Strategic Plan 2021-2026

Asthma Control Program

March 1, 2022

pennsylvania
DEPARTMENT OF HEALTH

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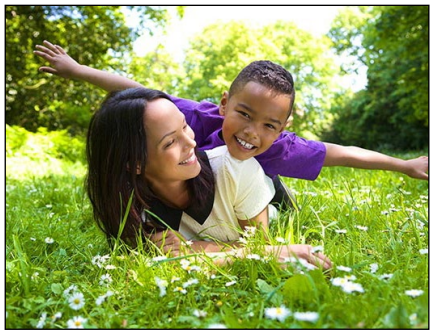
Executive Summary





The mission of the Department of Health is to promote healthy behaviors, prevent injury and disease, and to assure the safe delivery of quality health care for all people in Pennsylvania. Incumbent on public health professionals is the prevention and management of chronic disease. Through funding from the Centers for Disease Control and Prevention (CDC), the Asthma Control Program (ACP) seeks to improve the quality of life for those living with asthma. Under the guidance of the CDC, long-term goals include reducing the number of deaths, hospitalizations, emergency department visits, school days or workdays missed, and limitations on activity due to asthma.

The Pennsylvania ACP comprised of the Pennsylvania Department of Health, funded partners, and the Pennsylvania Asthma Partnership (PAP) began the planning process for this strategic plan after the PAP was re-convened in early 2021. Data, policy, other state plans, the 2015-2020 Pennsylvania Asthma Strategic Plan, and current programming were reviewed and discussed to inform the development of the new strategic plan. Additionally, an analysis of the ACP strengths, weaknesses, opportunities, and threats (SWOT) was conducted. The ACP identified and defined the following guiding principles to establish a vision to act collectively to address the burden of asthma in Pennsylvania:

- Equity
- Collaborations and partnerships
- Access to guidelines-based care and community support services
- Patient-centered approaches
- Data driven
- Social determinants of health

Asthma is a chronic respiratory disease impacting individuals at all stages of life and requires ongoing medical management. In 2019, one in nine adults ages 18 or older reported currently having asthma while one in 13 children were reported to have current asthma in Pennsylvania. The highest prevalence was found in non-Hispanic Black and Hispanic adults and Hispanic children. Generally, current asthma prevalence is higher in younger adults, those with less education, those with an annual household income less than $15,000, current smokers, and adults with obesity. In children, current asthma prevalence is generally higher in boys and those ages 15 to 17. Throughout the asthma data indicators, it is evident racial and ethnic minorities

are disproportionally affected by asthma. The reasons for this are multiple and complex ranging from poverty to insurance coverage, to access to high quality health care and medications, to housing quality, and racism and discrimination. To improve asthma control services and achieve equity in asthma outcomes, the ACP is using several frameworks: the EXHALE technical package, the socio-ecological model, an understanding of layers of policy, and the Health Belief Model and the Stages of Change Model of behavior change. Asthma control and management is not happening in a vacuum, and it is vitally important the ACP understand the larger context to make a meaningful impact.

To improve the reach, quality, effectiveness, and sustainability of asthma control services and to reduce asthma morbidity, mortality, and disparities by implementing evidence-based strategies across multiple sectors, the ACP has defined the following goals, each with their own objectives and activities, for the next five years:

- **Goal 1:** Use data to target the implementation of EXHALE strategies in overburdened communities and populations at high-risk for asthma.
- **Goal 2:** Collaborate with partners to advocate for policies to improve health care access and quality, and the places where people with asthma live, work, learn, and play.
- **Goal 3:** Replicate regional and local EXHALE strategies and best practices across the state.
- **Goal 4:** Increase collaboration between service providers, health care providers, government, and individuals and families with asthma.

This strategic plan is a living document. It is expected to evolve and adapt over time as activities are undertaken, data are updated, new issues emerge, and partnerships and collaborations expand.

Acknowledgments

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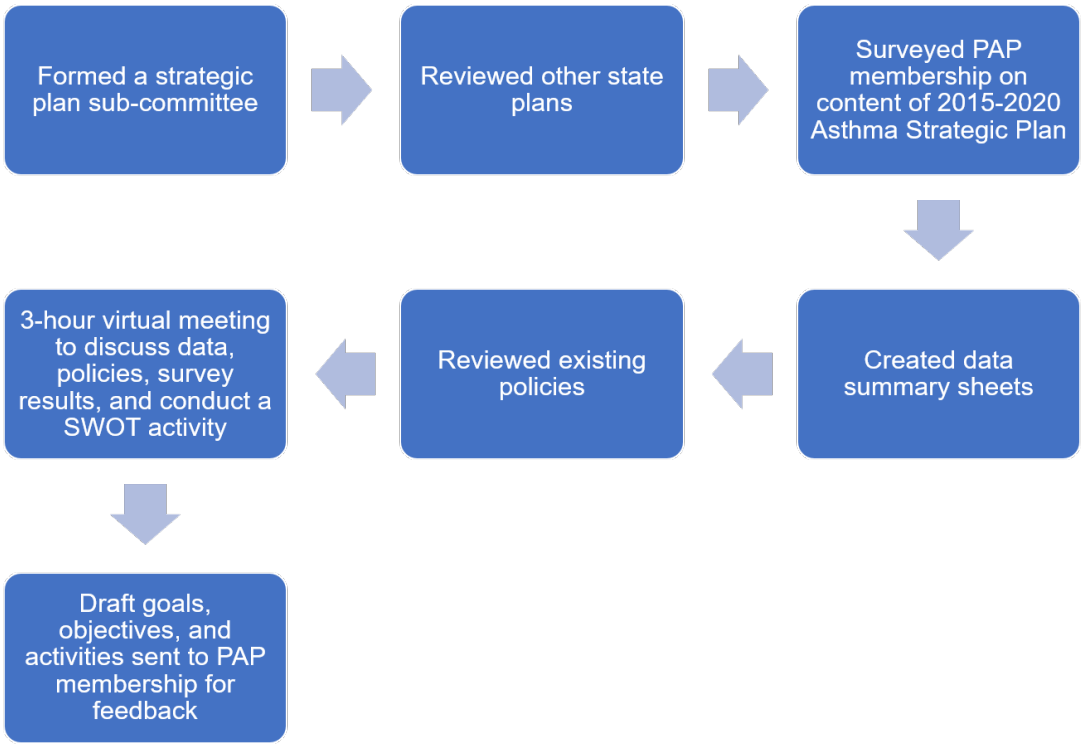
Process

