Awareness Isn't Enough: Bridging Gaps in Asthma Care Through Environmental Health Literacy

2024 Asthma Community Survey

Insights Report

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Executive Summary

The 2024 Asthma Community Survey[1] revealed a defining challenge in asthma care: people recognize the environmental impact on their symptoms, but lack the clarity, tools, and support to take meaningful action. This disconnect isn't about awareness— it's about unclear environmental guidance, challenges in care coordination, and the absence of simple, trusted resources to support daily decisions.

Based on responses from 385 individuals living with asthma across the U.S.—gathered in partnership with clinicians, advocacy leaders, care partners, and funded by Chiesi USA—this Insights Report presents a roadmap for integrating Environmental Health Literacy (EHL) across the asthma care continuum. Effectively embedded in clinical, community, and digital systems, EHL can help people make informed decisions—from navigating greenspaces to improving indoor air—that close the gap between awareness and action and improve long-term outcomes.

Environmental Health Literacy isn't a nice-to-have—it's a pillar of asthma care, a public health imperative, and a matter of equity.

Key takeaways

1 | People with asthma are aware—but not empowered

83% say environmental triggers strongly affect their asthma, but most lack the tools, context, and support to act with confidence.

2 | Environmental Health Literacy is overlooked—and urgently needed

Just 8% of respondents visited greenspaces daily, reinforcing the need for clearer, system-wide environmental guidance.

3 | Women reported lower confidence in assessing environmental risk

56% of women felt "somewhat confident" compared to 39% of men—underscoring the value of more tailored, gender-responsive support.

4 | Disparities persist indoors and out

44% made no indoor modifications to reduce environmental triggers due to cost and unclear guidance; 77% avoid greenspaces entirely—even on "good" air days.

5 | Embedding Environmental Health Literacy is a public health imperative

To move from awareness to better outcomes, EHL must become a standard of asthma care across clinical, digital, and community systems.

Introduction

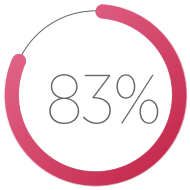
Asthma care has long prioritized symptom monitoring, medication adherence, and exacerbation management—pillars that remain essential. But traditional supports were built for clinical stability, not environmental volatility. As exposures like wildfire smoke, extreme heat, prolonged pollen seasons, mold, and shifting air quality grow more intense and less predictable, people with asthma often feel like they're navigating those environmental triggers alone.

The 2024 Asthma Community Survey reveals just how significant these environmental considerations have become. Eighty-three percent of respondents reported that environmental factors had a strong or extreme impact on their asthma. Forty-two percent said they avoided greenspaces even on days with "average" air quality, and 31% still avoided outdoor activity on "good" air quality days. In fact, 39% never visited greenspaces at all, despite living nearby. This gap between perception and behavior reveals the limits of data alone—people need tools and direction to translate awareness into informed decision-making.

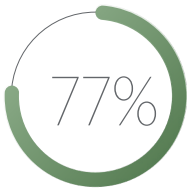
Critically, these challenges are not limited to outdoor spaces. Many respondents also struggled to assess or improve indoor environments. The survey found that 44% made no indoor modifications, and one-third were unsure if their air filters were asthma-appropriate. These insights reveal a pressing need to elevate both indoor and outdoor environmental guidance.

At the same time, many clinicians—particularly in high-volume or underserved settings—lack the time, tools, or training to interpret pollen indexes, Air Quality Index (AQI) ratings, or humidity warnings. Environmental Health Literacy—defined as the ability to understand, interpret, and act upon environmental data to protect health— is emerging as a shared blind spot. People living with asthma often struggle to determine what environments are safe, while many healthcare workers lack the resources or guidance to offer clear, actionable advice. This dual uncertainty reinforces the need for system-level strategies that promote shared understanding between patients and clinicians, across communities and care settings. Without those strategies, environmental risk is acknowledged but not consistently addressed.

