Maryland Asthma Coalition members, State and local agencies, schools, and other stakeholders to highlight trends, showcase progress, and determine unmet needs. The Program will continue to work closely with the Maryland Environmental Public Health Tracking Program, which governs the Environmental

³ *Id* fn 2.

⁴ Centers for Disease Control and Prevention, National Center for Environmental Health, Air Pollution and Respiratory Health Branch. Child Current Asthma Prevalence Rate (Percent) and Prevalence (Number) by State or Territory: BRFSS 2012. Accessed in 2014 at <http://www.cdc.gov/asthma/brfss/2012/child/c1.pdf>.

⁵ Maryland Department of Health and Mental Hygiene. Maryland Vital Statistics Data, 1989-2012. Baltimore, MD: Maryland Vital Statistics Administration; Accessed and analyzed in 2014.

⁶ James, CV and Rosenbaum, S. Paying for quality care: implications for racial and ethnic health disparities in pediatric asthma. *Pediatrics*, 123 (S3), March 2009.

⁷ The Maryland Health Services Cost Review Commission. Maryland Health Services Cost Review Commission Data, 2001-2012. Baltimore, MD; The Maryland Health Services Cost Review Commission; Accessed in 2014.

⁸ *Id* fn 1.

⁹ Centers for Disease Control and Prevention, National Center for Health Statistics. Deaths: Final data for 2011. National Vital Statistics Reports, 63(3), forthcoming; Hyattsville, MD. Accessed in 2014 at http://www.cdc.gov/nchs/data/nvsr/nvsr63/nvsr63_03.pdf.

¹⁰ *Id* fn 2.

¹¹ The Maryland Health Services Cost Review Commission. Maryland Health Services Cost Review Commission Data, 2001-2012. Baltimore, MD; The Maryland Health Services Cost Review Commission; Accessed in 2014.

Public Health Tracking Surveillance System, to increase awareness of the negative impact that both indoor and outdoor environmental air pollution has on the exacerbation of asthma symptoms. Due to the loss of grant funding to support a Program epidemiologist, the Program will utilize the Environmental Public Health Tracking Surveillance System as the primary system for capturing and analyzing asthma data. The Program will also continue to explore and analyze data regarding improved medical management of asthma, reduced environmental triggers, and decreased geographical burden of specific regions throughout the State.

Interventions to Reduce the Burden of Asthma in Maryland

Through September 2014, the Program continued to support interventions that contribute to a reduction in asthma-related morbidity and mortality. In an effort to reduce asthma disparities, activities have been prioritized based upon populations with the greatest need, as identified by the asthma surveillance system. Interventions have been focused on: (1) outreach and education; (2) environmental trigger reduction; and (3) management and control. Those interventions include the following activities:

(1) Outreach and Education

Local Health Departments

The Baltimore City Health Department is funded by the Program to lead the Greater Baltimore Asthma Alliance. The Greater Baltimore Asthma Alliance is comprised of local university, health, and non-profit professionals, along with parents and caregivers of those with asthma. The Greater Baltimore Asthma Alliance created a strategic plan to address the burden of asthma within Baltimore City and in surrounding jurisdictions. This group meets monthly and conducts outreach events throughout the year. Over 1,000 stakeholders received asthma resources and educational materials. The Baltimore City Health Department as a leader in the Greater Baltimore Asthma Alliance focused its efforts on increasing the number of asthma-friendly schools in Baltimore. In 2014, 10 of 17 schools successfully reapplied and are currently designated Asthma Friendly through the Asthma Friendly School Program. These efforts have been led by a dedicated Baltimore City Health Department staff person, who was hired at the urging of the Greater Baltimore Asthma Alliance. This outreach includes discussion and education for both principals and school nurses, along with providing trainings to staff and maintenance teams regarding asthma best practices and management.

The St. Mary's County Health Department uses funding from the Maryland Asthma Control Program for home visits and efforts to reduce triggers within the home. With referrals from pediatricians and school nurses, a part-time nurse from the St. Mary's County Health Department has visited 15 families to discuss asthma management, trigger reduction, and better asthma control mechanisms. The St. Mary's County initiative, which was also related to health enterprise zones, took advantage of a novel program that integrated the health departments, local pediatricians, and environmental assessments of the homes of children with severe or moderate asthma. This program was successful in establishing a formal relationship between a managed care organization and the local health department to provide reimbursement for the environmental assessments.

(2) Environmental Trigger Reduction

Asthma-Friendly School Program

Asthma affects many Maryland children and adolescents. As mentioned earlier in this report, the Asthma Friendly School Program has partnered with local school districts and health departments to improve asthma awareness and trigger reduction in schools by creating the program. Currently, there are 65 asthma-friendly schools in Maryland located in five jurisdictions. This program will continue throughout the 2014 - 2015 school year using a new application process and revised criteria. Criteria for designation includes education for staff and students regarding asthma management, ensuring classrooms and school buildings are free of environmental triggers of asthma, and data collection on absenteeism and educational outcomes for students with asthma.