This strategic plan was developed as a key deliverable under CDC-RFA-EH19-1902 *A Comprehensive Public Health Approach to Asthma Control through Evidence-Based Interventions.* The purpose of the award is to improve the reach, quality, effectiveness, and sustainability of asthma control services and to reduce asthma morbidity, mortality, and disparities by implementing evidence-based strategies across multiple sectors. The plan was developed over the course of nine months initially at a focused level with subject matter experts and then through interactive engagement with Pennsylvania Asthma Partnership (PAP) members and other relevant partners. As part of participation in the Centers for Disease Control and Prevention's (CDC) asthma control program funding award, the Pennsylvania Department of Health (DOH), together with funded partners and the PAP form the structure of the Pennsylvania Asthma Control Program (ACP). Re-convened in January 2021, the PAP, at a little over 30 members, is comprised of DOH staff, funded partners, and a multi-disciplinary group of agencies, organizations, and individuals invested in reducing the burden of asthma in Pennsylvania. The PAP is facilitated by the DOH and in addition to the core group has three sub-committees: Strategic Plan, Communications, and Environmental Justice/Health Equity/Antiracism. The Strategic Plan sub-committee led the development of this plan. Figure 1 outlines the steps taken.

Figure 1: Strategic Plan Development Process



Source: PAP (2021)

Throughout the development process, the goal was to provide multiple opportunities for PAP members to offer feedback. One of these opportunities was to gather input on the content of the 2015-2020 Asthma Strategic Plan. The survey of the 2015-2020 Asthma Strategic Plan received 13 responses and posed questions on a scale of strongly disagree to strongly agree whether previous goals and objectives had been met; if the goals and objectives were attainable within the scope of the ACP; if the goals and objectives were measurable; and if the goals and objectives were important to improving asthma in Pennsylvania. Respondents were also asked to rank activities for each objective from most to least important. There were also several opportunities within the survey to provide suggestions on topics or issues to be included in the new strategic plan.

A virtual meeting held in the fall of 2021 provided an overview of the available data, key policy initiatives, and the results of the survey. Each topic presentation was followed by small group discussions and report outs to identify key topics or issues for potential goals in the new strategic plan. A SWOT (strengths, weaknesses, opportunities, and threats) approach was used to examine the Pennsylvania ACP and how it is currently able to address the burden of asthma in Pennsylvania. The results are below:

Table 1: SWOT Analysis

Strengths	Opportunities
-Trusted by community -Focus on health equity/antiracism -Collaborative -Diverse -Partner organizations; long-term partnership and network relationships -Connections to community resources -Knowledge and experience -Use of community health workers -Awareness of asthma across organizations and the state -Dedicated leadership and support from the Department of Health -Partnerships with agencies for data -Access to data with layers to prioritize equitable intervention -Knowledge of evidence-based interventions -Data and science-based -Enthusiasm -Multi-faceted approach	-Stock albuterol legislation -Nicotine replacement therapy (NRT) pilot project -Pilot projects to find lessons learned from other communities -Create a policy agenda for the PAP and create recommendations to leaders -More data becoming available from a variety of resources -Advocate/identify and apply for federal funding for home remediation -Understanding county health department asthma work
Weaknesses	**Threats**
-Some agencies working within specific geographic regions -Funding/resources -No statewide funding stream for remediation services for families	-New respiratory viruses like COVID-19 -Continued funding -Capacity within organizations and agencies changing -New industrial pollutant sources -Public views of the role of public health

-No families or persons with asthma represented on the group -Engagement with clinicians -Census tract or zip code level data -Access to data between health care systems -Understanding of county health department asthma work -Staffing resources and allocations with health care providers and health care systems	-Change in government leadership/potential for not prioritizing public health

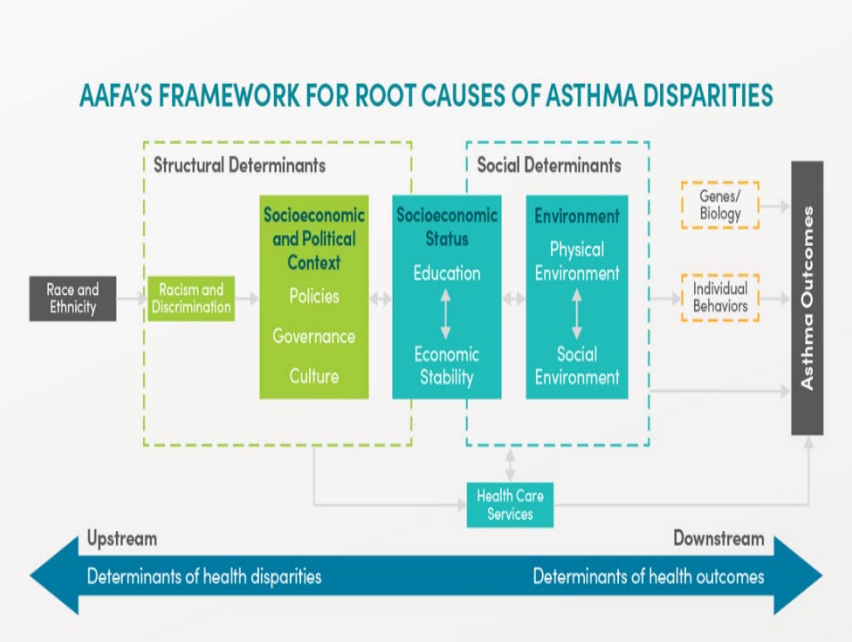
Source: PAP (2021)

After reviewing all the information and input provided throughout the process, a draft list of goals and objectives was compiled for the strategic plan sub-committee to review. After that round of comment, the draft goals, objectives, and activities were sent to the PAP for feedback resulting in the final content.

