

Pesticide Exposure and Disproportionate Risk for Hispanic Populations:

Increasing Healthcare Providers' Awareness

Research Purpose

- Advanced Practice Providers (APP), Physician Assistants, and Nurse Practitioners have been undertrained in the recognition and management of pesticide poisonings and the disproportionate risk borne by Hispanic populations from such exposures
- Upon review of the literature and the available educational resources, a presentation was designed to increase the capacity of healthcare providers to identify pesticide exposures in the Hispanic population
- High-risk occupational groups include migrant and seasonal farmworkers, leisure and hospitality workers, construction, and custodial staff members
- Pesticide usage in the agricultural sector accounts for nearly 90% of total pesticide usage in the U.S. and the U.S. Department of Labor's National Agricultural Workers Survey (NAWS) found that 83% of all agricultural workers in 2015-2016 were Hispanic (1)
- This review and resource development will demonstrate the magnitude and impact of pesticide-related illnesses and injuries on Hispanic health across the U.S.

Methodology

- Literature review completed by family practice APP to identify peer-reviewed journal articles using search strings such as: migrant farmworkers pesticides, migrant farmworker safety, Hispanic occupational risk, migrant farmworker resource, farmworker justice, pesticide reporting requirement
- Comprehensive gap analysis conducted to identify healthcare provider-specific resources on pesticide recognition and management
- PERC-med aims to help health care providers prevent, recognize, and treat pesticide-related illnesses provided extensive key informant interviews

Results

- Evidence exists in contemporary literature that migrant farmworkers, hospitality workers, construction and custodial staff are inequitably exposed to pesticides
- Despite well-intended workplace safety measures, Hispanic workers in these occupations are:
 - a) more likely to incur harm due to pesticide exposure than other populations
 - b) less likely to report pesticide exposure to health care personnel, and
 - c) risk their livelihoods when reporting
- Their exposures often have secondary or take-home exposures for household members including highly vulnerable children
- APPs can address the pesticide health effects knowledge gap and incorporate this knowledge as they diagnose and treat patients in these occupational groups with related symptoms. Such symptoms are often readily attributed to other etiologies and should be considered in a differential diagnosis when provided with practical tools and resources.

Signs & Symptoms of Pesticide Toxicity



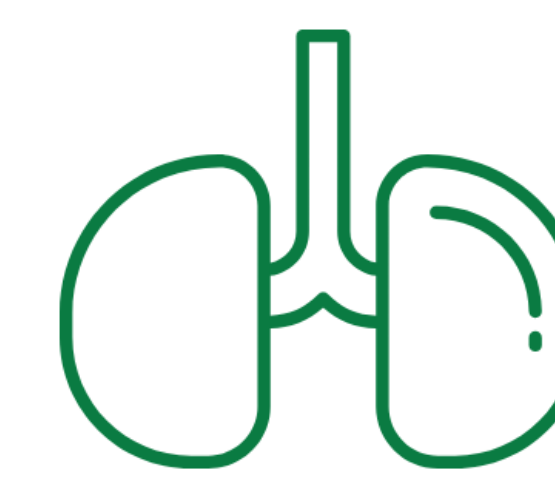
EYES



SKIN



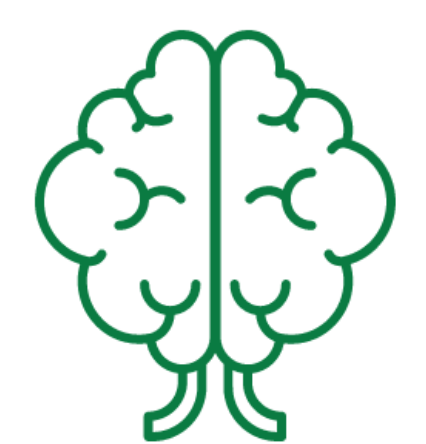
CARDIAC



RESPIRATORY



GI



NEUROLOGICAL

Conclusion

- APPs may better serve the Hispanic workforce in the United States by being more alert to the possibility that otherwise routine illness/injury may be related to pesticide exposure
- It is the intent of this research review to produce healthcare provider educational resources and disseminate tools that may be used to better inform APPs on the prevention, recognition, and management of pesticide poisonings
- The ultimate goal of this work is to reduce disparities, improve health outcomes, and better protect this population of patients and community members with a disproportionate risk

References:

1. U.S. Department of Labor's National Agricultural Workers Survey (NAWS). 2018.

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QR code link: short video by poster author Micah Bicker, PA-C, on his experiences working with Hispanic populations with pesticide illnesses.

