Asthma in Michigan 2020-2025: Plans for Action

AIM Asthma Initiative of Michigan

MDHHS Michigan Department of Health & Human Services

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INTRODUCTION & BACKGROUND

The purpose of this plan is to provide direction to the Asthma Initiative of Michigan (AIM) and to guide the use of Michigan Department of Health and Human Services (MDHHS) Asthma Prevention and Control Program (MiAPCP) staff, resources and partnerships. AIM is the collective name for all of the partners working with MiAPCP to address the asthma burden in Michigan. The plan informs the work of agencies, organizations and programs around the state, by providing current asthma data and identifying best practice strategies towards specific goals.

The recognition of asthma as a significant public health problem began in the 1990s; local asthma coalitions formed and in 1998 Michigan received a Centers for Disease Control and Prevention (CDC) asthma surveillance grant that led to increased communication between local asthma coalitions, non-profits, MDHHS, and other partners. With CDC funding in 2000, the MiAPCP began coordinating these efforts to maximize effects. MiAPCP used hospital discharge and mortality data to identify high asthma burden areas, addressed education of providers and patients, asthma management in clinical and community settings, and communicated the burden of asthma across the state. Eventually, based on evaluation outcomes, surveillance data, resources and partner and CDC input, the MiAPCP shifted to a systems and policy change approach with a focus on disparity reduction and health equity.

Priority Asthma Messages

1. *Use inhaled corticosteroids to control asthma.*
2. *Use asthma action plans to guide self-management.*
3. *Assess asthma severity at the first visit.*
4. *Assess and monitor asthma control at each follow-up visit.*
5. *Schedule follow-up visits.*
6. *Control exposure to allergens and irritants.*

*Source: Guidelines Implementation Panel Report: Partners Putting Guidelines into Action URL:*https://www.nhlbi.nih.gov/files/docs/guidelines/gip_rpt.pdf

In accordance with the CDC, clinical efforts are guided by the Expert Panel Report 3 - Guidelines for the Diagnosis and Management of Asthma (URL: https://www.nhlbi.nih.gov/health-topics/guidelines-for-diagnosis-management-of-asthma) and the 2020 Focused Updates to the Asthma Management Guidelines (URL: https://www.nhlbi.nih.gov/health-topics/all-publications-and-resources/2020-focused-updates-asthma-management-guidelines). All Michigan asthma activities are organized around the EXHALE and CCARE initiatives. EXHALE is CDC's technical package (URL: https://www.cdc.gov/asthma/exhale/index.htm) that describes ways that all states can impact the asthma burden: E = education on asthma self-management; X = extinguishing smoking and secondhand smoke; H = home visits for trigger reduction and asthma self-management education; A = achievement of guidelines-based medical management; L = linkages and coordination of care across settings; and E = environmental policies or best practices to reduce asthma triggers from indoor, outdoor and occupational

sources. Controlling Childhood Asthma and Reducing Emergencies (CCARE) (URL: https://www.cdc.gov/asthma/ccare.htm) is a CDC objective to prevent 500,000 emergency department visits and hospitalizations due to asthma in the U.S. by August 31, 2024, and Michigan's work contributes to this goal.