Background

Asthma is a chronic respiratory disease impacting individuals at all stages of life and requires ongoing medical management.[1] Many factors can cause asthma, some of which are yet not known, but genetic, environmental, and occupational factors have been linked to developing asthma.[17] Racial and ethnic minorities and those with low socioeconomic status are disproportionally affected by asthma.[2] There are multiple factors and complex situations creating these disparities.[2] These can include insurance coverage, pharmacy availability, beliefs about medication, and access to adequate, affordable, and quality fresh food.[2] Exposure to pollutants and substandard housing because of longstanding policies such as redlining also contribute to disparities in asthma.[2] Experiences of racism and discrimination contribute to psychosocial stress and negative outcomes.[2] Access to poor quality health care, limited access to specialty care, affordability of medication, combined with implicit bias of medical providers and lack of diversity in the medical workforce create additional barriers to equity in asthma outcomes.[2]

Figure 2: Framework for Root Causes of Asthma Disparities



Source: Asthma and Allergy Foundation of America[5]

Geography can also impact asthma outcomes as those living in the northeast United States are more likely to visit an emergency department for asthma.[1] Pennsylvania is home to five cities (Allentown, Philadelphia, Harrisburg, Scranton, Pittsburgh) in the United States ranked among the top 100 most challenging places to live with asthma.[3] These same cities are also ranked among the top 100 allergy capitals in the United States.[4] The Asthma and Allergy Foundation of America's Framework for Root Causes of Health Disparities (Figure 2) provides a visual of the multiple factors and complex situations contributing to health disparities in asthma outcomes.[5] Here are some highlights of how asthma is affecting the health of adults, children, and families in Pennsylvania.

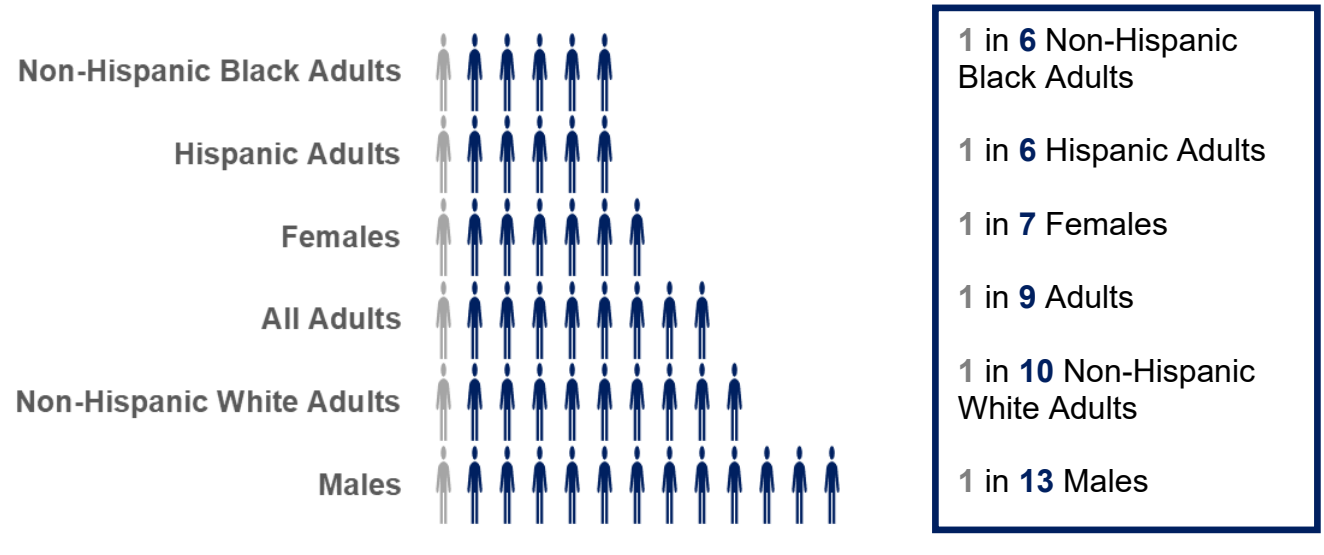
Mortality

In Pennsylvania, the age-adjusted asthma mortality rate has remained **relatively stable** over the last decade however the mortality rate is higher in women than men and the rate differs in racial/ethnic populations.[6] While the mortality has **declined** in Black adults, the mortality rate in Black adults has been **substantially higher** than in White adults over the last decade and in 2019 was more than **two times higher**.[6]

Prevalence

Lifetime prevalence of asthma in adults (18 years or older) **increased** from 2011 to 2019.[7] In 2019, **one** in **six** adults reported a lifetime prevalence of asthma.[7] Current prevalence of asthma in adults also **increased** from 2011 to 2019.[6] Figure 3 compares the current prevalence of asthma among different adult sub-groups. The highest prevalence is found in non-Hispanic Black adults and Hispanic adults.[6] Generally, current asthma prevalence is higher in younger adults, those with less education, those with an annual household income less than $15,000, current smokers, and adults with obesity.[6]

Figure 3: Current Asthma Prevalence in Adult Populations 18 years or older in 2019



Source: Pennsylvania Department of Health[6]

Lifetime prevalence of asthma in children (ages 0 to 17 years) has **decreased** from 2011 to 2019.[7] In 2019, **one** in **eight** children reported lifetime asthma.[7] Current prevalence in children also **decreased** from 2011 to 2019.[7] Figures 4 and 5 compare the current prevalence of asthma among different sub-groups of children. The highest prevalence is found in Hispanic children.[7] Generally, current asthma prevalence is higher in boys and those ages 15 to 17.[7]

Figure 4: Current Asthma Prevalence in Children Ages 0 to 17 in 2019.

