



A story of **Impact**

NIOSH Pesticide Poisoning Monitoring Program Protects Farmworkers

Among the estimated two million agricultural workers in the United States, physicians diagnose 10,000 to 20,000 pesticide poisonings each year.¹ The National Institute for Occupational Safety and Health (NIOSH) established the Sentinel Event Notification System for Occupational Risks—Pesticides Program (SENSOR-Pesticides) in 1987 to reduce the number of injuries and illnesses associated with occupational pesticide exposure.

The Program is a U.S. state-based surveillance effort that monitors pesticide-related illness and injury in 11 states.² Under this Program, NIOSH provides technical support and funding to state health departments to build and maintain surveillance capacity and to bolster pesticide-related illness and injury surveillance. The U.S. Environmental Protection Agency (EPA) also provides funding support for the Program.

Relevant Information

About 1.1 billion pounds of pesticides are used annually in the U.S. and over 20,000 pesticide products are marketed.^{6,7}

A variety of occupations such as agricultural workers, groundskeepers, pet groomers, and fumigators are at risk for exposure to pesticides including fungicides, herbicides, insecticides, rodenticides, fumigants and sanitizers.²

Surveillance serves as an early warning system for harmful effects not detected by manufacturer pre-market testing of pesticide products.²



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The SENSOR-supported surveillance systems tabulate the number of acute occupational pesticide poisonings, allowing for the timely identification of outbreaks. The Program also helps develop preventive interventions and maintains a national database that compiles information from participating states. Researchers and government officials from the SENSOR-Pesticides Program have published research articles highlighting findings from the data and build state and national capacity by facilitating communication across participating states. Publications have discussed issues as diverse as pesticide poisoning among agricultural workers, pesticide poisoning in schools, birth defects, and residential use of total release foggers (aka: bug bombs), which are devices that release an insecticide mist.³

Impact

In 2005, three migrant farmworkers living in the same region of Florida gave birth to infants with birth defects within eight weeks of each other.⁴ Though suspected, the possibility of workplace pesticide exposure during the maximum sensitivity period of their pregnancies was not initially confirmed because one of the three women had not been working in Florida during this period. The SENSOR-Pesticides Program facilitated collaboration between states that revealed that the three mothers worked for the same tomato grower during their maximum sensitivity periods—two at the grower's Florida operations and one in North Carolina.⁴ Thorough investigation was not able to establish a causal link between the mothers' possible workplace pesticide exposure and their infants' birth defects. However, the Florida Department of Agriculture and Consumer Services and the North Carolina Department of Agriculture and Consumer Services inspected the tomato grower's farms and found several pesticide and record keeping violations. Later, North Carolina created a taskforce whose findings motivated the state legislature to pass anti-retaliation and record-keeping laws, training mandates to protect the health of agricultural workers, and funding for improved surveillance.⁵ The Florida state legislature provided funding to add ten new pesticide inspectors.

Visit www.cdc.gov/niosh/topics/pesticides/ for more information about research efforts to protect the safety and health of farmworkers and others working with or around pesticides.

¹⁻⁷ For a complete list of references, see www.cdc.gov/niosh/docs/2012-108/.

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