

Asthma Practices Survey Report

2024



**Department of
Health**

Asthma Program

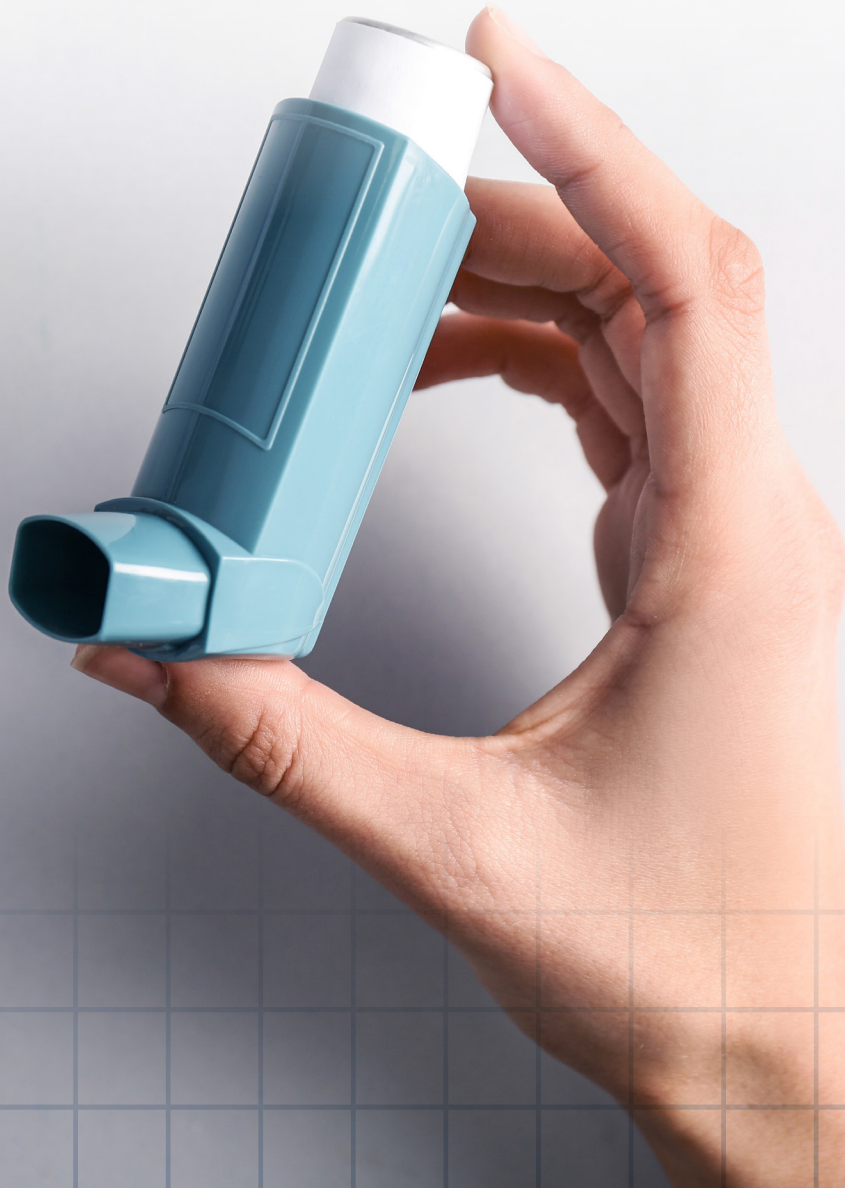
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Abstract

In 2024, the Ohio Department of Health Asthma Program conducted the Asthma Practices Survey Report to evaluate the integration of CDC EXHALE strategies and to gauge asthma-related practices in hospitals and healthcare facilities throughout Ohio. The survey focused on how organizations manage asthma care, including using EXHALE strategies, adherence to the National Asthma Education and Prevention Program (NAEPP) guidelines, and providing services such as asthma self-management education, tobacco cessation efforts, and referrals. The data collected from over 400 health care providers highlighted critical gaps in care and provided insights to inform future strategies to reduce asthma hospitalizations and improve patient outcomes.