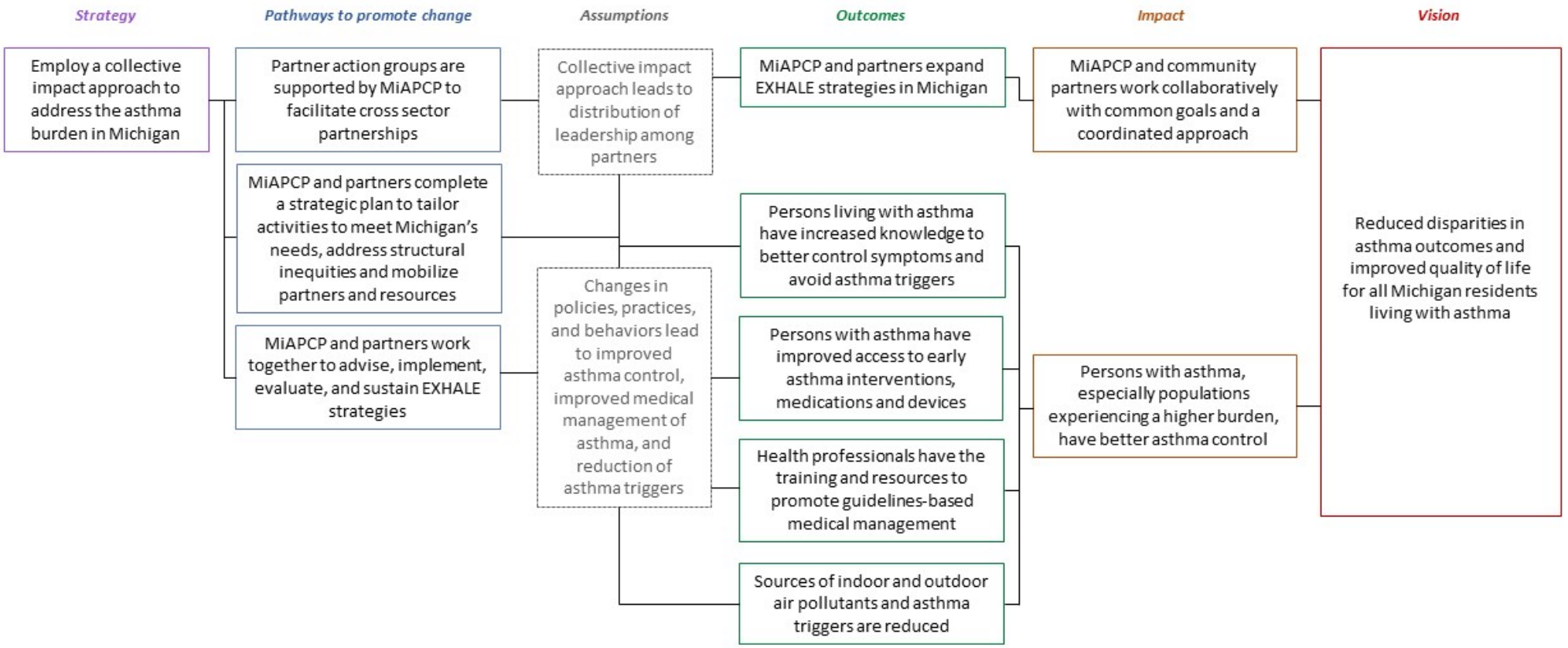
Many best practices and interventions have been developed and implemented over the years by MiAPCP and partners. Information about current interventions, including Managing Asthma Through Case-management in Homes (MATCH – an asthma case management model used by local partners), efforts to improve access to spacers, the Michigan law that allows children to carry their rescue inhaler at school and FLARE asthma emergency department discharge instructions can be found at the MDHHS Asthma webpage (URL: https://www.michigan.gov/asthma). Communicating about these interventions, evaluation outcomes, surveillance findings and other relevant topics has been a priority for the MiAPCP, resulting in a comprehensive partner website, robust MDHHS asthma webpages and valued weekly listserv.

AIM STRATEGIC PARTNERS

AIM is a network of partners that collaborate to accomplish specific strategies and activities. This plan identifies the organizations that have critical information and expertise to help carry out tasks necessary for successful implementation of asthma goals. These organizations include representation from health care professionals, health plan representatives, non-profit organizations, hospital representatives, pharmacists, school staff, state and local public health, universities, and coalition members. Additionally, AIM includes partner action groups (Schools, MATCH, Detroit, Evaluation) that have helped form strategies, implement activities, evaluate, and sustain initiatives. The Advisory Action Group (AAG), a partner collaborative of state asthma clinical and policy leaders representing key sectors and high burden areas, includes members from the Action Groups (Evaluation, Schools, Detroit, MATCH). The AAG convenes yearly to advise MiAPCP on activities, opportunities and emerging issues that align with its work and best practices. The AAG participated in the development of this strategic plan.

The following logic model was developed to illustrate how AIM works to achieve reduced disparities in asthma outcomes and improved quality of life for all Michigan residents living with asthma. By using a collective impact approach, MiAPCP and partners collaborate to mobilize partners and resources, and advise, implement, evaluate, and sustain EXHALE strategies and interventions. This collaborative work will expand EXHALE strategies in Michigan, ultimately producing a body of stakeholders with common goals and a coordinated approach, leading to better asthma control and care for persons living with asthma, particularly within populations experiencing a higher burden of asthma.

COLLABORATIVE APPROACH TO IMPROVE THE ASTHMA BURDEN IN MICHIGAN



EXHALE is a group of strategies developed by the Centers for Disease Control and Prevention (CDC) that represent the best available evidence to improve asthma control and reduce asthma-related hospitalizations, emergency department visits, and healthcare costs. Implemented as a package, the EXHALE strategies help achieve a key national objective, Controlling Childhood Asthma and Reducing Emergencies (CCARE), of reducing pediatric hospitalizations and emergency department visits due to asthma.

