Pesticide Exposure Surveillance – Louisiana, 2013

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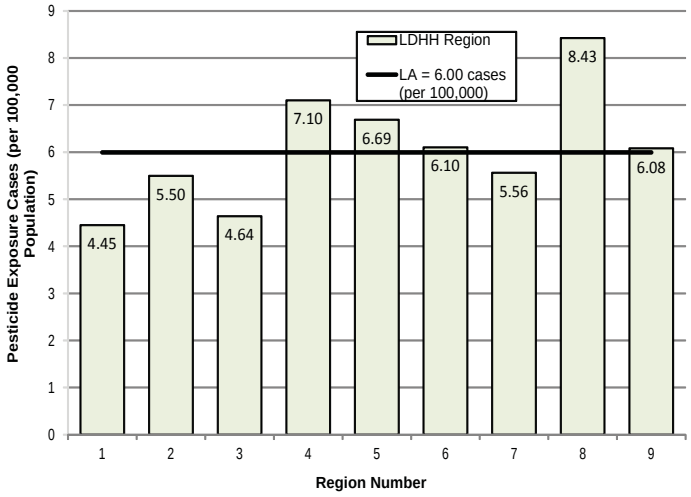
The Louisiana Department of Health and Hospitals' Office of Public Health's Section of Environmental Epidemiology and Toxicology's (SEET) Pesticide Surveillance Program investigates and tracks pesticide exposures occurring throughout the state. Case reports of pesticide exposure are primarily received from the Louisiana Department of Agriculture and Forestry and the Louisiana Poison Center. Information collected during a pesticide exposure investigation includes demographic data, circumstance and route of exposure, pesticide product information, type of application, location of pesticide application, medical signs and symptoms, biological and environmental monitoring information (e.g., results of cholinesterase and swab samples), severity of health effects, and healthcare utilization.The pesticide exposure database, data coding guides, and case classification and severity criteria used by the Program were developed by the Centers for Disease Control and Prevention's National Institute for Occupational Safety and Health.

The Pesticide Surveillance Program recently released *Summary of Pesticide Surveillance Data: Louisiana, 2006-2011*, which provides descriptive statistics of aggregate pesticide exposure case data. Between 2006 and 2011, 1,594 individuals (cases) reported health effects associated with pesticide exposure. The median number of cases per year was 274, ranging from 128 (2011) to 388 (2007). (The Program recently discontinued tracking non-occupational disinfectant exposures which resulted in fewer cases in 2011.) Madison, Richland and Franklin Parishes, in the northeastern part of the state (Region 8*) had the highest average annual rate of pesticide exposure cases; all parishes had at least one reported exposure (Figure).

Figure: Average Annual Pesticide Exposure Case Rate by DHH Region, Louisiana, 2006-2011.



Overall there were more male cases (51%) than female cases (49%). Thirty-four percent of cases (N=546) were between 20 and 39 years old. Two hundred and sixty-five cases (17%) were less than ten years old. Two hundred and eleven cases (13%) were working when the reported pesticide exposure occurred. Ninety percent of cases had mild health effects (low severity). There were no deaths. The most common type of symptom reported was respiratory (28%), followed by gastrointestinal (18%).

Approximately two-thirds of the reported exposures (N=1050) occurred during spring or summer months. The circumstance of exposure for the majority of cases was targeted exposure (58%, N=924). The target surface for a third (534 cases) of all applications was the interior or exterior of a building. The most common site of an exposure event was a single family home (83%, or 1,317 cases). Applications via manual placement accounted for 40%, or 639, of the cases. The most common pesticide types involved in reported incidents were insecticide (45%, 724 cases) followed by disinfectants (39%, 626 cases).

To access the complete report, visit *www.dhh.louisiana.gov/assets/oph/Center-PHCH/Center-CH/infectious-epi/LMR/SumPestSurvData0611.pdf*. For more information on Louisiana DHH's Pesticide Surveillance Program, visit the website at *www.dhh.louisiana.gov/index.cfm/page/836*, call 1-888-293-7020 (toll free), or send an email to *oph.seetweb@la.gov*.

*Map of regions on page 7

IDEPI Question/Answer Corner

How Can Water Be Disinfected With Bleach?

Bleach will kill some, but not all, types of disease-causing organisms that may be in the water (chlorine and iodine may not be effective in controlling more resistant organisms like *Cryptosporidium*).

Add 1/8 teaspoon (or 8 drops) of regular, unscented, liquid household bleach for each gallon of water, stir it well, and let it stand for 30 minutes before you use it. Store disinfected water in clean containers with covers.

Bleach	Container
8 Drops or 1/8 teaspoon	1 Gallon
2 ½ Teaspoons	20 Gallon container
5 to 9 Teaspoons	Average tub 40 to 70 gallons
18 Teaspoons or ¼ Cup	Kiddie pool (depends on size) about 140 Gallons

To calculate the volume of a tub:

- Measure the length, the width and the height of water in inches
- Volume in cubic inches = Length x Width x Height of water
- Divide by 233 to calculate Gallons

Example for a tub 60" long, 24" wide and water at 12" height:
60" x 24" x12" =17,280 Cubic inches /233 = about 75 Gallons".

To calculate the volume of a kiddie pool:

- Measure the diameter of the circular pool and the height of the water in inches
- Volume of water in cubic inches 3.14 x (Diameter/2) x (Diameter/2) x Height
- Divide by 233 to calculate Gallons

Example for a kiddie pool with 48" diameter and water at 18" height:
3.14 x (48/2) x (48/2) x 18 = 3.14 x 24 x 24 x 18 = 32,555 cubic inches /233 = 140 Gallons