The report underscores the importance of the EXHALE strategies and highlights the current practices in asthma management across various health care settings. The report highlights areas for improvement, particularly in guideline-based care and care coordination. The findings aim to guide specific interventions addressing these gaps. Ultimately, the goal is to improve the quality of asthma management and decrease the health care burden associated with asthma-related complications in Ohio.



Introduction

Background

The Ohio Department of Health Asthma Program (ODHAP) conducted the Asthma Practices Survey to gather information about current asthma-related practices in hospitals and health care settings across Ohio. The survey is part of ODHAP’s ongoing efforts to reduce the state’s asthma burden. This web-based survey was administered in 2024, led by Shahd Qaisi and Sarah Kravitz, designed to collect details about how various organizations work with individuals with asthma, intending to use this information to target strategies to fill current gaps in asthma care to reduce asthma hospitalization rates and improve patient asthma management. Areas of inquiry included asthma self-management education, referrals and service coordination, medication management, tobacco cessation efforts, and asthma-related Quality Improvement projects.

CDC created the EXHALE strategies to improve asthma control and reduce health care costs. They also serve as the foundation of the ODH Asthma Program. Each letter identifies a new activity to assist in asthma management:

- E** Education on asthma self-management.
- X** X-tinguishing smoking and secondhand smoke.
- H** Home visits for trigger reduction and asthma self- management.
- A** Achievement of guidelines-based medical management.
- L** Linkages and coordination of care across settings.
- E** Environmental policies or best practices to reduce asthma triggers from indoor, outdoor, and occupational sources.

Research Problem: To assess asthma care by providers in Ohio.

Objectives: The goals or aims of the research are:

- Evaluate the access to asthma management resources.
- Identify gaps and barriers in asthma care.
- Evaluate the quality of asthma care.
- Assess provider adherence to guidelines.
- Asthma self-management education.
 - Referrals and service coordination.
 - Medication management.
 - Tobacco cessation efforts.
 - Asthma-related QI projects.

Understand the common challenges health care providers face, such as medication access, care coordination, patient compliance, and socioeconomic factors affecting asthma management.

Gather data on patient outcomes related to asthma management, including hospitalization rates, emergency department visits, and patient adherence to treatment plans.

- To understand health equity and asthma.
- How often were EXHALE strategies used?
- How were asthma management services delivered?
- To provide an overall comprehensive understanding of asthma healthcare delivery in Ohio.

Methodology

Research Design: The overall approach was qualitative.

Sample:

In 2024, over 60,000 healthcare providers throughout Ohio received the Asthma Stakeholder and Asthma Practices Surveys. These surveys aimed to gather comprehensive information on asthma-related practices in hospitals and other health care facilities. This shift from previous years has broadened the focus to encompass a broader range of providers. ODHAP excluded school districts from the survey and opted instead to source this data from other channels. The final sample encompassed providers from hospitals, community health centers, and various organizations serving asthma patients. With the reach significantly expanded this year, expectations are high for a response rate that will offer a more detailed insight into statewide asthma care practices.

Those Who Participated in the Survey Include:

The survey was completed by 44.5% clinical providers, 36.5% general hospitals and 15.3% children’s hospitals.

Data Collection Methods:

The data presented in this report was collected via a web survey in one phase. Data was collected for the Asthma Practices Survey from January to March 2024. Organizations in the ODHAP sample received multiple email invitations to complete the survey. Each invitation included a request asking recipients if there was a better person to contact at the agency and, if so, to provide their contact information.