E = Education on asthma self-management
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HEALTH EQUITY

The commitment to an equitable approach to asthma control services is an essential value of MiAPCP. We will continue to work to increase access to resources and services to communities experiencing the highest asthma burden. Surveillance data allows MiAPCP to continuously measure both the state's and community's needs and ensure that programming is focused on priority populations. This focused approach for communities with the greatest need will help to decrease asthma disparities.

HEALTH EQUITY RELATED DEFINITIONS

It's important to understand terms such as health equity, health disparities, social determinants of health, and health literacy in order to address Michigan's asthma burden. The definitions below are from Michigan Department of Health and Human Service's Diversity, Equity and Inclusion Plan/Glossary.

- Health Equity – fair, just and equitable distribution of and access to public services, social resources and implementation of public policy necessary to achieve well-being and thrive. It requires removing economic and social obstacles and inequities, such as poverty, discrimination and their consequences, as well as build better outcomes for historically and currently disadvantaged populations.
- Health Disparities – particular types of health differences that are closely linked with social, economic and/or environmental disadvantage. Health disparities adversely affect groups of people who have systematically experienced greater obstacles to health based on their racial or ethnic group; religion; socioeconomic status; gender; age; mental health cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion.
- Social Determinants of Health/Equity – the economic and social conditions and systems that influence the health of individuals and communities. The conditions and systems in/under which people are born, grow, live, work and age, that influence the health and well-being of individuals and communities. Examples include: race/ethnicity, racism/discrimination, social connection and safety, access to reliable transportation, water quality, quality education, criminal justice, safe and affordable housing, job security, availability of nutritious food, etc.

Another important term is health literacy. The U.S. Department of Health and Human Services defines health literacy as "the degree to which individuals have the capacity to obtain, process and understand basic health information needed to make appropriate health decisions."[1] Healthy People 2030 has updated the definition of health literacy by addressing both personal health literacy and organizational health literacy.

- Personal health literacy is the degree to which individuals have the ability to find, understand and use information and services to inform health-related decisions and actions for themselves and others.
- Organizational health literacy is the degree to which organizations equitably enable individuals to find, understand, and use information and services to inform health-related decisions and actions for themselves and others.

MiAPCP is committed to continuing our efforts to increase our understanding of these concepts and use that understanding to take action to address health equity across AIM activities.

HEALTH DISPARITIES IN ASTHMA

Despite advances in asthma treatments, policy efforts and research, inequities in asthma outcomes remain. These inequities are disproportionately distributed across age, race, income, gender, and geographic region. See "Asthma Burden in Michigan" section for data that highlights the disparities in Michigan's asthma burden.

These differences are influenced by multiple factors. According to the Allergy and Asthma Foundation of America[2], disparities in asthma are caused by:

- Structural determinants such as systemic racism, segregation and discriminatory policies.
- Social determinants such as socioeconomic status, education, neighborhood and physical environment, employment, social support networks and access to health care.
- Biological determinants such as genes and ancestry.
- Behavioral determinants such as tobacco use and adherence to medicines.

The burden of asthma disproportionately falls on Blacks and other minority groups. These disparities are largely driven by social determinants and structural inequities.[2] Blacks (poverty rate of 18.8% in 2019) and people of Hispanic origins (poverty rate of 15.7% in 2019) have consistently been the poorest ethnic groups in the U.S. compared to non-Hispanic whites.[3]

Transportation in poor communities is often an obstacle to accessing health care until emergencies arise. Blacks live in some of the country's lowest quality housing which contributes to unfavorable asthma outcomes. Also, Blacks are significantly more likely to reside near sources of air pollution which further worsens their asthma outcomes.[4]

MiAPCP is committed to addressing asthma disparities through data collection, partnership development and collaboration, and interventions focusing on those communities experiencing inequities. We recognize that a one-size-fits-all approach does not necessarily impact all populations equitably, and that community-led and guided interventions are critical to addressing inequities. MiAPCP is determined to look at all our work through a health equity lens. Using a health equity lens will help ensure that the needs of communities experiencing inequities are being considered when planning and implementing our activities.

