



Executive Summary

A National Asthma Public Policy Agenda 2022 Update

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The burden of asthma in the United States is complex, multi-factorial, unequal and serious. Efforts to address asthma must be equally significant and must look at the underlying systemic causes of both the disease and the barriers to controlling it.

In 2009, the American Lung Association released the first National Asthma Public Policy Agenda after bringing together a broad, multi-disciplinary group of asthma specialists, medical professionals and public health and policy experts to agree on a set of public policy priorities that, if implemented, could have the greatest impact on asthma morbidity and mortality. The project established a blueprint for a national asthma policy on which lawmakers, regulators and advocates could act. To be successful, the policy recommendations needed to be adopted by multiple stakeholder groups at all levels.

In the subsequent decade, much has been accomplished to impact and hopefully improve the quality of life for those living with asthma—including the passage of the Affordable Care Act (ACA) in 2010, the adoption of stricter national air standards for particle pollution in 2012 and ozone in 2015, the 2018 implementation of the U.S. Department of Housing and Urban Development’s smokefree public housing policy, and the 2020 update of the National Asthma Education and Prevention Program’s clinical guidelines. These and other changes in the policy environment made it necessary to review, revise and update the National Asthma Public Policy Agenda to chart a path for the public health community to follow in this next decade.

The stakeholders brought together by the American Lung Association to update the National Asthma Public Policy Agenda met before the COVID-19 pandemic. The pandemic has exposed many of the major challenges facing the nation’s public health and health systems infrastructure, including a serious lack of robust, predictable and sustained investments in public health at the federal, state and local levels; depleted and understaffed workforces; inadequate public health surveillance; and systemic inequities that create disparate health outcomes. The recommendations included in the National Asthma Public Policy Agenda - 2022 Update are even more timely and urgent considering this global respiratory pandemic.

The Burden of Asthma Is Unequal and the Updated Agenda Must Address These Disparities

Asthma makes breathing difficult for the 24.8 million Americans it affects, including 5.5 million children. Since 2001, asthma rates have increased 22% among adults while decreasing 34% among children. While asthma affects people of all ages, races, genders and segments of society, the burden is not equally shared across these segments. Black individuals and American Indian/Alaska Natives have the highest rates of current asthma compared with other races and ethnicities. Further, though asthma rates are relatively low for Hispanics overall, Puerto Ricans in the continental United States have the highest current asthma rate of any

racial or ethnic group (14.0%^{*}). Finally, asthma rates were significantly higher among those with a family income below the poverty threshold.¹

Of the 24.8 million Americans with a current diagnosis of asthma, 19.2 million are adults and 5.5 million are children. Over half of children and adults with asthma (52.7%) living below the federal poverty level report an asthma attack in the past year compared to 44.6% of those living at or above double the federal poverty level,² which is an indication of poor asthma control. Children and people living below the federal poverty level are among the groups most likely to have asthma, and to suffer from severe asthma attacks, hospitalization and even death.³

Healthcare

Asthma morbidity and mortality is disproportionately burdensome for Black individuals, who are least likely to have access to adequate healthcare.⁴ There are substantial gaps between guidelines-based asthma care and coverage by state Medicaid programs. A large percentage of children with asthma receive coverage through Medicaid and the Children's Health Insurance Program (47.6%).⁵ Many Medicaid programs do not cover the recommended categories of care and have inconsistent coverage across fee-for-service and managed care plans within the same state, making it difficult for providers and patients to understand coverage of asthma treatments and services.⁶

While the ACA provides quality healthcare coverage for tens of millions more Americans, including many with asthma, gaps in states that have not expanded Medicaid and increasing challenges of affordability still leave millions more without the coverage they need. Asthma's multi-factorial and complex causes and triggers also underscore that this disease will not be addressed by treatment alone; it also requires a robust multi-sector response including public health and environmental approaches.