Asthma-Friendly Child Care Initiative

Asthma is one of the most common chronic diseases among children, and children under four years old are most severely impacted. Asthma-related illnesses result in frequent emergency department visits and hospitalizations, and can be deadly if not properly managed. However, with proper diagnosis and good asthma care, children with asthma should live normal active lives. Launched in 2012, the goal of the Asthma-Friendly Child Care Initiative is to encourage child care centers and family child care homes to create and sustain safe, supportive, and asthma-friendly environments through providing excellent asthma management, reducing environmental asthma triggers in the child care environment, and providing asthma education and awareness programs for children and staff. Child care providers are trained on the initiative's objectives through a two hour training session. A binder with resource materials is distributed, along with a DVD that outlines the application and implementation process. As of October 2014, over 400 providers have attended a training session in numerous jurisdictions throughout the State. Since the launch of the initiative, 30 child care centers/homes have been designated as "asthma-friendly" – an increase of over 50% from the previous year.

(3) Management and Control

Rx for Asthma Program

Educating health care providers on the standard of care in asthma management decreases unnecessary asthma hospitalizations and increases patient self-management. Education to health care providers about proper management and control must extend to pharmacists and pharmacy staff. The Program has partnered with the University of Maryland School of Pharmacy to create the Rx for Asthma Program. Rx for Asthma provides online instruction and structured lectures about proper asthma management and medication administration. Pharmacists can enroll in the course to access a variety of inhaler demonstrations, instructions on front-line asthma education provided at the pharmacy counter, and suggestions on how to discuss asthma management with both families and physicians. Enrollment of pharmacists in the program has been targeted to specific jurisdictions in Maryland with high asthma hospitalization and prevalence rates. A total of 252 pharmacists and 55 nurses participated in the Rx for Asthma Program offerings during the three year project period. A formal evaluation of the Rx for Asthma Program by the Hilltop Institute determined the program to be successful.

Sustainability and New Directions for 2015

In the wake of health care reform, the Department is reevaluating its approach to asthma. Additionally, with the loss of federal funding, certain initiatives will be scaled back or discontinued while the Department will leverage existing resources to ensure sustainability of other initiatives. Future initiatives and priorities include:

(1) New models of care – The Department is seeking to develop community-integrated medical homes, or extended models of patient-centered medical homes in which health care delivery is more integrated. In the case of asthma, this would involve linkage between the health care provider, parents, school health care services, pharmacies, and community organizations (including the local health department) that integrates medical management, education, and asthma trigger reduction. The Department is actively discussing methods for using reimbursement models that foster this integration in several jurisdictions. The most significant opportunity for collaboration involves partnering with Managed Care Organizations, payors, Medicaid, and other stakeholders to collectively agree on a new model for reimbursement and care delivery, which was discussed at two meetings in 2014. In January a meeting was held at the University of Maryland School of Nursing where stakeholders discussed reimbursement models and opportunities to improve asthma management and outcomes through more effective communication and care integration models. The second meeting occurred in October at the Prince George’s County Health Department, and brought together leaders in asthma and medicine from across the State. As a result of these meetings, the Maryland Asthma Control Program is meeting with the Medicaid program to explore ways of moving these ideas forward.

(2) Increasing the scope, effectiveness, and sustainability of the Maryland Asthma Coalition – The Program has engaged in discussions with the Coalition about ways to strengthen the role of the Coalition in the State’s efforts to reduce the burden of asthma. In 2013, the Coalition began to deliberate possible strategies to strengthen its own role, including strategies that would help make the Coalition less dependent on federal funding of the Program. Moving forward sustainability will be a primary focus of the Coalition given the Program’s current status.

(3) Surveillance system – The Asthma Surveillance System is robust in its ability to collect data and identify hot spots for intervention. In 2014, the surveillance system focused on development of data for the renewal application and data for St. Mary’s County and began to develop additional data with Medicaid which, however, will be delayed due to the lack of funding. The Program will work more collaboratively with other data surveillance systems, such as the Environmental Health Tracking Surveillance System, to more fully understand the impact of the environment on asthma.

The Program recognizes the importance of developing plans to sustain existing efforts for reductions in asthma morbidity and mortality, especially in communities with high rates of asthma disparities. Successful implementation of these plans will require a long-term holistic approach, and appropriate metrics to demonstrate that goals are being reached. The Program will continue discussions with managed care organizations, Local Health Improvement Coalitions, Medicaid, and other stakeholders in addition to key internal collaboration among Department programs to achieve the goal of scaling up and integrating the interventions described in this report across multiple jurisdictions. Part of this effort will be to define appropriate metrics that

measure progress. As evaluation data from the individual interventions are developed in this project year, these data will be used to inform and refine the initiatives discussed in this report. The Program will continue to ensure that asthma is well-managed among all populations, and to work on the goals, objectives, and strategies of the *Maryland Asthma Control Plan*, and utilize surveillance data for priority setting and evaluation to contribute to a reduction in asthma morbidity and mortality throughout Maryland.