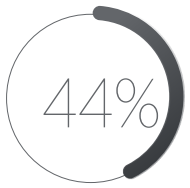
Survey Snapshot



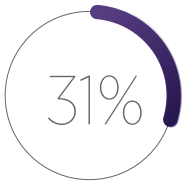
of respondents said environmental conditions have a strong or extreme impact on their asthma



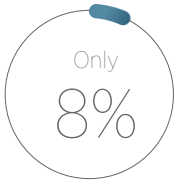
avoid greenspaces due to environmental concerns



made no indoor changes to reduce triggers



avoid outdoor activity even on "good" air quality days

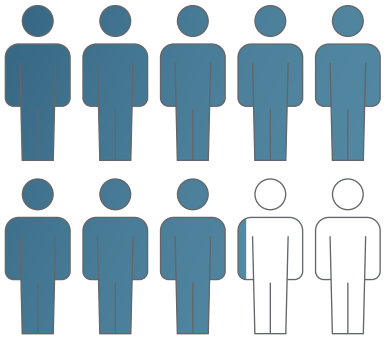


visit greenspaces daily

Reframing Greenspace from Risk to Resource

Despite their well-established ability to support respiratory health, reduce stress, and improve overall well-being, greenspaces often go unused by many people living with asthma. The 2024 Asthma Community Survey found that 39% of respondents never visit greenspaces, even when they live nearby—and nearly one-third avoid them even when air quality is rated "good." Just 8% of respondents visited greenspaces daily. Even on days rated "excellent" for air quality, 60% said they went outside only once or twice—underscoring how uncertainty can override opportunity, even under ideal conditions.

Environment Often Or Always Triggers Asthma Symptoms



82%

felt triggered, but few rated air quality as poor

Among respondents in high-symptom regions like the Southwest, 82% said their environment often or always triggered asthma symptoms, but few rated their local air quality as "poor." In fact, most respondents in these regions rated their air quality only as "average"— a disconnect that highlights how perception often lags behind experience, and how environmental data, without context or confidence, rarely changes behavior.

This avoidance stems from uncertainty, not indifference. Many individuals, particularly women, reported confusion around pollen levels, humidity, and AQI— and low trust in tools like weather apps or alerts. Only 44% of women felt "very confident" managing environmental triggers, compared to 61% of men. When information is unclear or inaccessible, caution often becomes avoidance.

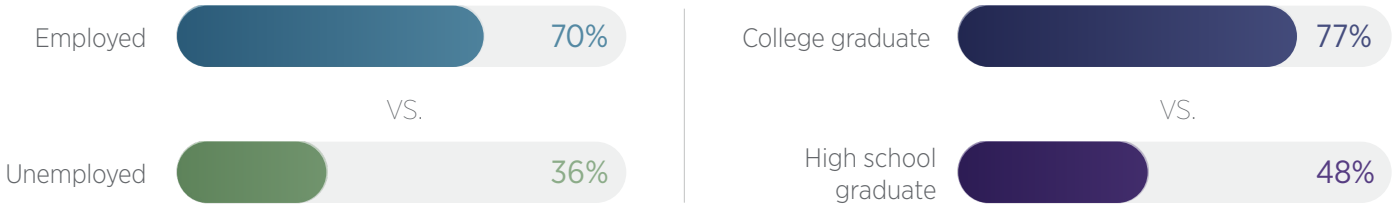
Embedding EHL into care plans and everyday tools is essential to close this confidence gap. Programs like AirNow.gov[3], AAFA Weather Alerts[2], and the State of the Air Report[10] are valuable, but only when people understand how to use them. Guidance must move beyond broad public health messaging to real-time, personalized decision-making support.

Integrating tools into asthma action plans, pairing them with behavioral coaching, and piloting "Safe Outdoor Days" can empower people to navigate greenspaces with clarity and confidence. When people understand how to assess risk for themselves, outdoor activity becomes possible again—not just tolerated but trusted.

Indoor Air Quality: The Invisible Risk

Environmental risk doesn't stop at the front door. Indoor environments—where people spend most of their time—are among the most modifiable and least addressed contributors to poor asthma control. The survey found that 44% of respondents had made no changes to reduce indoor triggers, and one-third were unsure whether their air filters were asthma-appropriate.

More Likely To Make Indoor Changes Based On Income And Education



Respondents with higher income and education were significantly more likely to make indoor changes: 77% of college graduates made modifications, compared to just 48% of high school graduates, and 70% of full-time workers made changes versus only 36% of unemployed respondents. These disparities reflect persistent cost and access barriers that limit effective intervention for many people living with asthma.