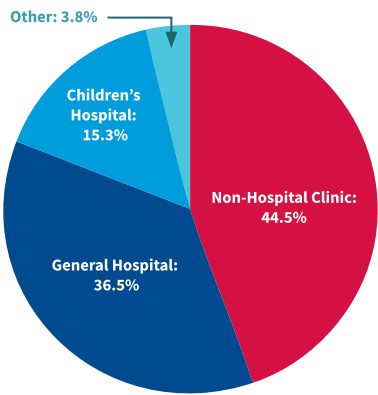
Data Analysis:

The ODH Asthma Program data team thoroughly analyzed the data collected. The strategy of extensively oversampling the population, which was a part of expanding the pool of potential respondents, resulted in a significant amount of missing data in the final sample. The ODHAP received 793 responses within three months of the initial survey invitation. The survey exclusively targeted providers serving asthma patients in Ohio, so the researchers excluded responses from individuals who either did not see asthma patients (144 individuals) or did not work in Ohio (173 individuals). This exclusion process yielded 546 responses from providers who worked in Ohio and saw asthma patients. ODHAP also conducted a data quality analysis which excluded 146 of the remaining 546 responses. Specifically, 143 respondents had completed only the first page of the survey (i.e., personal and work information), and one respondent had completed the first page and only the first question on the second page. We also excluded two additional responses due to poor data quality. Even with this extensive culling of the sample a large portion of responses were still missing.

Despite culling the collected data to include only responses from providers who see patients in Ohio and who completed the primary portions of the survey, a large amount of missing data remained. Twenty-five percent of respondents were missing at least 80% of the essential fields and 50% of respondents were missing more than a third of the essential fields. Exercise caution when interpreting the data due to the high percentage of missing responses.

Frequency analyses were conducted using the cleaned sample of 400 responses in SAS. Missing values were removed for individual questions so that only valid responses are reported.

Respondent’s Role / Place of Employment:



Results

Presentation of Findings:

Each section of the ODHAP results is organized according to the correlating CDC EXHALE Strategy.

EXHALE Strategy: Education on Asthma Self-management.

EXHALE Strategy: Education on asthma self-management is critical to the EXHALE framework. This strategy aims to empower individuals with asthma by giving them the knowledge and skills to manage their condition effectively.

Self-management education is crucial because it helps patients understand their asthma triggers, how to use medications correctly, and what to do in case of an asthma attack:

- Asthma information and training in asthma evaluation skills.
- Self-monitoring and personalized asthma action plans.
- Written asthma action plan.
- Regular assessment by a consistent clinician and medication management.

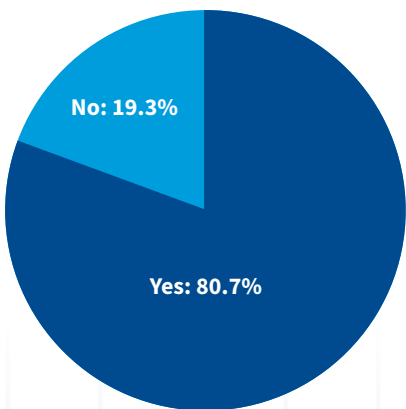
Healthcare providers should reinforce the following topics:

- Essential facts about the pathophysiology of asthma.
- Correct usage of medications.
- Techniques for monitoring symptoms.
- Importance of avoiding triggers (both indoor and outdoor).

According to Our Survey:

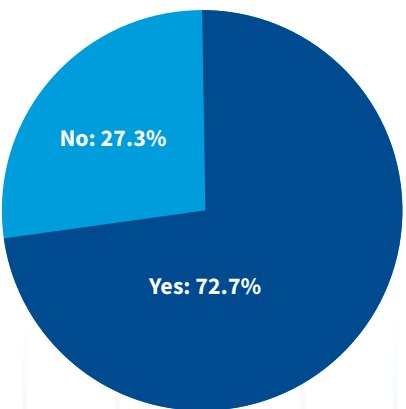
- **84.4%** of providers in Ohio provide asthma self-management education. (n = 275)
- **80.7%** of providers in Ohio give environmental trigger education. (n = 192)
- **72.7%** of providers in Ohio offer asthma action plans. (n = 118)