Outdoor and Indoor Air Quality

A substantial body of evidence links asthma exacerbations to exposures to allergens and irritants from outdoor sources and from indoor pollutants found where people live⁷, go to school⁸ or work.⁹ Establishing asthma-friendly policies that eliminate or reduce exposures to indoor and outdoor allergens, irritants, and pollutants where people with asthma live, work, go to school and play is critical in the overall management of asthma. Asthma self-management education, which includes education on reducing exposure to asthma triggers, has been repeatedly shown to make a difference in patients' ability to maintain good control of the disease.

Climate change brings new challenges to people with asthma, such as increased ozone pollution driven by heat; increased particle pollution from more frequent and intense wildfires; increased pollen levels that can trigger allergic asthma; and mold from flooding and extreme

^{*} NHIS data from 2016-2018 was combined to acquire a large enough sample size to ensure an accurate estimate for this population.

storms. Public policies focused on asthma must also recognize the importance of addressing both the causes and impacts of a warming Earth and climate.

Significant Financial Burden

People with asthma that have difficulty managing their disease can impact their community in several ways, from lost productivity in the workplace to health care costs to premature death. Asthma costs the nation \$81.9 billion annually, including \$50.3 billion in direct health care expenses and additional costs from loss of productivity, absenteeism, and mortality.¹⁰ Contributing to the burden, asthma accounts for an estimated 10.9 million missed workdays for people over 18 years of age and 7.9 million missed school days.¹¹ Much of the overall health and economic burden of asthma is the result of asthma not being well controlled; in addition to missing work or school, people with asthma may require care in the emergency department or hospital for asthma emergencies.

Objective and Approach

The American Lung Association with support from the U.S. Centers for Disease Control and Prevention (CDC) reviewed the recommended policies and strategies from the 2009 National Asthma Public Policy Agenda, assessed the existing evidence for effective asthma policy interventions, convened an interdisciplinary group of asthma experts and built consensus for an updated, comprehensive and actionable national asthma public policy agenda.

The National Asthma Public Policy Agenda does not represent an official position of the American Lung Association or the CDC. Rather, it represents a broad agreement on policy from a multi-disciplinary group of stakeholders committed to reducing asthma morbidity and mortality.

Public Policy Categories

- Public Health Infrastructure and Surveillance
- Outdoor Air
- Healthcare Systems and Financing
- Homes
- Schools
- Workplaces

The consensus process resulted in 22 public policy recommendations grouped in six major categories. The expert stakeholders determined the categories should remain unchanged from the 2009 Agenda, but many of the policies and supporting strategies within the categories were updated to reflect the latest science.

Policy Recommendations by Category

Public Health Infrastructure and Surveillance

Every state and territory should have a comprehensive statewide asthma strategic plan and adequately funded state asthma program to reduce asthma morbidity and mortality.

Supporting Strategies:

- Statewide asthma programs and partners should develop a strategic plan to document the problem, implement strategies and assess progress.
- Statewide asthma programs should follow best practices outlined in CDC's EXHALE Technical Package on implementing a comprehensive asthma program, including access to guidelines-based asthma care, expanded asthma self-management education in clinical and home visits, and environmental policies and practices to reduce exposure to asthma triggers.
- Statewide asthma programs should partner with multiple sectors, including health systems, housing, workplaces, schools and childcare facilities, when implementing comprehensive asthma programs.
- Statewide asthma programs should implement the activities outlined in CDC's EXHALE Guide for Public Health Professionals.
- Statewide asthma programs should identify and ensure they address asthma in underserved and disproportionately affected populations in their strategic plan and activities.

The federal government and states should institute a comprehensive, nationwide asthma surveillance system that provides timely and relevant data.

Supporting Strategies:

- Asthma surveillance systems should include the collection of asthma data at both the national and the state level.
- The asthma surveillance system should collect or coordinate with other agencies/organizations to obtain data and report measures that are nationally consistent by patients' age, sex, race, ethnicity, occupation, and socio-economic status.
- The asthma surveillance system should track asthma prevalence, morbidity and mortality, and coordinate with other data gathering efforts.
- The asthma surveillance system should explore obtaining data from non-traditional sources, including federally qualified health centers (FQHC), government (Medicaid or Children's Health Insurance Program [CHIP]), private insurance, hospitals, and schools.