Source: Pennsylvania Department of Health[7]

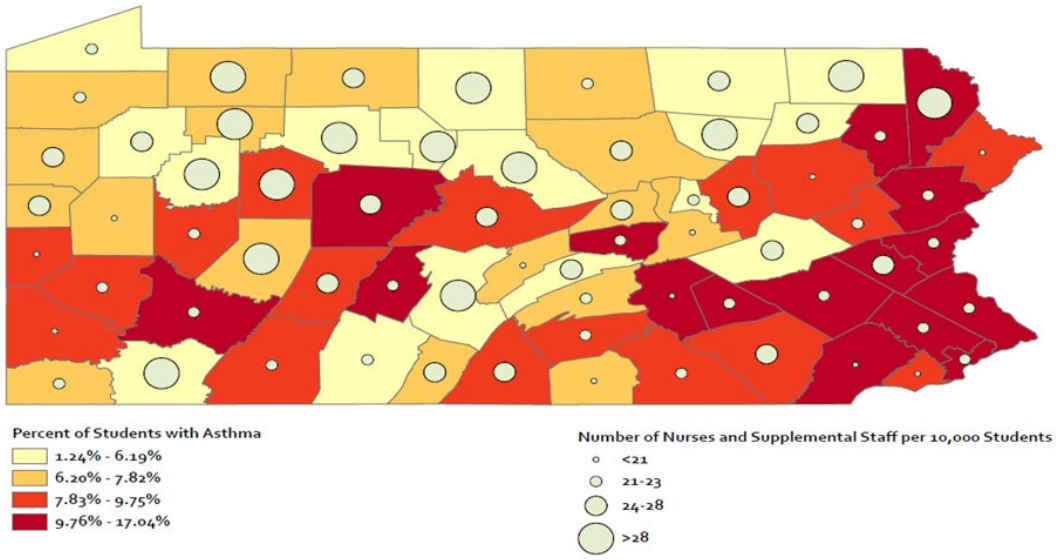
Figure 5: Current Asthma Prevalence in Children Ages 0 to 17 in 2019 by Age Group.

Source: Pennsylvania Department of Health[7]

The DOH also collects data on asthma in schools. As some asthma programming occurs in schools in collaboration with school nurse staff, it is important to understand where there may be strengths and gaps in the capacity to address asthma in school students. Figure 6 below shows the percentage of students with asthma for each of the 67 counties with the darker map colors indicating a higher percentage of students with asthma.[8] The circles on the map represent the combined number of nurses and supplemental staff per 10,000 students for each county, the larger circles indicating a higher staffing rate.[8] This number ranges from 14.96 to 52.66 per 10,000 students.[8] Supplemental staff are defined as registered nurses,

licensed practical nurses, or unlicensed personnel supplemental to the certified school nurse.[8]

Figure 6: Percent of Students with Asthma and Number of Nurses and Supplemental Staff per 10,000 Students by County, 2019-2020

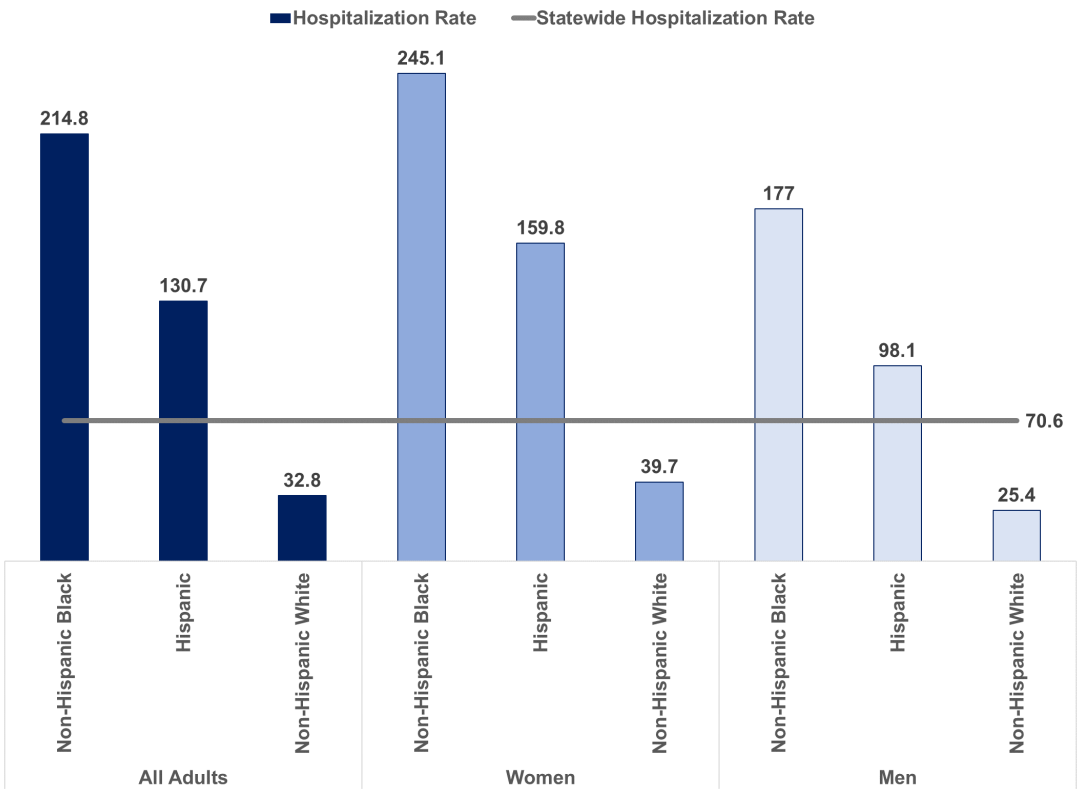


Source: Pennsylvania Department of Health[8]

Hospitalizations and Emergency Department (ED) Visits

Asthma related hospitalizations and ED visits are costly and frequently preventable. From 2010 to 2019, total charges per hospitalization **increased** from $23,384 to $34,597 and in 2019 Medicare/Medicaid paid for 70 percent of asthma hospitalizations.[9] The age-adjusted hospitalization rate **declined** from 2010 to 2019.[6] Asthma hospitalizations are generally highest in non-Hispanic Black adults, women, and in people less than 20 years old.[6] Figure 7 compares the 2019 age-adjusted hospitalization rates of different sub-groups to the statewide age-adjusted hospitalization rate.