Does your facility provide
Education on Environmental dangers?*



*n = 192; 208 missing responses

Does your facility provide
Asthma Action Plans for patients?***



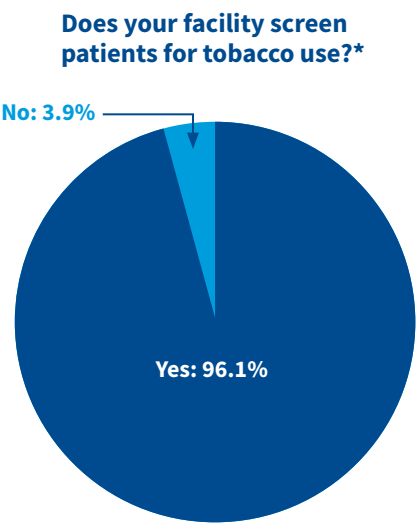
***n = 282; 118 missing responses

EXHALE Strategy: X-tinguishing Smoking and Secondhand Smoke.

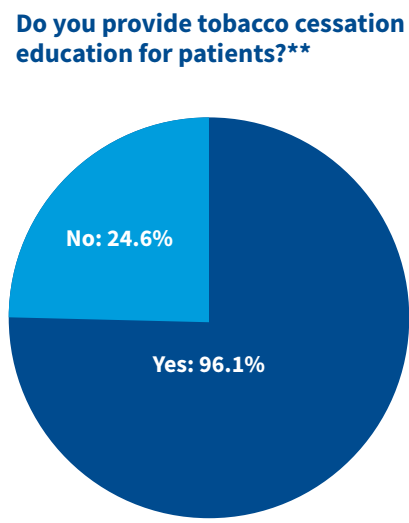
EXHALE Strategy: X-tinguishing smoking and secondhand smoke ([CDC, 2024](#)). The National Asthma Guidelines recommend that people with asthma avoid smoking and exposure to secondhand smoke. Cigarette smoke can trigger asthma attacks that require emergency department care or hospitalization. Moreover, smoke-free policies can reduce secondhand smoke exposure.

According to Our Survey:

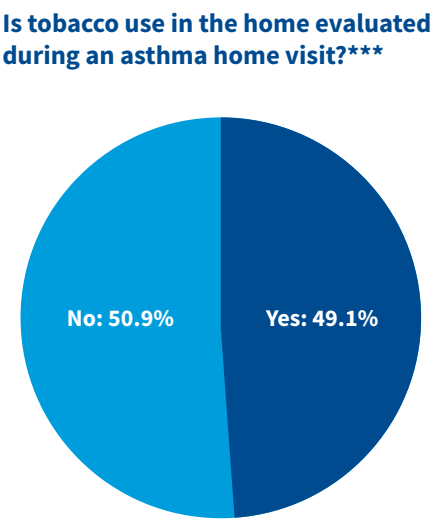
- **96.1%** of providers report screening for tobacco use. (n = 280)
- **75.4%** of providers deliver inpatient tobacco cessation education. (n = 276)
- **49.1%** of providers evaluate tobacco use during home visits. (n = 222)



*n = 280; 120 missing responses



**n = 276; 124 missing responses



***n = 222; 178 missing responses

EXHALE Strategy: Home Visits for Trigger Reduction and Education.

Home visits are a vital component of the EXHALE strategy. In these visits, trained professionals assess the home environment for asthma triggers and provide education on self-management. These visits are precious because they can uncover barriers to effective asthma management that might not be apparent in clinical settings.

Home visits for trigger reduction and asthma self-management education can:

- Improve medication adherence among people with asthma.
- Addressing environmental factors such as mold, pests, secondhand smoke, and home visits can significantly improve asthma control.
- Reduce asthma-related emergency department (ED) visits and hospitalizations.
- Decrease missed school or workdays because of asthma.
- Reduce health care costs.

Home visit services focused on people at higher risk of asthma attacks (i.e., people with prior hospitalizations or ED visits for asthma).