Federal, state and local governments' natural disaster response plans and climate resilience plans should address the needs of people with asthma.

Supporting Strategies:

- Federal, state and local governments should consider the current and future impacts of natural disasters and climate change on air quality in their natural disaster response plans and climate resilience plans.
- Federal, state and local governments should include air quality experts and asthma control programs in their stakeholder engagement efforts when planning and implementing natural disaster response plans and climate resilience plans.
- Federal, state and local governments should ensure that natural disaster response plans and climate resilience plans address populations with chronic lung conditions that may be disproportionately impacted by poor air quality.

Outdoor Air

Federal, state, and local governments should support and implement the Clean Air Act to reduce asthma risk from outdoor air pollution.

Supporting Strategies:

- U.S. Environmental Protection Agency (EPA) should adopt and implement strong national measures to reduce emissions of outdoor air pollutants that cause or worsen asthma and contribute to climate change.
- EPA should adopt strong, science-based National Ambient Air Quality Standards (NAAQS) that provide an adequate margin of safety for people with asthma and other more vulnerable populations.
- EPA, states, and local governments should ensure reductions in emissions, so air quality meets the NAAQS, and so that more local, community-level sources of harmful pollution are addressed.
- Federal, state and local agencies should use Clean Air Act tools and other steps to reduce air and climate pollution.

States and communities should reduce greenhouse gases to minimize climate change, and prepare communities for hotter temperatures, more high-ozone days, extreme weather, flooding, drought, wildfires and smoke to reduce risk for people with lung disease.

Supporting Strategies:

- States and communities should minimize climate change by cleaning up major sources of carbon pollution and other greenhouse gases, including power plants, industrial facilities, cars, trucks and other mobile sources. These policies must:
 - Adopt science-based targets to prevent climate change above 1.5° C.

- o Maximize benefits to health by reducing carbon and methane pollution while reducing other dangerous emissions from polluting sources.
- o Ensure pollution is cleaned up in all communities, prioritizing those near polluting sources who have historically borne a disproportionate burden from air pollution.
- o Leave the Clean Air Act fully in place. Any policy to address climate change must not weaken or delay the Clean Air Act or the authority that it gives EPA to reduce carbon emissions.

State and local governments should prioritize environmental justice through community-informed and directed healthy air protections and investments in disproportionately impacted communities.

Supporting Strategies:

- Implement environmental policies and best practices such as those outlined in CDC’s “EXHALE Fact Sheet on Environmental Policies and Best Practices to Reduce Asthma Triggers.”
- Enhance publicly available air quality and health data through expanded monitoring networks to identify major sources of pollution burdens at the community level and inform targeted clean-up efforts in areas disproportionately impacted by asthma.
- Reduce burdens caused by the fossil fuel industry through increased investment in energy efficiency and zero-emission alternatives for transportation, energy, home heating and cooking and other end uses to reduce asthma exacerbations.
- Make public funding for transportation projects conditional on verifiable emission reductions and providing alternatives to driving by increasing pedestrian, bicycle and transit infrastructure and service.
- Reduce harmful industrial and commercial practices that can exacerbate asthma, including agricultural burning, oil and gas flaring and broadcast applications of toxic pesticides.
- Transition to zero-emission technologies for on- and off-road vehicles and equipment (cars, school buses, transit, trucks, port equipment), such as by purchasing zero-emission school buses to replace diesel buses.
- Transition to zero-emission appliances for home heating and cooking to reduce and eliminate health impacts caused by combustion.
- Reduce emissions of pollutants from fossil fuel-fired power plants, especially sulfur dioxide and nitrogen oxide emissions, and transition to clean, non-combustion renewable electricity.
- Prohibit or restrict outdoor wood boilers (outdoor hydronic heaters) and require cleanup or retirement of existing units.
- Reduce agricultural sources of emissions, such as agricultural burning and diesel trucks, tractors, pumps and other equipment.