Clinical guidance increasingly recommends tailoring indoor interventions to an individual's specific allergy profile, ideally confirmed through allergy testing. Strategies should be targeted—not one-size-fits-all—and often require a multi-component approach. For example, dust mite sensitization may call for impermeable pillow and mattress covers; mold allergies require reducing indoor humidity below 50% and repairing leaks. For those allergic to pets, rodents, or cockroaches, recommended strategies may include restricting pet access, hiring pest management services, and removing carpeting when feasible. HEPA-filtered vacuums and air purifiers can also be helpful when used as part of a broader, personalized plan. These approaches align with the 2020 *Focused Updates to the Asthma Management Guidelines* issued by the National Asthma Education and Prevention Program[9] (NAEPP) and demonstrate how clinician-supported, tailored strategies can help patients reduce exposure and regain control of their indoor environments.

Improving indoor air quality also requires scalable education and tools. People need support identifying common triggers—such as smoking*, cleaning agents, humidity, pet dander, mold, and pests—and guidance on which interventions are both practical and effective. Resources like the Clean Air at Home[5] initiative and the Lung Health Navigator program[8] offer trusted, accessible starting points for action.

Clinical teams can build on these tools by integrating indoor air literacy into discharge protocols and asthma care plans, and by training community health workers to provide virtual or in-home assessments. Expanding coverage and reimbursement for indoor interventions—particularly in underserved communities—will be essential to advancing equity and long-term impact.

Confidence: The Difference Between Knowing and Doing

Confidence is rarely treated as a clinical priority— yet it may be the most significant barrier between understanding risk and responding to it. The Asthma Community Survey found that women were more likely to perceive their air quality as “average” or “poor,” even in regions with favorable AQI ratings. This perception gap, paired with lower reported confidence in managing environmental triggers, suggests that people living with asthma need support to turn data into decisions.

Confidence In Managing Environmental Triggers

EHL is essential, but without behavioral reinforcement, it often doesn’t lead to meaningful change. People need tools that do more than inform—they must clarify uncertainty, support decision-making, and demonstrate what effective asthma management looks like in daily life. Behavioral scaffolding—checklists, trackers, and peer-guided demonstrations—help build confidence over time. Practical, culturally relevant resources such as How to Clean Your Own Air Cleaner[7], the Trusted Messengers Asthma Program[11], and the Lung Health Navigator[8] offer clear, achievable pathways for reducing exposure and improving control in real-world conditions.

Integrating these supports into care routines, patient portals, and asthma action plans transforms EHL from an abstract concept into a lived practice. Confidence isn’t assumed—it’s built, reinforced, and sustained. To be effective, these tools must also reflect the lived experiences of those most affected. Designing confidence-building strategies that address gender-specific concerns—and that feel realistic, relatable, and trustworthy—is critical to reaching those most at risk of avoidance.

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Embedding EHL in the Asthma Care Continuum

Environmental Health Literacy can't be a pamphlet at discharge. To be effective, it must be embedded as a system-level standard—woven across clinical care, digital tools, and community touchpoints. The Asthma Community Survey underscores the need to operationalize EHL not as education alone, but as infrastructure.

Clinically, this means integrating AQI and pollen literacy directly into asthma education protocols, routine assessments, and discharge planning. Environmental checklists should be as common as medication reviews. Real-time air quality dashboards, tailored to regional conditions, can support clinicians in providing guidance that feels both timely and relevant.

In the community, EHL should show up where people live, learn, and gather. Schools, housing authorities, and local health departments are powerful allies in this work. So are patient advocacy organizations, which can co-create trusted tools and ensure EHL reflects real-world priorities. Community health workers can deliver plain-language guidance, model practical steps, and connect families to support. EHL isn't just part of chronic disease education—it belongs in the foundation.

Digitally, people need more than generic alerts— they need personalized, symptom-linked guidance delivered at the point of decision. Patient portals and apps should offer behavior cues based on current conditions, such as "It's a good air day, walk outside for 15 minutes if symptoms are stable." Push notifications should be digestible at a glance. Dashboards should show not just data, but what that data means for people with asthma today.

EHL becomes truly impactful when it's not a message—it's a method. When EHL is embedded across systems, it turns uncertainty into clarity and transforms asthma care from reactive to responsive.