ASTHMA BURDEN IN MICHIGAN

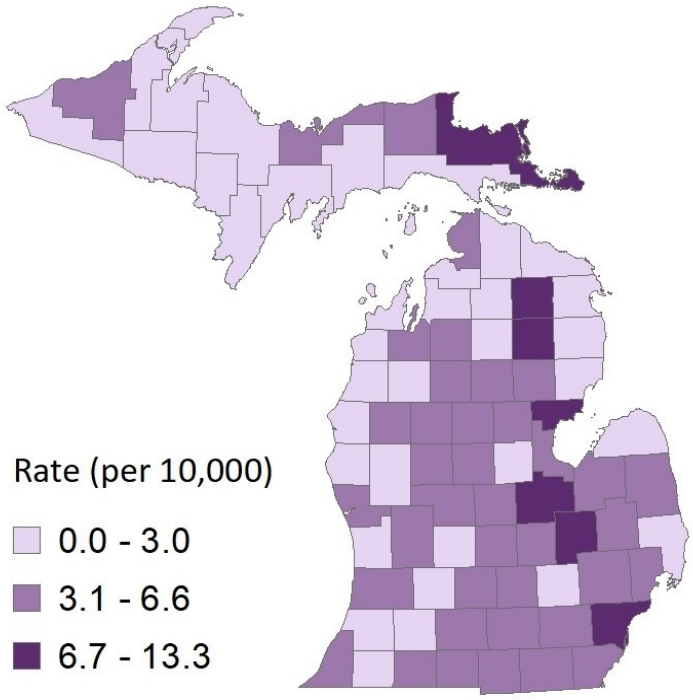
ASTHMA PREVALENCE

Asthma is a chronic inflammatory disorder of the respiratory system that makes it harder to breathe due to the narrowing and obstruction of the airways.[5] In 2019, 16.4% of Michigan adults reported ever having asthma and 11.1% reported having asthma currently while 11.0% of Michigan children reported having ever had asthma and 7.8% have it currently.[6]

Among adults in Michigan, Black non-Hispanics had the highest current asthma prevalence rate (15.9%) in 2019 compared to white non-Hispanics (10.6%), Hispanics (10.1%) and other non-Hispanic races (10.3%). A higher rate of current asthma prevalence was recorded for adults in the lower category of household income (<$20,000) compared with higher income categories. Black non-Hispanic children had a higher current asthma prevalence (9.1%) compared with other races: white non-Hispanic (7.3%) and other non-Hispanic (7.6%).[6]

ASTHMA HOSPITALIZATION

In 2017, there were 6,152 asthma hospitalizations for an asthma hospitalization rate of 6.6 per 10,000 residents for the state of Michigan. The asthma hospitalization rate for adults in Michigan was 5.1 per 10,000 and that rate for children was 10.9 per 10,000. Blacks had about 5 times the rate of asthma hospitalization (20.5 per 10,000) compared to whites (3.8 per 10,000). Wayne county had about twice the asthma hospitalization rate of the state. Six other counties also had higher rates of asthma hospitalization than the state; Genesee, Saginaw, Montmorency, Oscoda, Chippewa, and Arenac.[7]



INDOOR AIR QUALITY

Asthma triggers in the indoor environment have the potential to exacerbate asthma symptoms. The American Lung Association has identified indoor triggers that can impact asthma: dust mites, strong odors or chemicals, smoke from fireplaces and candles, pet dander, pests, and molds.[8]

Between 2012 and 2016, 55.2% of Michigan children with current asthma reported gas being used for cooking in their homes, 11.3% reported the use of wood burning stove/fireplace in their homes and 6.4% reported the use of unvented gas logs, stoves or fireplaces in their homes. The use of air cleaners in the home was reported among one third of children. Among Black children with current asthma, 33.1% reported the use of a bathroom exhaust fan while 63.6% of white children with current asthma reported use of a bathroom exhaust fan.[9]

ASTHMA MORTALITY

Between 2016 and 2018, there was a total of 308 asthma deaths in Michigan and an overall asthma death rate of 9.2 per 1,000,000. Females had a higher asthma death rate (10.4 per 1,000,000) compared to males (7.6 per 1,000,000). Whites had a significantly lower (6.5 per 1,000,000) asthma death rate compared to Blacks (23.0 per 1,000,000).[10]

PROGRAM EVALUATION

Evaluation helps demonstrate achievement of project outcomes, builds a stronger evidence base for specific interventions, clarifies applicability of the evidence base to different populations, settings and contexts, and drives continuous program improvement. AIM is committed to using evaluation to inform decision making and generate evidence to promote and expand asthma-related programs and services:

- Providing guidance and feedback on evaluation activities and disseminate and utilize evaluation findings.
- Assisting in implementation and reporting of economic, process and outcome measures that lead to program improvements or build the business case for asthma-related services and medications.
- Strengthening evaluation competencies and capacity by taking part in technical assistance opportunities and by actively participating in the evaluation process.
- Sharing evaluation findings widely with appropriate audiences.
- Using evaluation findings to guide continuous program improvement, develop new partnerships, direct resources, and promote or expand asthma control services.