- Adopt policies that reduce the use of motor vehicles, promote more compact and walkable community development, and encourage transit use, bicycling and walking that is safe and accessible to all communities, especially those that have been historically under-invested in and impacted negatively by transportation investments.
- Adopt or expand mass transit and other shared mobility options that reduce emissions from motor vehicles and expand the benefits of healthier, less polluting forms of travel.
- Adopt policies to transition to zero-emission vehicles, including investment in infrastructure and programs that ensure equitable distribution of the health benefits of zero-emission cars, school and transit buses, trucks and other transportation sources.
- Implement policies and programs to reduce exposure to air pollution in disproportionately burdened communities.

Healthcare Systems and Financing

All people with asthma should have comprehensive, affordable, and accessible healthcare coverage to improve overall health and quality of life.

Supporting Strategies:

- Maintain and expand access to Medicaid, CHIP, and other affordable health insurance coverage options for eligible populations.
- Ensure that Medicaid and other payers include all asthma treatments and home-based asthma services that reduce or eliminate environmental asthma triggers recommended by national evidence-based guidelines in coverage policies.
- End policies that require patients to change medications when they are already well-controlled (non-medical switching) and other practices that interfere with patients' ability to control their asthma.
- Limit out of pocket costs for patients to support adherence to medications and other treatments.

Private health insurance, Medicare and Medicaid should develop and implement policies and payment systems to support the delivery of guidelines-based asthma care, address social determinants of health and eliminate disparities.

Supporting Strategies:

- Implement activities such as those outlined in CDC's EXHALE Guide for Medicaid and Children's Health Insurance Program (CHIP) Leaders or CDC's EXHALE Guide for Managed Care Leaders and Staff.
- Ensure that prescription formularies include a full range of medication options for quick-relief and long-term control of asthma in accordance with the National Asthma

Education and Prevention Program (NAEPP) guidelines for diagnosing and managing asthma.

- Develop and test innovative payment models that incentivize providers and cover treatments and services to support the needs of people with asthma.
- Develop and implement coding, coverage and reimbursement policies for payment for home-based asthma services, including environmental remediation.
- Develop and implement sustainable financing mechanisms to better integrate services provided by community health workers into the healthcare delivery system.
- Expand access to telehealth services.

Provider teams should deliver services and treatments consistent with the National Asthma Education and Prevention Program guidelines for the diagnosis and management of asthma with appropriate care coordination.

Supporting Strategies:

- Implement the activities outlined in CDC's EXHALE Guide for Healthcare Professionals.
- Provide self-management education using evidence-based interventions by trained professionals as a standard of care.
- Develop and use asthma action plans for all patients.
- Provide case management and care coordination, including home-based asthma education, environmental assessment, remediation, and referrals to other social supports or resources, for high-risk patients and those whose asthma is not well controlled.
- Provide tobacco dependence treatment and pharmacological therapy to smokers who have asthma or who have family members with asthma.
- Recruit and train a diverse workforce to care for patients with asthma, including community health workers (CHW), pharmacists and other members of patients' care teams.

The healthcare system should develop and meet quality improvement goals that improve outcomes for patients with asthma.

Supporting Strategies:

- Implement the activities outlined in CDC's EXHALE Guide for Healthcare System Executive Leaders.
- Revise, expand or develop national performance measures aligned with national standards to better measure asthma control and quality of care.
- Provide comprehensive and consistent data that is reported across healthcare systems, including through electronic health records, to improve asthma surveillance and tracking of asthma outcomes and disparities.

Homes

Housing agencies should adopt housing codes that protect people with asthma from exposure to indoor air pollutants, irritants and allergens.

Supporting Strategies:

- Adopt and proactively enforce healthy housing standards in state and local housing codes.
- Use integrated pest management (IPM) techniques in multi-unit housing.

State and local health departments and housing agencies should enforce housing codes to protect people with asthma from exposure to indoor air pollutants, irritants and allergens.