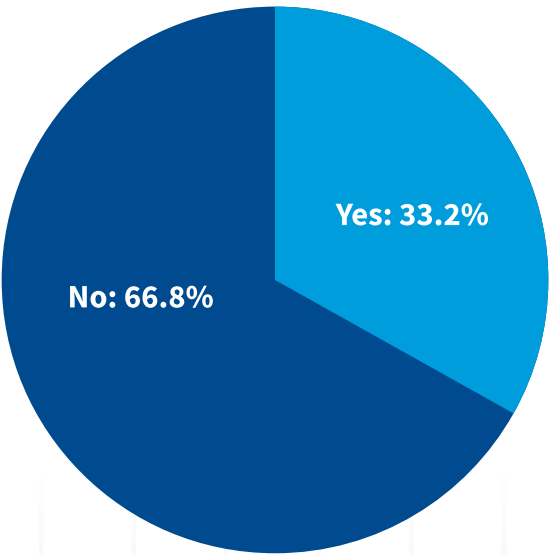
Home visit services include:

- Home environmental assessments for common triggers of asthma attacks, such as cockroaches or mold.
- Asthma self-management education includes education on using asthma medications correctly and what to do if asthma symptoms worsen.

Public health partners, including nurses, certified asthma educators, community health workers, and others, can deliver home visits to people with asthma.

According to our survey data, only 33.2% of Ohio providers (n = 238) provide asthma home visits.

Does your facility provide asthma home visits?*



*n = 238; 162 missing responses

EXHALE Strategy: The Achievement of Guidelines-based Medical Management Among People with Asthma.

EXHALE Strategy: The achievement of guidelines-based medical management among people with asthma offers numerous benefits that positively impact individuals with asthma and the broader healthcare system. By adhering to established clinical guidelines, health care providers can improve medication adherence among patients, ensuring that individuals take their medications correctly and consistently. Adherence among patients helps control symptoms, prevent asthma attacks, and maintain stable lung function, significantly reducing the need for emergency department visits and hospitalizations. Consequently, fewer severe asthma episodes translate into fewer disruptions to daily life, such as missed school days for children and workdays for adults, enhancing overall quality of life and productivity. Moreover, following guidelines-based care improves health outcomes and lowers health care costs. Reduced hospital admissions and emergency care usage decrease the financial burden on families and healthcare systems. Additionally, proactive asthma management through preventive care and education lessens the long-term complications associated with poorly controlled asthma, further cutting down on costs related to chronic care. Overall, guidelines-based asthma management provides a comprehensive approach that improves patient adherence, reduces acute exacerbations, and promotes cost-effective care delivery, ultimately supporting better health and well-being for those with asthma.

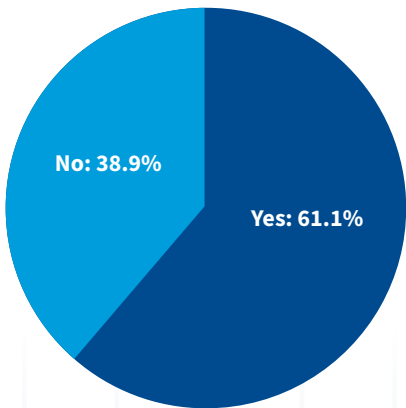
Effective ways to achieve guidelines-based medical management among people with asthma include:

- Analyzing medical records to identify people who could benefit from additional outreach or interventions.
- Decision support tools, such as treatment algorithms or reminders.
- Focused training of health care providers.
- Strengthening the system supports and improves access and adherence to asthma medications and devices.

According to Our Survey:

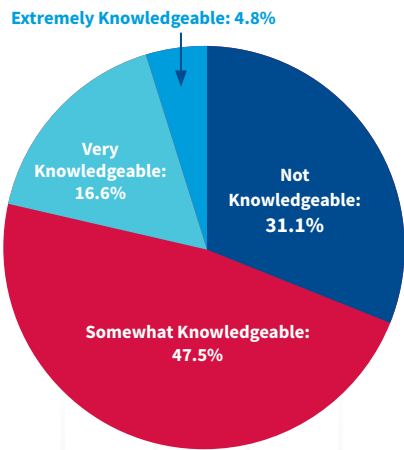
- **61.1%** of providers in Ohio use the National Asthma Education and Prevention Program NAEPP Guidelines in the care of asthma patients. (n = 375)
- **31.1%** of providers in Ohio Rated themselves as “not knowledgeable at all” of these guidelines. (n = 379)
- **81.3%** of providers in Ohio track adherence to medication. (n = 214)

