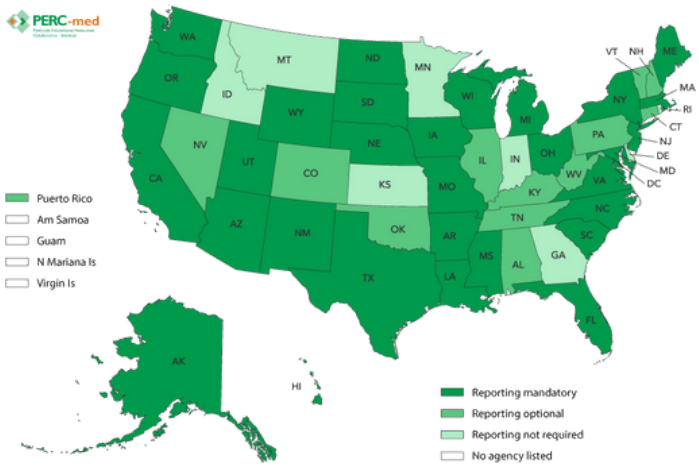
Family Medicine's Role in Recognizing Pesticide Poisoning

Authors: Micah Bicker, PA-C, Diana Simmes, MPH; Rebecca Belloso, MPH; Kaci Buhl, MSc; Suzanne Forsyth, MPH

Family physicians play a critical role in assessing exposure risks.
Vigilance is needed in seeking out possible pesticide exposures in histories and physicals.

Vulnerable populations such as people experiencing poverty, children, and workers including migrant laborers, farmworkers, and hospitality workers are at increased risk of pesticide exposure and poisoning. These workforce groups are less likely to be aware of safety information, protective gear, and specific health risks of using pesticides. Concerns of potential retribution or loss of employment and language barriers can lead them to avoid seeking healthcare or initiating a discussion about exposures when receiving care. Additionally, workers may not recognize that their symptoms could be related to pesticide exposure or know where to find the names of specific products.

Family physicians play a critical role in assessing exposure risks. A national protection standard, the Worker Protection Standard (WPS), is a federal regulation that aims to reduce pesticide poisonings and injuries among agricultural workers and pesticide handlers (Pesticide Educational Resources Collaborative, n.d.). The WPS requires agricultural employers to comply with minimum safety precautions, but this protection is not well known amongst clinicians.



People experiencing poverty have increased exposure risks for several reasons. Low-income housing is often located adjacent to areas where pesticides can be found in the water, soil, air, and building materials. These individuals often have fewer healthcare resources and face potential housing loss or other recrimination if exposures are reported. Additionally, they are more likely to experience occupational exposure if they work in the hospitality, janitorial, and food service industries.

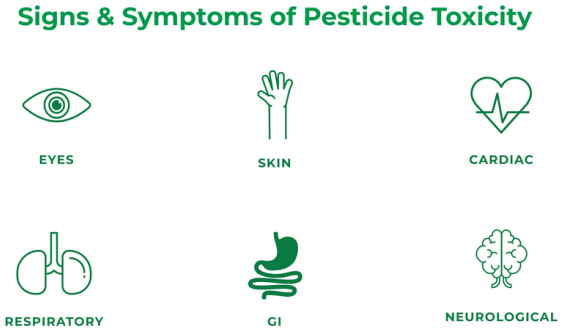
Children are the population most profoundly impacted by pesticide poisoning. Additional exposures and mechanisms, such as teens working in farm or landscaping, should be on clinicians' minds. Pesticides can affect cognitive and physical development and are linked to numerous types of pediatric cancers and chronic diseases. Due to metabolic, behavioral, and physical characteristics, children are much more likely to experience serious effects from toxic exposures at lower doses than adults.

Children living in homes with family members who work in high-risk industries are even more vulnerable due to secondhand exposure to chemicals on clothes and equipment. This type of exposure is often not considered in clinical settings. Additional pediatric exposures and mechanisms of injury should be on clinicians' minds, as the following is considered: "Farm labor can be legally performed by children as young as twelve years of age under the Fair Labor Standards Act, with no minimum age for children working on small farms or family farms. Child labor in agriculture is common, with as many as 500,000 child farmworkers estimated to work in the U.S." (Children's Health Protection Advisory Committee, 2021, p. 1).

Clinical Resources

Family medicine clinicians can be vigilant in seeking out possible pesticide exposures while taking histories and performing physicals for high-risk patients. This fact sheet lists related history-gathering tools that will be helpful in this endeavor and recommends networking with community health workers (U.S. Department of Health and Human Services, 2014) who may function as patient advocates, resource coordinators, and patient educators. Recognition and Management of Pesticide Poisoning is a comprehensive, easily digested resource detailing pesticide exposure and treatment that is easy to reference during patient visits (PERC-med, n.d.). This presentation provides clinical guidance on recognizing pesticide poisonings in ambulatory care settings.

Family physicians can help the PERC-med team advocate for increasing awareness and training of clinicians to diagnose and treat excessive and/or prolonged pesticide exposure.



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Resources

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www.pesticideresources.org/med
PERC-medSupport@ucdavis.edu

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