Supporting Strategies:

- Provide training for housing code enforcement officials on applying codes to address indoor environmental quality problems.
- Provide proactive inspections of rental housing.
- Provide authority and capacity for local health departments to take legal action to enforce indoor environmental quality-related codes and laws (including nuisance laws).
- Provide capacity within state and local housing inspection agencies to offer specialized services to identify and remedy indoor environmental quality problems where families with asthma reside.
- Improve legal and other recourse for tenants to ensure enforcement of local laws (including judicial education, increasing legal services and tenant education) without risk of displacement.
- Provide capacity for state and local health departments to offer guidance to property owners on identifying and remediating indoor environmental quality problems, including information on smokefree policies.

Multi-unit housing, including public and other federally supported housing, should be smokefree.

Supporting Strategies:

- Pass state and local laws and regulations to require smokefree multi-unit housing, including e-cigarettes and marijuana.
- Expand policy with the U.S. Department of Housing and Urban Development (HUD) to require all federally supported multi-family housing to be smokefree.
- Develop and disseminate guidance on best practices for enforcement of smokefree policies while minimizing displacement and eviction.
- Provide resources and services to support smokers wishing to quit.
- Collaborate with tenants' rights and other community-based organizations to develop and implement policies and best practices.

State and local agencies should incorporate best practices for healthy and climate-resilient homes through construction, rehabilitation and repair of housing, including public and other federally supported housing.

Supporting Strategies:

- Identify substandard public and other federally assisted housing buildings and renovate according to best practices for healthy indoor environmental quality.
- Green building guidelines should incorporate healthy housing standards.
- Housing authorities should incorporate financing tools, including grants, loans and tax credits, to ensure safe and healthy properties.
- Ensure that federal policies for the funding of housing rehabilitation encourage following best practices for improving indoor environmental quality for housing rehabilitation and weatherization.
- Housing authorities should incorporate climate resilience into building construction, rehabilitation and repair with considerations of siting of residential buildings and flood protection; materials; heating, cooling and ventilation; energy sources; and zero-emission vehicle fueling infrastructure.

Schools

Every state should put in place laws and regulations to improve asthma management in schools.

Supporting Strategies:

- Establish laws to authorize stock asthma medication in schools.
- Provide funding to support school nurses in every school.
- Expand Medicaid programs to allow school districts to bill Medicaid for all Medicaid eligible services delivered to Medicaid enrolled students.
- State Boards of Education should create and disseminate standards or recommendations for healthcare services and alternative methods for providing care in schools in the absence of school nurses.
- State Departments of Health and State Departments of Education should coordinate activities to support asthma policies and practices in schools.
- States should use funding from and implement procedures recommended by ESSA to improve school buildings.

All educational facilities should adopt and implement policies and procedures for the medical management of asthma that are based on current research and best practices.

Supporting Strategies:

- Implement recommended strategies such as those outlined in CDC’s EXHALE Guide for Schools on coordination of care and educate all students with asthma and their caregivers on asthma self-management.
- Ensure that all students with asthma who are not well controlled are provided case management by a school nurse or other designated school personnel.
- Educate all educational personnel (especially health services, physical educators, coaches and athletic trainers) about asthma, including how to identify and respond to students at risk for a respiratory emergency.
- Establish and implement emergency protocols for students in respiratory distress.
- Designated school health staff should identify and track all students with a healthcare provider diagnosis of asthma and assess and refer students who may be at risk for asthma or have asthma that is not well-controlled based on a nurse assessment for clinical diagnosis and treatment.
- Obtain and ensure the use of an asthma action plan for all students with asthma in all settings.
- Ensure students with asthma have immediate access to quick-relief medications by establishing protocols to define students’ assessment of readiness for self-carry and stock medication in school.
- Schools should identify alternative options for care when school nurses are not present, such as School-based Health Centers (SBHCs), community health workers or telehealth.

After-school programs, youth serving organizations and licensed childcare systems should adopt and implement policies and procedures for the management of asthma that are based on current research and best practices.