Figure 7: Age-Adjusted Hospitalization Rates per 100,000 in 2019 by Race/Ethnicity and Sex



Source: Pennsylvania Department of Health[6]

In children, the hospitalization rate **declined** from 2010 to 2019.[10] This decline was seen across all sub-groups. As with adults, the highest hospitalization rate was in non-Hispanic Black children.[10] The ED visit age-adjusted rate **increased** from 2018 to 2019.[11] ED visit rates were generally higher in younger age groups.[11]

Asthma Experiences

Data from the Behavioral Risk Factor Surveillance System's Asthma Call-Back Survey provide additional insight on how asthma and asthma management is experienced by those living with it in Pennsylvania.

In 2018:

- Almost **1 in 3** adults (18 years and older) with asthma reported having an asthma episode or attack in the past twelve months.[12]
- Over **7 in 10** adults with asthma reported ever being taught by a health professional how to recognize early signs and symptoms of an asthma attack, or what to do during an asthma episode or attack.[12]
- Almost **1 in 3** adults with asthma reported they were ever given an asthma action plan.[12]
- Only about **1 in 17** adults with asthma reported having ever taken a course or class on how to manage their asthma.[12]

- Nearly **6 in 10** adults with asthma reported there were days they were unable to work or carry out usual activities because of their asthma.[12]

It is important to consider asthma may have more than a physical impact on individuals. Children and adolescents with asthma face challenges which may contribute to psychological distress including social isolation, restricted life choices, embarrassment and shame about their condition or treatment or both, self-consciousness, and fear of disease exacerbation.[25]

Policy

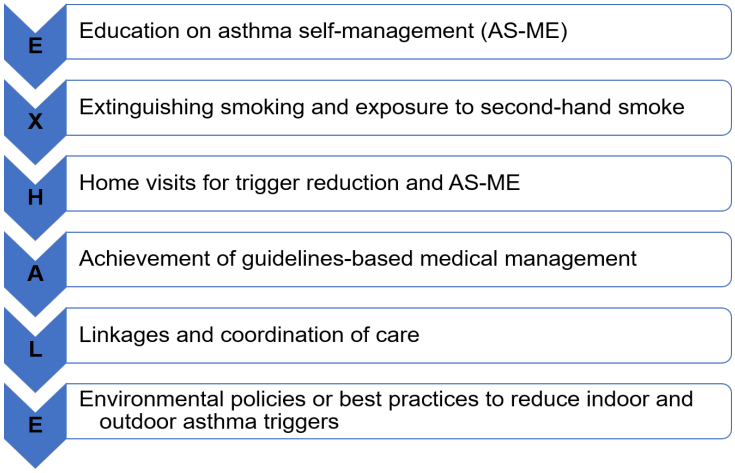
While there are policies at many levels affecting asthma control and management, there are two key statewide policies impacting individuals and families with asthma. The first is the Clean Indoor Air Act (CIAA). The CIAA was made law in Pennsylvania in 2008 and the goal was to reduce secondhand smoke. The law was not comprehensive as there are multiple exceptions, five of which require review and approval by the DOH. The exceptions leave some residents unprotected from secondhand smoke and at continued risk of poor health outcomes. The following locations are exceptions to the CIAA: two types of drinking establishments, two types of cigar bars, tobacco shops, up to 50 percent of gaming floors of casinos, up to 25 percent of hotel and motel rooms, designated sleeping quarters within full-service truck stops, tobacco manufacturer cigar exhibitions, non-profit fundraisers which feature tobacco products, and private clubs including fire, ambulance and rescue companies.

The second policy is notable in its absence. A policy currently being advocated for in Pennsylvania is school stock inhalers. This policy would allow schools to stock emergency albuterol inhalers for use by students having an asthma attack or respiratory distress during school, school events, or while on school transportation. The availability of stock inhalers would address some of the barriers to medication experienced by those with asthma. Currently only 15 of 50 states have these policies. A school stock inhaler policy was introduced in the Pennsylvania legislature in December 2021 because of advocacy efforts of the American Lung Association (ALA) and a network of asthma partners.

Frameworks

To achieve the purpose of the asthma funding award and expand the reach, quality, effectiveness, and sustainability of asthma control services and comprehensively address disparities in outcomes, the ACP is focused on strengthening leadership and enhancing infrastructure to support program development and implementation driven by the evidence-based technical package of six EXHALE strategies.[13] As a multi-component approach is more effective, the EXHALE package is designed to be implemented with all components in the same area. Most of the DOH funded programming is currently in Philadelphia and Allegheny Counties with quality improvement activities occurring in Philadelphia, Delaware, Lehigh, and Wayne Counties. The table below lists the core programs of the ACP and which EXHALE strategies they represent.

Figure 8: EXHALE Package



Source: CDC[13]

Table 2: DOH Funded Asthma Programs and EXHALE Strategies

DOH Funded Programs	EXHALE Strategies
School-based services—Open Airways for Schools, Kickin' Asthma, in-school clinics	Linkages and coordination of care, AS-ME
Smoking cessation services and referrals	Extinguish smoking and exposure to second-hand smoke
Community-based services (services not otherwise categorized)—Healthy Homes program, structural improvements, AS-ME	AS-ME, linkages and coordination of care, adopt environmental policies or best practices to reduce indoor and outdoor asthma triggers
Expanded access and delivery of home visiting services	Home visits for trigger reduction, linkages and coordination of care across settings
Asthma friendly policy promotion—school stock inhaler, reduce air pollution, policy education	Adopt environmental policies or best practices to reduce indoor and outdoor asthma triggers (outdoor air quality, schools, etc.)
Implementation of quality improvement processes to establish & encourage guideline-based care and care coordination	Achievement of guidelines-based medical management
PAP	Strategic partnerships, Communication