ROLES AND RESPONSIBILITIES

STRATEGIC PARTNERS

To achieve its strategic goals, MiAPCP must work collaboratively with partners who represent a multi-disciplinary array of organizations and individuals, many of whom work in high burden communities. These partners act as liaisons to target communities and populations and have influence to bring about change. Primary responsibilities include:

- Assisting the MiAPCP in identifying appropriate activities, their settings and locations.
- Supporting strategic goals/activities by serving as community advocates. Providing community knowledge and access and utilizing resources toward measurable results.
- Communicating accurate information to appropriate audiences.

MICHIGAN ASTHMA PREVENTION AND CONTROL PROGRAM

To implement this plan, MiAPCP staff will use an integrated team approach to provide leadership (set agenda, facilitate, connect), expertise (data, evaluation, best practices, guidelines) and resource development and utilization (access to statewide datasets, information, staff time). MiAPCP works closely with partners to define the issues and needs, translate and apply best practices, and attract and allocate resources to achieve goals.

PRIORITY ACTIVITIES

MiAPCP and the action groups will use program infrastructure resources including: leadership and program management; strategic partners; surveillance data; communication and evaluation to help accomplish our activities.

Rather than create separate health equity related activities, our planning, education and implementation will be done through a health equity lens. Our activities will target communities with higher rates of asthma hospitalization, emergency department visits and prevalence. We will focus on populations experiencing higher burden of asthma, specifically Blacks and low-income residents, with an emphasis on children and adolescents.

CDC EXHALE CATEGORIES	ACTIVITIES
E Education on asthma self-management: expanding access to and delivery of asthma self-management education	• Promote MATCH (self-management education is a primary component of MATCH visits) • Promote asthma education for caregivers (parents, schools, daycares) using local, statewide and national asthma education products • Work with statewide partners to hold Certified Asthma Educator (AE-C®) test review course
X X-tinguishing smoking and secondhand smoke: reducing tobacco smoking; reducing exposure to secondhand smoke *AIM will also work to reduce electronic nicotine delivery systems (ENDS) use and secondhand aerosol exposure from ENDS; reduce exposure to marijuana smoke	• Strengthen partnership with MDHHS Tobacco Section; engage additional tobacco/ENDS partners; connect tobacco/ENDS and asthma partners • Encourage referrals to smoking/ENDS cessation programs from MATCH case managers, Federally Qualified Health Centers, Child and Adolescent Health Centers, and other partners
H Home visits for trigger reduction and asthma self-management education: expanding access to and delivery of home visits (as needed) for asthma trigger reduction and asthma self-management education	• Support existing MATCH programs with promotional efforts and linkages to each other and related organizations • Promote new MATCH programs with organizations that have the capacity to support them; provide technical assistance to new programs; explore MATCH model enhancement through telemedicine

A Achievement of guidelines-based medical management: strengthening systems supporting guidelines-based medical care, including appropriate prescribing and use of inhaled corticosteroids; improving access and adherence to asthma medications and devices	• Support guidelines-based care (including 2020 Update) in Michigan practices through effective EHR products and provider/medical resident education opportunities • Improve patient access to asthma devices and medications through education and policy change
L Linkages and coordination of care across settings: promoting coordinated care for people with asthma	• Promote MATCH (coordination of care is a primary component of MATCH services) • Foster communication and education opportunities between health systems, providers, health plans, school health workers, and people with asthma/caregivers • Promote the initiation of multi-disciplinary clinics in high burden areas
E Environmental policies or best practices to reduce asthma triggers from indoor, outdoor and occupational sources: facilitating home energy efficiency, including home weatherization assistance programs; facilitating smoke-free policies; facilitating clean diesel school buses; eliminating/reducing exposure to asthma triggers in the workplace	• Promote efforts and policies that support clean indoor air at schools and daycares • Work with local and statewide tobacco partners on smoke-free policies and activities • Promote activities that improve outdoor air quality with Environmental Protection Agency, state and local partners • Work with local, statewide, regional, and national partners on environmental policies and activities including weatherization, diesel reduction, home and workplace triggers

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For more information, visit www.michigan.gov/asthma

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