Supporting Strategies:

- Communities should educate and train personnel from after-school programs, youth serving organizations and licensed childcare systems about effective asthma friendly policies and practices to improve childhood asthma.
- After-school programs, youth serving organizations and licensed childcare systems should implement emergency protocols for students in respiratory distress.

All educational systems should adopt and implement environmental assessment and management protocols that are based on current research and best practices.

Supporting Strategies:

- Develop, implement and sustain an indoor air quality program as detailed in U.S. Environmental Protection Agency’s Indoor Air Quality Tools for Schools.
- Educational systems should strive to have ventilation systems that meet the minimum guidelines of American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).

- Educational systems should follow work practices to reduce exposure to cleaning agents and disinfectants that cause or aggravate asthma as recommended by EPA’s “Safer Choice” program.
- Require schools, grounds, facilities, vehicles and sponsored events to be 100% tobacco-free, including e-cigarettes.
- Schools should minimize students’ exposure to outdoor air pollutants on days with unhealthy levels of air pollution, including using ventilation/filtration and other strategies to reduce exposures while inside school buildings.
- Schools should adopt zero-emission technology for school buses, and policies to prevent school bus and personal car idling on school grounds.
- Schools should develop and implement a disaster response plan that addresses exposure to indoor and outdoor pollutants (e.g., mold, wildfires), access to asthma medication and cleaning up schools.

Workplaces

The federal government should update Occupational, Safety and Health Administration (OSHA) standards to make them comprehensive standards that include air levels set low enough to prevent work-related asthma and provide education and medical surveillance to exposed workers.

Employers should identify and eliminate exposures to hazards that put workers at risk for developing asthma or causing asthma symptoms.

Supporting Strategies:

- Identify work processes that expose workers to substances that cause or make asthma worse and control these exposures by eliminating their use, substituting safer substances and employing engineering controls (such as ventilation).
- Establish 100 percent tobacco-free workplaces, including e-cigarettes.
- Implement fragrance-free policies.
- Provide tobacco cessation programs.
- Adopt cleaner equipment (e.g., loaders, tractors) or vehicle technology (e.g., transition to zero-emissions technology).

States should adopt and implement surveillance mechanisms to track work-related asthma, identify asthma hazards, follow trends and facilitate interventions.

Supporting Strategies:

- Establish a surveillance system for work-related asthma using data from healthcare providers, clinics, emergency departments, hospitals, workers' compensation databases and poison control centers.
- Promote interventions that investigate and reduce exposures associated with work-related asthma.

National clinical guidelines on the diagnosis and management of work-related asthma, including primary and secondary prevention, should be adopted by healthcare providers and healthcare systems.

Supporting Strategies:

- National guidelines should be implemented by healthcare providers to assess work-related asthma and should include education and clinical decision support tools.
- Healthcare providers should ask their adult asthma patients about their workplace, positions and job tasks, including associated exposures and timing of symptoms.

The policy statements and supporting strategies presented in the National Asthma Public Policy Agenda create a blueprint for how the American Lung Association and its partners can work together to improve asthma. The agenda recommends specific policies that can be implemented—policies that have, in fact, worked in certain areas. It also presents goals that the asthma community can work on together to reduce morbidity, mortality and health disparities in asthma.

The American Lung Association is committed to making the changes outlined in this report and, as a next step, will partner with others at the national, state and local levels to collect and develop tools, including model policy language and plans, and widely communicate these concepts. The Lung Association welcomes your feedback about the policies presented in this agenda and welcomes your involvement to push these initiatives forward. We invite you to help champion clean air for all, improve the quality of life for those living with asthma and their families, and create a tobacco free future.

The American Lung Association wishes to thank all of the participants from the National Asthma Public Policy Agenda Stakeholder Group and the reviewers who assisted in improving the final version of A National Asthma Public Policy Agenda. For copies of the full report or additional information on this project, including background on each of the recommended policy strategies, please visit the American Lung Association website at Lung.org. You may also contact Barbara Kaplan, National Director, Asthma Programs at Barbara.Kaplan@Lung.org.

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