
*Project

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News

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National Asthma Public Policy Agenda – 2022 Update

In 2022, The American Lung Association (ALA) released the National Asthma Public Policy Agenda – 2022 Update (<https://www.lung.org/policy-advocacy/healthcare-lung-disease/asthma-policy/national-asthma-public-policy-agenda>).

This document consists of 22 public policy recommendations in six categories: healthcare; homes; outdoor air; public health; schools; and workplaces. The focus of our project is to address work-related asthma (WRA), so we have copied the workplace section of the report. Readers interested in other sections will need to access the full report.

Guiding Principles

Workplaces should reduce or eliminate conditions that cause or exacerbate asthma. Many people work in situations that place them at risk of developing work-related asthma, but also may be discouraged from seeking assistance. Policies to identify and manage asthma in the workplace should recognize that critical issues must be addressed, including:

- Every worker has the right to a safe workplace. Immigrants, people of color and low-wage earners are especially vulnerable and should not face discrimination nor denial of these rights.
- Every worker should have access to comprehensive, affordable healthcare coverage for themselves and their family members to manage asthma.
- Every worker should be eligible for workplace accommodations to minimize the effect of the workplace on their asthma symptoms.
- Every worker is eligible to receive workers' compensation for asthma caused or aggravated by work.

Overview

The 2009 Agenda called for establishment of surveillance mechanisms to document levels of WRA and to establish national guidelines for the management of WRA. CDC's National Institute for Occupational Safety and Health (NIOSH) funds states "to assess the extent and severity of workplace injury, illness, disability, and death and identify worker populations and occupations at greater risk."¹ Massachusetts and Michigan have consistently monitored work-related asthma since the program began in 1988. Additional states have conducted surveillance and developed resources related to work-related asthma including California, New Jersey, New York, Washington, and Wisconsin. However, more studies are needed to evaluate the effectiveness of approaches to prevent and manage work-related asthma. Also, national guidelines do not exist for states to prevent and manage WRA.

Consensus documents from the American Thoracic Society conclude that 15% of asthma in adults is caused by exposures at work and that 21.5% of adults with asthma have aggravation of their asthma by work.^{2,3} There are three types of WRA: 1) asthma caused by an immunological reaction to animals (e.g., veterinarians or workers handling mice/rats in research labs), plants (e.g., bakery workers, or workers in grain mills), or chemicals (e.g., workers making car seats from isocyanate foam, or construction workers using epoxy glues); 2) asthma caused by a marked exposure to an irritant (e.g., janitorial workers exposed to a mixture of bleach and acid or bleach and ammonia); 3) Aggravation of pre-existing asthma (e.g., workers in offices with poor ventilation and/or housekeeping). The diagnosis of WRA is based on the presence of asthma symptoms that occur/increase in relationship to work, history of exposure to substances that cause work-related asthma, and medical tests (e.g., breathing tests that show worsening in relationship to work and sometimes allergy testing). CDC's NIOSH guidelines include questions to be asked and recommended medical tests to diagnose WRA.⁴

There are approximately 300 substances present in the workplace that have been shown to cause WRA from an immunological reaction. There are thousands more substances in the workplace that can aggravate pre-existing asthma. Consultation with an occupational medicine specialist, pulmonary specialist or allergist may be useful to assist in both diagnosis and identification of the causal agent. Early diagnosis of WRA along with removal from exposure to the causal

agent(s) is extremely important. Early diagnosis and cessation of exposure to the agent(s) causing WRA increases the likelihood of complete resolution of symptoms or at least the reduction of the severity of symptoms.

The importance of early diagnosis has led to recommendations that individuals who work with known causes of WRA be provided medical surveillance to promptly recognize individuals who develop asthma from their work. Surveillance should, at the minimum, include a respiratory questionnaire about breathing symptoms.

Many organizations have developed recommendations for health care providers and approaches to reduce use/exposure to workplace causes of asthma, for example the OSHA Fact sheet,⁵ or the Cleaning for Asthma Safe School project by the California Department of Public Health (CDPH).⁶

Policy Statements and Supporting Strategies

1. The federal government should update 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.

About the evidence. Current OSHA standards were not promulgated to prevent WRA. Examples include flour, which is regulated as a nuisance dust, or disinfectants, which have no regulatory air standard. Agents that are known to cause WRA do not have comprehensive standards, so there are no requirements to educate workers about the risks nor requirements for medical surveillance to ensure early diagnosis. Additionally, exposure to some causes of WRA such as the isocyanates can occur after skin exposure, and OSHA regulations do not require skin protection.

Even in the absence of changes in OSHA regulations, employers who use substances known to cause WRA should take voluntary efforts to lower exposure to known causes of WRA, educate their employees and provide periodic medical testing.