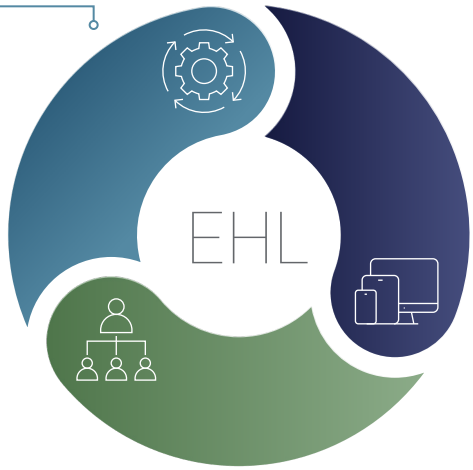
Clinical Integration

Include AQI/pollen literacy in asthma education and discharge protocols

Integrate environmental checklists into routine assessments

Create clinician-facing dashboards with regional air quality summaries

Embed EHL tools into hospital systems such as Epic to fortify discharge protocols



Digital Enablement

Enhance patient portals and mobile apps with symptom-triggered alerts and localized guidance

Offer plain-language push notifications that interpret AQI and pollen ratings in real time

Develop dashboards with embedded behavior cues (e.g., "It's a good air day, walk outside for 15 minutes if symptoms are stable")

Community-Based Interventions

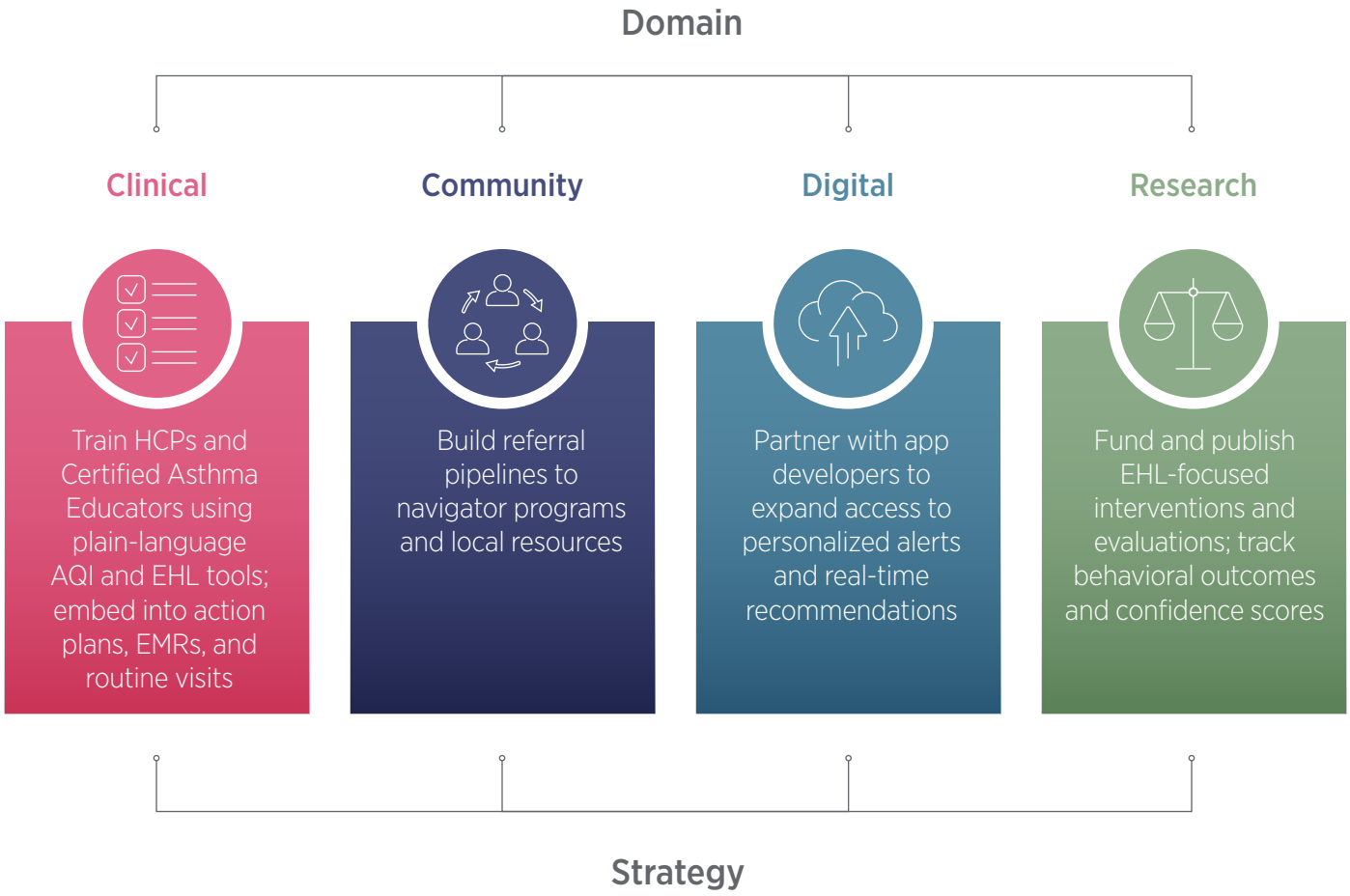
Partner with schools, housing authorities, and local health departments to expand reach