Allegheny County Asthma Task Force	Strategic partnerships, Achievement of guidelines-based medical management

Source: Pennsylvania Department of Health (2021)

Figure 10: Socio-ecological Model

Source: Adapted from the CDC[15] and Glanz, Rimer, & Lewis.[14]

In addition to the EXHALE strategies, there are additional theoretical frameworks steering the ACP and the implementation of this strategic plan. The socio-ecological model (Figure 9) helps the ACP to consider the interactions between individual, interpersonal, institutional or organizational, community, and structural, policy, and systemic factors influencing asthma control and asthma management in different populations.[14] At each of these levels there are factors that increase risk for or protect people from poor asthma outcomes.[15] Like the EXHALE package, the best approach to improve outcomes and sustain efforts over time is for programming to address factors on multiple levels at the same time. Not only are there interactions between factors shown above, but asthma programs and policies implemented experience the interaction of a multi-layered policy context (Figure 10). The capital "P" policy is at the highest formal level, issued by branches of government. The lowercase "p" policies are at varying levels of formal and informal authority, issued by government agencies, organizations, groups, and individuals. Policy work is important to the EXHALE package and the ACP because it drives systems-level change and can take the findings from program interventions to a higher level to improve implementation and outcomes across multiple locations. Policy work also has a business orientation that examines program deliverables and opportunities to reduce redundancy and health care costs.

Figure 9: Policy Layers

Source: PAP (2021)

In addition to the frameworks above, the Health Belief Model and the Stages of Change (Transtheoretical) Model will be used to inform behavior change focused communications campaigns throughout the timeframe of this strategic plan. The Health Belief Model interprets

behavior change on the belief people will take action to prevent, to screen for, or to control ill-health conditions depending on their perceived susceptibility to the condition, the potential for serious consequences, the perceived benefits of the action, and if the benefits of the action outweigh the costs or barriers to the action.[14] The Stages of Change Model interprets behavior change as a process with progress over time. There are five stages: precontemplation, contemplation, preparation, action, and maintenance.[14] People at different stages require different programming approaches to embark on behavior change.

Guiding Principles

These guiding principles establish a vision to act collectively to address the burden of asthma in Pennsylvania.

1. **Equity** Achieve health equity by addressing the social determinants of health, dismantling systems of oppression, expanding activities into communities of greatest need be they rural or urban, and partnering with these communities to reduce health disparities. The ACP is committed to approaching program development and implementation with a health equity lens.

2. **Collaboration and Partnerships** Identify potential linkages and act upon opportunities to cooperate and partner responsibly to achieve greater impacts than can occur in isolation. All health care and public health partners understand, accept, and fulfill their roles and responsibilities.

3. **Access to Guidelines Based Care and Community Support Services** Guidelines-based asthma care, AS-ME, and appropriate support services are available, accessible, and affordable.

4. **Patient-centered approaches** The health care system is designed to recognize and value the needs of individuals, their caregivers and their families, to provide coordinated care and support.

Figure 11: Social Determinants of Health

Source: National Academy of Medicine[16]

5. **Data Driven** The use of national, state, local, and program data for asthma surveillance and to guide implementation, evaluation, and quality improvement activities to achieve ACP goals and improve health outcomes.

6. **Social determinants of health (SDOH)** (Figure 11) The social circumstances in which people live, learn, work, and play can have a greater impact on health outcomes than health related factors such as health care coverage and access to care. The ACP will leverage new and existing partnerships to address the SDOH leading to asthma disparities in Pennsylvania.

Goals and Objectives

This strategic plan is a living document. It is expected to evolve and adapt over time as activities are undertaken, data are updated, and new issues emerge. While each objective has a responsible party referenced, these indications are considered a starting point for moving the work forward and are not meant to exclude any individual or organization working on similar activities or looking to partner or collaborate with the ACP. It is expected the responsible party designations will evolve over time too as partnership and collaboration are a guiding principle of the ACP. The long-term outcomes of the CDC funding award are for more people to have well-controlled asthma, fewer asthma attacks and fewer missed school days, fewer asthma-related ED visits, hospitalizations, and deaths. To achieve these outcomes, the ACP has defined the following goals and objectives.

Goal 1: Use data to target the implementation of EXHALE strategies in overburdened communities and populations at high-risk for asthma.

Objective 1.1: By September 2022**,** establish and maintain a collaboration/linkage with the Health Equity Zones project and Community Health Organizers on common goals.
Responsibility: PAP Environmental Justice/Health Equity/Antiracism Sub-Committee

- Contact Health Equity Zone and Community Health Organizer leads in PAP member and Asthma Control Program funded partner geographic areas.
- Prepare and discuss talking points on Asthma Control Program goals and activities to be shared with the Health Equity Zone project and Community Health Organizers.
- Identify common health equity, antiracism, and environmental justice goals and ways to share resources and collaborate.
- Create a process for sharing information between the Health Equity Zone project, Community Health Organizers, and the Asthma Control Program.

Objective 1.2: By December 2022**,** identify a data source and metric to monitor long-term effects of COVID-19 on those with asthma.
Responsibility: DOH and PAP

- Review the literature to identify the relationship between COVID-19 and asthma and determine potential metrics.
- Identify available COVID-19 data sources for the metric.
- Identify potential barriers and resolutions to accessing and reporting on the metric.
- Create a process for regular data collection, analysis, and reporting on the metric.

Objective 1.3: By December of each year, identify, analyze, and report on data sources and metrics to determine communities and populations for implementation of EXHALE strategies.
Responsibility: DOH

- Identify data sources and metrics for reporting (examples: school health, disparities, rural, migrant, high prevalence, asthma/allergy capitals, higher risk based on social determinants of health, air quality/emissions, medication use, costs of asthma).

- Create easy to read reports on identified metrics to track changes over time.
- Identify potential overburdened areas and populations.
- Identify currently implemented EXHALE strategies and available resources, services, and organizations in the identified areas.
- Establish relationships with target area asthma champions and community members to discuss opportunities for EXHALE strategy implementation.