Do you use National Asthma Education and Prevention Program (NAEPP) guidelines in care of patients with asthma?*



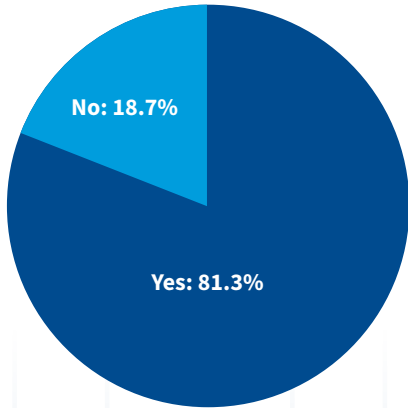
*n = 375; 25 missing responses

How knowledgeable are you regarding NAEPP guidelines?***



***n = 379; 21 missing responses

Do you track patient adherence to medication?***



***n = 214; 186 missing responses

EXHALE Strategy: Linkages and Coordination of Care.

EXHALE Strategy: Linkages and Coordination of Care. The EXHALE strategy emphasizes creating robust connections within and across health care systems and community services to address asthma patients’ needs comprehensively. Linkages include coordinating medical care and social services, which is crucial for effective asthma management. Coordinated care to improve patient outcomes by addressing all aspects of a patient’s health has been effective. This holistic approach helps reduce gaps in care, particularly for vulnerable populations. Implementing patient-centered medical homes and disease management programs can significantly reduce asthma exacerbations and improve overall health outcomes.

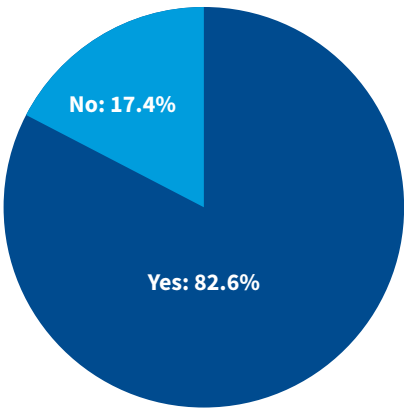
Impact:

Strengthening these linkages has the potential to reduce health care costs by decreasing emergency department visits and hospitalizations related to asthma ([CDC](#)).

According to Our Survey:

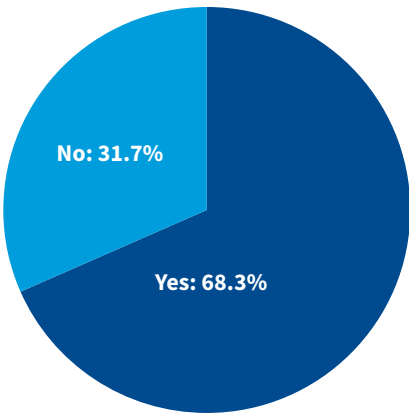
- **82.6%** of providers in Ohio schedule follow-up appointments after an unscheduled hospital visit. (n = 219)
- **68.3%** of providers in Ohio follow up on referrals provided to ensure patient’s access to care. (n = 205)

Does your facility schedule follow-up appointments for patients at discharge from an unscheduled hospital encounter?*



*n = 219; 181 missing responses

Does your facility follow up on clinical referrals for patients to ensure they accessed care?**



**n = 205; 195 missing responses

EXHALE Strategy: Environmental Policies or Best Practices to Reduce Asthma Triggers from Indoor, Outdoor, and Occupational Sources.

EXHALE Strategy: Environmental policies or best practices to reduce asthma triggers from indoor, outdoor, and occupational sources profoundly impact health outcomes by decreasing asthma-related emergency department visits and hospitalizations and reducing the number of missed school days. These policies also help lower health care costs by preventing asthma exacerbations and improving overall condition management. By addressing environmental factors, these practices create healthier environments where people with asthma live, learn, work, and play.

