

US EPA ARCHIVE DOCUMENT

Childhood Pesticide Exposures on the Texas-Mexico border: Surveillance for Non-occupational Pesticide Illness and Injury in Children in Texas

Start Date: August 1998

Completion Date: 2003

Project Purpose:

To describe differences in childhood pesticide exposures between counties on the Texas-Mexico border and nonborder counties. This project is collaboration with the Texas Department of Health (TDH) and the Centers for Disease Control and Prevention (CDC) National Center for Environmental Health (NCEH).

Project Description:

The TDH and CDC collaborated with EPA/ORD and EPA/OPP on a project to evaluate hospital-based data and poison control center reports to determine if children in the Lower Rio Grand Valley (LRGV) of Texas might be exposed to potentially hazardous pesticides in non-occupational settings. This project is a follow-up to earlier work by the EPA monitoring study in the LRGV that assessed human exposure to various environmental contaminants. TDH did an evaluation, after the EPA study, to specifically look at pesticide exposures. Results of the TDH study identified that children in the LRGV might be exposed to potentially hazardous pesticides.

The TDH provided CDC exposure data reported to the South Texas Poison Center (STPC) from 1997 through 2000. Inclusion criteria for this study are: younger than 6 years of age and resident of Texas. Pesticide categories include insecticides, herbicides, fungicides, rodenticides, and moth repellents.

There were 2,520 pesticide exposure reports received by the STPC that were included in this study, 579 in border counties and 2,520 in nonborder counties. There were eight counties in the LRGV considered a border county and 35 counties that are considered nonborder.

Rodenticide exposures were the most frequently reported among children from border counties than among children from nonborder counties. Rodenticides are the anticoagulants such as warfarin. Childhood exposures occurring in the Texas-Mexico border counties more commonly involve pyrethrins and organochlorines and less commonly insect repellents and organophosphates.

Overall, nonborder counties had twice the reported exposure rate of border counties. Parents of border children were significantly less likely to contact the poison center after an exposure and more likely to have their children evaluated in a health care facility. By increasing awareness of the poison center and identifying potential barriers to its use among residents of Texas-Mexico border communities may prevent unnecessary visits to health care facilities.

Publications or Presentations:

Childhood Pesticide Exposures on the Texas-Mexico Border: Clinical Manifestations and Poison Center Use. American Journal of Public Health. August 2003. 93 (8): 1310-15

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Project Participant(s):

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