Objective 1.4: Every 18 months, produce at least one asthma data report.
Responsibility: DOH and PAP

- Identify the most important asthma, environmental justice, and health equity metrics to include in a data report.
- Identify relevant sub-populations to be included in the data analysis.
- Align with Asthma Strategic Plan objectives where appropriate.
- Ensure the report is culturally and linguistically appropriate and accessible by a wide variety of audiences.
- Create a plan for distribution and discussion with health care providers, service organizations, and community members on the asthma data.

Objective 1.5: By June 2023, identify, analyze, and report on at least one data source/metric with zip code level data.
Responsibility: DOH and PAP

- Identify and prioritize available asthma or proxy asthma metrics with zip code information.
- Identify potential barriers and resolutions to accessing and reporting on zip code metrics.
- Develop data sharing agreements as needed.
- Create an interactive map with zip code level asthma data.

Objective 1.6: By June 2024, implement an EXHALE strategy in at least one new overburdened community or population at high-risk for asthma.
Responsibility: PAP member organizations and DOH

- In collaboration with the target area asthma champions and community members, identify an EXHALE strategy or strategies for implementation and evaluation.
- Work with existing partners and target area asthma champions and community members to determine best approaches for implementation.
- Identify potential funding opportunities, if applicable.
- Provide technical assistance as needed.

Goal 2: Collaborate with partners to advocate for policies to improve health care access and quality, and the places where people with asthma live, work, learn, and play.

Physical and Social Environment

Objective 2.1: By June 2022, educate providers, community organizations and the public on how to support the passage of a school stock inhaler policy.
Responsibility: ALA and PAP

- Identify target areas for education.

- Distribute key talking points on the importance of a school stock inhaler policy.
- Identify methods and a process to disseminate key talking points or information as needed.
- Evaluate the education efforts implemented.

Objective 2.2: Within a year of bill passage**,** educate providers, schools, health care systems, community organizations and the public on the best practices for the implementation of a school stock inhaler policy.
Responsibility: ALA and PAP Communications Sub-Committee

- Develop and distribute communications materials.
- Promote the use of the ALA developed training module.
- Reach out to other states who have a policy as needed to aid implementation.
- Promote the training module and other information in overburdened communities first.
- Develop a process for additional technical assistance as needed.
- Monitor and evaluate policy implementation.

Objective 2.3: Each year, educate providers, asthma service organizations and the public on advocating for measuring and monitoring aggregate emissions.
Responsibility: PAP Communications Sub-Committee

- Identify individuals or organizations to provide education.
- Define the goals of the education.
- Identify the important facts, data, and resources to be included in the education.
- Determine the methods and process for providing education based on the intended audience.
- Implement and evaluate the education provided.

Objective 2.4: Each year, identify at least one environmental justice, air quality, or equity initiative and create a business case, white paper, or issue brief to aid partners' advocacy efforts.
Responsibility: PAP Environmental Justice/Health Equity/Antiracism Sub-Committee

- Create a process to select an initiative.
- Gather information on the selected initiative including discussions with subject matter experts, communities impacted, and data reports.
- Create a business case, white paper, or issue brief template for use by the PAP.
- Develop and distribute a business case, white paper, or issue brief for the selected initiative.

Objective 2.5: Each year**,** identify at least two school districts and three childcare centers in overburdened communities for education on environmental factors associated with asthma and approaches to mitigate exposures.
Responsibility: PAP

- Use school health data and other data sources in combination with locations of overburdened communities to create a list of school districts and childcare centers.

- Determine if there are any existing relationships with the identified schools and childcare centers.
- Create a process and talking points for approaching school districts, childcare centers, and the community.
- Identify current actions to mitigate environmental factors.
- Define the goals, methods, and a process to provide education on environmental factors and approaches to mitigation in school, childcare centers, and at home.
- Promote Asthma Friendly Schools, model wellness policies, green cleaning, environmental assessments, integrated pest management, and other strategies.
- Create linkages between childcare centers, school nurses, health care providers, local industries, and local asthma resources and services.
- Evaluate the education and approaches implemented.

Objective 2.6: Each year, educate providers, community organizations and the public on advocating for policies to reduce exposure to second-hand smoke and close the Clean Indoor Air Act loopholes.
Responsibility: Tobacco Prevention and Control partners and PAP

- In collaboration with Tobacco Prevention and Control partners, provide education to advocate for policy initiatives such as updating current 100% tobacco-free school policies to include all other tobacco products, Young Lungs at Play, tobacco-free homes, smoke-free homes, and worksite policies.
- In collaboration with Tobacco Prevention and Control partners, provide education to advocate for strengthening the Clean Indoor Air Act.
- Develop talking points highlighting the relationship between smoke-free and tobacco-free areas and asthma.

Objective 2.7: By June 2023, identify at least two school districts in overburdened communities for implementation of the EPA's air quality flag program.
Responsibility: PAP Environmental Justice/Health Equity/Antiracism Sub-Committee

- Use school health data in combination with locations of overburdened communities to create a list of school districts.
- Determine if there are any existing relationships with the identified school districts.
- Create a process and talking points for approaching school districts and the community about implementation of the EPA's air quality flag program.
- Provide a connection between the EPA and the school districts.
- Provide technical assistance and monitor program involvement as needed.

<u>Health Systems and Services</u>
Objective 2.8: Each year, identify at least one non-covered asthma related service or barrier to medication use and develop a business case/proposal for at least one health insurer. Non-covered asthma related services include use of community health workers, integrated pest management, and asthma home visiting.
Responsibility: PAP

- Use available resources, subject matter experts, and community member input to identify a non-covered asthma related service or barrier to medication use.

- Review any previous or current efforts to propose new coverage.
- Develop a business case proposal.
- Determine if there are any existing relationships with potential insurers.
- Determine the steps for proposing a business case and identify champions as needed.
- Evaluate the process for best practices and lessons learned.
- Educate health care providers, service organizations, and the public on approved changes to coverage.