Several examples of effective environmental policies and practices have proven beneficial for individuals with asthma. Home weatherization assistance programs, which provide loans or grants to low-income residents for home repairs and improvements, can reduce asthma triggers like mold and pests. Comprehensive smoke-free policies, which ban smoking in all indoor spaces, such as workplaces, restaurants, and bars, also help create cleaner air. Additionally, modifying older diesel engines of school buses to run more cleanly reduces air pollution. In contrast, efforts to eliminate or reduce exposure to asthma triggers in the workplace contribute to healthier environments. These initiatives collectively support better health outcomes for people with asthma by reducing exposure to harmful environmental triggers.

Most Common Asthma Environmental Triggers:

Indoor Triggers:

- **Dust mites:** Tiny insects found in household dust that can provoke asthma symptoms.
- **Mold:** Fungi that grow in damp areas, releasing spores that irritate airways.
- **Pet dander:** Tiny skin, hair, or feathers particles from pets that can cause allergic reactions.
- **Tobacco smoke:** Exposure to secondhand smoke from cigarettes, cigars, or pipes.
- **Cockroaches and pests:** Allergens from cockroach droppings, saliva, and body parts that can trigger asthma.

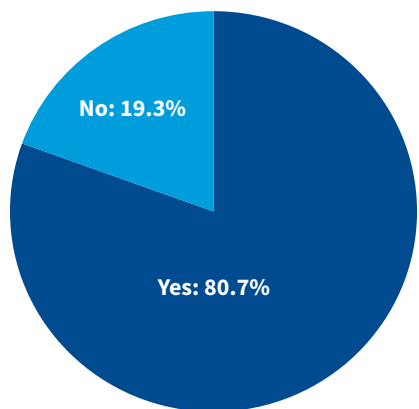
Outdoor Triggers:

- **Pollen:** Allergens from trees, grasses, and weeds prevalent in different seasons.
- **Air pollution:** Particulate matter from traffic, industrial emissions, and burning of fossil fuels.
- **Ozone (smog):** Ground-level ozone, a major component of smog, can worsen asthma symptoms.
- **Cold air:** Cold and dry air can cause airway constriction and exacerbate asthma.
- **Smoke from wildfires or burning:** Smoke and particles released into the air during wildfires or open burning can irritate the lung.

According to Our Survey:

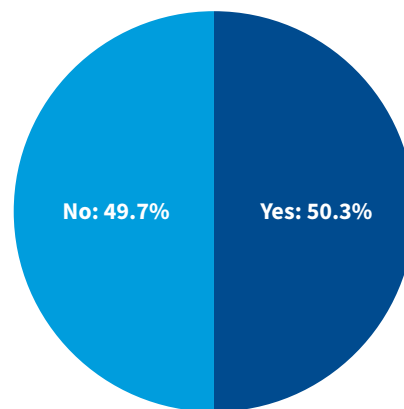
- **80.7%** of providers in Ohio give environmental education on asthma triggers. (n = 192)
- **50.3%** of providers in Ohio issue an environmental assessment using the Home Characteristics and Asthma Triggers Checklist for Home Visitors or a similar tool. (n = 171)
- **22.4%** of providers in Ohio offer environmental remediation of asthma triggers such as home modifications. (n = 161)

Does your facility provide education on environmental triggers?*



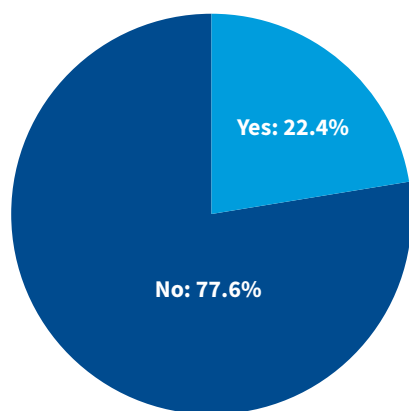
*n = 192; 208 missing responses

Does the facility or partner provide environmental assessment using the Home Characteristics and Asthma Triggers Checklist for Home Visitors or similar environmental assessment tool?**



**n = 171; 229 missing responses

Do you provide environmental remediation of asthma triggers such as home modifications?***