Activate community health workers to provide EHL education and tools

Embed EHL into chronic disease self-management programs

EHL Activation Strategy Framework

Real change requires action across the healthcare ecosystem. The strategies below translate insights into operational priorities by domain and by audience.



EHL is the missing link. It's not just about knowing that environmental conditions matter—it's about understanding how to assess risk, interpret conditions, and make informed choices.

Conclusion

The 2024 Chiesi Asthma Community Survey uncovers a critical unmet need: while people living with asthma recognize environmental triggers, many lack the support to navigate them with confidence. This disconnect isn't about awareness—it reflects the absence of a framework that transforms recognition into meaningful change.

EHL is the missing link. It's not just about knowing that environmental conditions matter—it's about understanding how to assess risk, interpret conditions, and make informed choices. It's about having access to relevant, real-time guidance and resources that support protective action regardless of income, background, or geography.

Integrated EHL connects clinical insight, behavioral science, and personal context into a single, usable system. It's how awareness becomes confidence—and how confidence becomes action.

Environmental Health Literacy isn't a nice-to-have—it's a pillar of asthma care, a public health imperative, and a matter of equity. Improving asthma outcomes means turning information into action clearly, consistently, and equitably. That's what EHL delivers. And it's what the future of asthma care demands.

Resources

1. 2024 Asthma Community Survey Results
2. AAFA Pollen & Weather Alerts
3. AirNow
4. CDC: Environmental Health and Asthma
5. Clean Air at Home
6. EPA Guide to Air Cleaners in the Home
7. How to Clean Your Own Air Cleaner
8. Lung Health Navigator Program
9. National Asthma Education and Prevention Program EPPR-4 Guidelines
10. State of the Air 2024
11. Trusted Messengers Asthma Program

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*Smoking cessation was not a part of this study.
*Disclaimer: The views, opinions, and quotes expressed in this report are those of the Steering Committee members and individuals interviewed who helped inform the writing of this report.

We gratefully acknowledge the contributions of our esteemed Steering Committee members, whose expertise and perspectives have been instrumental in shaping this Insights Report.

Charmayne Anderson, Patient, Care Partner, and representative of Allergy & Asthma Network

Juan Carlos Cardet, MD, Associate Director, Clinical Research Unit, University of South Florida Morsani College of Medicine; Associate Professor of Medicine & Pediatrics

Hannah Jaffee, Research Director, Asthma & Allergy Foundation of America

Daniel J. Jackson, MD, Professor of Pediatrics, Division of Allergy, Immunology & Rheumatology, University of Wisconsin School of Medicine and Public Health

Joe Morrison, CEO and Board Member, Right2Breathe

Giselle S. Mosnaim, MD, MS, Director of Allergy and Immunology Research, Endeavor Health; Clinical Associate Professor, University of Chicago, Pritzker School of Medicine

Anju T. Peters, MD, MS, MSCI, Professor of Medicine, Associate Chief of Clinical Research and Practice Innovation, Division of Allergy and Immunology, Northwestern Medicine; Director, Center for Clinical Research, Northwestern University Clinical and Translational Sciences Institute; Medical Director, Northwestern Medicine Clinical Research Unit, Northwestern University Feinberg School of Medicine

Cindy Trubisky, MS Ed, AE-C, Senior Director, Nationwide Asthma Programs/Health Promotion, American Lung Association