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

- Identify and control sources and conditions in the workplace that cause or make asthma worse.
- 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).

About the evidence. All employers should ensure that ventilation in their facilities meets the minimum guidelines of American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) specific for their type of workplace (e.g., office, laboratory, retail store).⁷ In addition, all employers can address issues related to cleaning agents/disinfectants, tobacco smoking, fragrances, and other allergens.

NIOSH provides guidelines on WRA, and provides useful information that can help employers and employees develop and maintain a worksite safe from asthma triggers.⁸ Similarly, the ALA's *Guide to Control Asthma at Work* details a set of measures to eliminate sources of unhealthy air in the workplace by using safer disinfectant and cleaning products whenever possible, using chemicals and machinery according to manufacturer instructions, and to establish tobacco-free policies eliminating smoke, secondhand smoke or e-cigarette aerosols.⁹

The COVID pandemic has increased the use of disinfectants, many of which are known causes of WRA (e.g., bleach and quaternary ammonium chloride compounds). The ALA has provided sample fragrance free policies to be implemented at workplaces.¹⁰ EPA's "Safer Choice" program helps consumers, businesses, and institutional buyers identify cleaning and other products that perform well, are cost-effective and are safer for the environment.¹¹ A list of cleaners that meet EPA standards can be found by searching for SAFER Choice Products.

In addition, all employers should make sure their health insurance includes a comprehensive tobacco cessation benefit for all employees. The Affordable Care Act requires employer-sponsored health insurance to cover smoking cessation. A benefit that covers all treatments recommended in the 2008 U.S. Public Health Service Guideline, including all seven medications and three forms of counseling would give smokers the best chance to become tobacco-free.¹² There are many smoking cessation programs that can be used in workplaces. One such program is the ALA's "Freedom From Smoking" program, which has over 35 years of experience helping hundreds of thousands of people quit smoking for good.

Mobile sources are major contributors to air pollution because they emit air pollutants including nitrogen oxides (NOx), hydrocarbons, particulate matter, toxics and greenhouse gases. Diesel exhaust from on-road vehicles (cars, trucks buses), farm and construction equipment, locomotives, marine vessels, and aircraft are major contributors to air pollution. The California Air Resources Board (CARB) 2020 Mobile Source Strategy promotes the use of zero-emission technologies.¹³

3. States should adopt and implement surveillance mechanisms to track WRA, identify asthma hazards, follow trends, and facilitate interventions.

- Establish a surveillance system of WRA with healthcare providers, including clinics, emergency departments, hospitals, and poison control centers.
- Promote interventions that investigate and reduce exposures associated with WRA.

About the evidence. NIOSH maintains a surveillance system for work-related lung disease including asthma,¹⁴ and State-Based Occupational Respiratory Disease Surveillance that contributes to NIOSH epidemiological research.¹ Since 1988, NIOSH has funded several states to collect surveillance data on WRA including Massachusetts, Michigan, New Jersey, California, Washington, and New York. These surveillance projects have identified new causes of WRA and, more importantly, have shown that follow up at the workplaces identified through the surveillance programs prevents WRA in fellow workers of the index case.¹⁵ State health departments should encourage healthcare professionals to report all diagnosed or suspected cases of asthma that are caused by or exacerbated by the workplace. Expansion of surveillance systems in additional states would increase reported cases and help to report trends in WRA.

4. National clinical guidelines on the diagnosis and management of WRA, including primary and secondary prevention, should be adopted by healthcare providers and healthcare systems.

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

About the evidence. The American College of Chest Physicians published a consensus statement on WRA in 2008.¹⁶ Early diagnosis is extremely important in WRA, because the sooner WRA is diagnosed after the onset of symptoms and measures are taken to eliminate/reduce causal exposures, the greater the likelihood that the disease will not progress.

The most common reason for missing the diagnosis of WRA is failure of the healthcare provider to ask about work exposures among their adult patients with asthma. OSHA produced a fact sheet that healthcare providers and adults can use to assess for WRA.⁵ The Fact Sheet outlines key questions and processes that healthcare providers may use in the diagnosis of WRA. A study from Michigan, Minnesota and Oregon reported that only 21 to 25% of adults who thought their asthma was caused by a job had discussed with their doctor the possibility their asthma was work-related.¹⁷ Healthcare providers and employers can play a key role in raising awareness about WRA and use tools like the OSHA Fact Sheet.

Prevention and control of WRA starts with a workplace assessment, followed by a discussion between the employer, employee, and workplace health and safety professional on appropriate strategies to minimize or eliminate exposure. Industrial hygienists play a critical role in identifying workplace hazards and help to mitigate or control them through appropriate measures. When WRA is suspected, the healthcare system including healthcare providers can engage with industrial hygienists to further investigate the exposure and help develop control plans to prevent additional exposures.

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