***n = 161; 239 missing responses

Discussion

Interpretation of Results:

The results of the Asthma Practices Survey in Ohio provide a detailed overview of the current state of asthma care delivery, highlighting both areas of progress and opportunities for further enhancement. Many health care providers in Ohio know established asthma management guidelines and strategies, but the survey reveals inconsistencies in their knowledge and application across different settings. More comprehensive training and education are needed to ensure these guidelines are fully understood and consistently implemented. Some providers indicated a limited familiarity with the national guidelines, suggesting that a lack of awareness or access to training may impact the quality of care and outcomes for asthma patients.

While several health care facilities provide essential asthma management services, such as self-management education and smoking cessation support, the survey findings indicate that there is room for improvement regarding the number of providers who adopt comprehensive approaches. These include services like home visits to assess and mitigate environmental triggers and efforts to address broader social determinants of health that can affect asthma outcomes. Additionally, the results point to gaps in adopting environmental policies and best practices, critical for reducing exposure to asthma triggers in indoor and outdoor settings.

The survey underscores the need for a more holistic approach to asthma care in Ohio, incorporating effective practices across all areas of care delivery. These include increasing capacity for local communities, fostering stronger community partnerships, enhancing provider training, and ensuring that resources and support are available to address the factors influencing asthma outcomes. By focusing on these areas, Ohio can work toward achieving more consistent, equitable, and high-quality asthma care for all its residents, ultimately reducing the burden of asthma on individuals, families, and the healthcare system.

Implications:

- **Need for Targeted Training and Education.**
 - The survey highlights gaps in knowledge and inconsistent use of national asthma management guidelines among health care providers.
- **Expansion of Comprehensive Asthma Services.**
 - While several healthcare facilities provide basic asthma care services, fewer offer comprehensive services like home visits for environmental assessments or support to address social determinants of health, expanding these services could reduce asthma exacerbations by identifying and mitigating triggers in patients' living environments, improving overall health outcomes, and reducing healthcare costs.
- **Understanding Disparities in Asthma Care.**
 - The survey reveals disparities in how asthma care is delivered and varying levels of familiarity among health care providers with guidelines and strategies.
- **Integrating Social Determinants of Health in Asthma Management.**
 - The findings show the importance of considering social determinants of health (SDOH), such as housing, income, and access to health care in asthma management. Addressing the SDOH promotes a more holistic approach to asthma care.

Conclusion

The ODHAP survey was designed to collect in-depth information about asthma-related practices within hospitals and other health care agencies, focusing on their familiarity with asthma resources and adherence to established guidelines. The overarching goal was to identify gaps in care and use this data to inform strategies to reduce asthma hospitalization rates and improve overall asthma management for patients across the state.

At the heart of this initiative are the CDC's EXHALE strategies, which served as the foundational framework for our approach. The CDC EXHALE strategies are essential for comprehensive asthma care, and our survey sought to assess how well these practices are implemented across different healthcare settings.

The survey results highlighted the most prevalent gaps in care reported by respondents, offering valuable insights that will be instrumental in shaping targeted interventions. By addressing these gaps collectively, we can work towards reducing asthma-related hospitalizations and enhancing asthma management for individuals across the state.

References

- Ohio Department of Health Asthma Practices Survey, 2024
- CDC. "EXHALE: Strategies to Help People with Asthma Breathe Easier." CDC National Asthma Control Program, www.cdc.gov/national-asthma-control-program/php/exhale/index.html.

Program Contact Information:

Join the conversation and become a member of the Asthma Collaborative Improvement Committee. The committee holds monthly meetings from January through October and aims to unite health care professionals, community groups, and other stakeholders to improve asthma care in our community. CE is provided for Nursing, Sanitarian, and Social Work. Sign up for the [Asthma Collaborative Improvement Committee](#) today!

Sign up for free email updates from the [Ohio Department of Health Asthma Program](#).

Email: Asthma@odh.ohio.gov

Website: <https://odh.ohio.gov/know-our-programs/asthma-program>