Objective 2.9: Each year, identify at least one health care system, health care provider professional organization, or conference to target for education/capacity building on asthma related topics. Potential topics include, but are not limited to, performing spirometry, addressing local indoor (including homes) and outdoor air quality, SDOH, or standards of quality-based asthma care.

Responsibility: PAP Communications Sub-Committee

- Assess training and education needs for health care systems and providers in overburdened communities or those serving populations at higher risk for asthma.
- Identify opportunities and asthma champions to provide education or capacity building.
- Provide education and capacity building on a variety of topics to share knowledge, experiences, and best practices.
- Establish an inventory of asthma training materials and programs available for health professionals.
- Develop a process to track policy or infrastructure changes by the target audience after training and education.
- Provide technical assistance for policy or infrastructure changes, if needed.
- Evaluate the trainings and impact on intended outcomes.

Objective 2.10: By September 2024, establish a process for creating local, regional, and statewide linkages or referral processes between health care systems, providers, community organizations, schools, childcare centers, and asthma programs.

Responsibility: PAP

- Assess current processes for linkages or referrals between health care systems, providers, community organizations, and individuals and families with asthma in overburdened communities.
- Assess current processes for linkages or referrals and communication between school nurses or childcare centers, and health care providers, students, and families.
- Identify key parts in the referral process where improvements or new processes can be made.
- In collaboration with all relevant partners, develop and implement an improvement plan.
- Evaluate improvements and revise as necessary.

Goal 3: Replicate regional and local EXHALE strategies and best practices across the state.

Objective 3.1: Each year, identify at least two regional or local programs for piloting in another part of the state.

Responsibility: PAP

- Identify existing programs or initiatives for piloting.
- Determine potential target areas for the pilot.
- Determine if there are any existing relationships in the target area.
- Identify the target area asthma champions and community members with whom to discuss the potential pilot.

Objective 3.2: Within two years of deciding on programs for a pilot, implement and evaluate at least one of the identified programs.

Responsibility: PAP member organizations

- In collaboration with the target area asthma champions and community members, develop an implementation and evaluation plan.
- Provide capacity building and technical assistance as needed.

Goal 4: Increase collaboration between service providers, health care providers, government, and individuals and families with asthma.

Objective 4.1: By September 2022, establish a collaboration process for PAP members in the same geographic area or working on similar asthma topic areas to address racism, health equity, and the social determinants of health as part of the work.

Responsibility: PAP Environmental Justice/Health Equity/Antiracism Sub-Committee

- Identify the geographic location and topic areas of current members.
- Identify topics of interests for education and capacity building with respect to addressing racism, health equity, and the social determinants of health.
- Create communication and collaboration processes.

Objective 4.2: Annually review and update the Pennsylvania Department of Health Asthma website with educational resources for parents, caregivers, service providers, and health care providers.

Responsibility: PAP Communications Sub-Committee

- In collaboration with partners, review educational resources included on the website.
- Identify any new resources to be added.
- Create a process for partners and the public to submit resource suggestions.

Objective 4.3: Each year, identify at least one new participating partner organization or collaboration for the PAP.

Responsibility: PAP

- In collaboration with the current PAP, assess gaps in current membership with a focus on diversity of voices, experiences, and expertise.

Objective 4.4: Annually review and update the Asthma Strategic Plan as needed to ensure the plan evolves with new findings to control and mitigate asthma and with the political and social context.

Responsibility: PAP Strategic Plan Sub-Committee

- Create a timeline for annual review.
- Create a process for gathering input on updates from PAP membership.
- Create a process to track progress on plan objectives.
- Communicate progress and plan updates to the ACP, partners, and the public.

Objective 4.5: By June 2023, define a process by which individuals and families can contribute to decision-making on the PAP and other ACP activities.

Responsibility: PAP Environmental Justice/Health Equity/Antiracism Sub-Committee

- Review current processes for individual and family participation on Department of Health partnerships.
- Identify and address potential barriers to participation.
- Create a process for requesting participation and define expectations for participation.
- In collaboration with partners, identify and request participation from interested individuals and families.

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Glossary

Asthma episode or attack: An asthma attack may include coughing, chest tightness, wheezing, and trouble breathing. During an asthma attack, the sides of the airways in the lungs well and the airways shrink causing less air to get in and out of the lungs. Mucous also clogs the airways.[17]

Asthma action plan: Individual plan created with a health care provider. The goal of the plan is to prevent and control asthma.[18]

Antiracism: A commitment to dismantling racism, which has dimensions that are institutional and social as well as attitudinal and behavioral.[19]

Community members: People who represent the broad interests of the communities served, either through current or future programs, particularly those who are at increased risk for poor health outcomes.[20]

Current asthma prevalence: Percentage of the population who have been told by a health professional they had asthma and had asthma at the time surveyed.[21]

Environmental Justice: The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.[19]

Health Equity: When everyone has the opportunity to attain his or her full health potential and no one is disadvantaged. This requires removing obstacles to health such as poverty, discrimination, and their consequences, including powerlessness and lack of access to good jobs with fair pay, quality education and housing, safe environments, and health care.[22]

Lifetime asthma prevalence: Percentage of the population who have ever been told by a health professional they had asthma.[21]

Overburdened community: Minority, low-income, tribal, or indigenous populations or geographic locations in the United States that potentially experience disproportionate environmental harms and risks. This disproportionality can be as a result of greater vulnerability to environmental hazards, lack of opportunity for public participation, or other factors. Increased vulnerability may be attributable to an accumulation of negative or lack of positive environmental, health, economic, or social conditions within these populations or places. The term describes situations where multiple factors, including both environmental and socio-economic stressors, may act cumulatively to affect health and the environment and contribute to persistent environmental health disparities.[23]

Racism: Racism is a system that structures opportunity and assigns value based on how a person looks. The result: conditions that unfairly advantage some and unfairly disadvantage others. Racism hurts the health of the nation by preventing some people the opportunity to attain their highest level of health. Racism may be intentional or unintentional. It operates at

various levels in society. Racism is a driving force of the social determinants of health (like housing, education, and employment) and is a barrier to health equity.[24]