

# Data Notes for Acute Pesticide Illness Dashboards

## Data Source

The Washington Department of Health (DOH) receives reports of potential acute pesticide illnesses from multiple sources: Washington Poison Control Center and Labor and Industries; Department of Agriculture, healthcare providers, individuals, and others. DOH reviews reports to determine if the incident meets the case criteria for inclusion for investigation as defined by the National Institute for Occupational Safety and Health (NIOSH) at the Center for Disease Control and Prevention (CDC)<sup>1</sup>. The investigations include interviews with impacted people, review of medical records, pesticide label information, and toxicology reports. Once the investigation is completed, the investigator makes the determination if the illness was “definitely,” “probably,” or “possibly” linked to exposure to pesticide using NIOSH criteria. All information on cases is entered into our SPIDER<sup>2</sup> data base. Only cases classified as definite, probable, or possible are included in the Dashboard.

## Rationale for Inclusion

The Acute Pesticide Exposure dashboard provides a rich source of data about acute illnesses stemming from pesticide exposures, including trends over time, the geography of where pesticide exposures occurred, correlations with demographics, and the pesticide classes most often associated with these illnesses. This data could help the public reduce their risk of acute pesticide illnesses through education of the risks associated with different types of pesticide application and how proper use of personal protection equipment (PPE) and following pesticide labels can reduce risk. This data could inform programs and future policies on pesticide usage, including appropriate use of PPE.

## Information about the Data

Acute pesticide-related illnesses are from acute exposure events “i.e., a single, repeated, or continuous exposure to one or more pesticides that generally occurs for  $\leq 8$  hours.”<sup>3</sup> Acute pesticide illnesses may occur in both occupational and non-occupational settings.

Pesticide-related illnesses are a notifiable condition in Washington ([WAC 246-101-101](#)). Under this rule, health care providers are required to report cases of pesticide-related illness to the state Department of Health immediately in the case of hospitalization, fatality, or cluster – defined as an unusual aggregation

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<sup>1</sup> [Case Definition for Acute Pesticide-Related Illness and Injury Cases \(cdc.gov\)](#)

<sup>2</sup> SPIDER: [SENSOR \(CDC/NIOSH Sentinel Event Notification System for Occupational Risks\) Pesticide Incident Data Entry and Reporting](#)

<sup>3</sup> [Acute Nonoccupational Pesticide-Related Illness and Injury – United States, 2007–2011 | MMWR \(cdc.gov\)](#)

of illnesses, generally of 4 or more people, from a single event; and within three business days for all other cases.

The Department of Health reviews all referred reports and investigates those that meet the following criteria: 1) the pesticide exposure occurred during the last three months; 2) symptoms are reported; 3) at least one person involved saw a health care provider; 4) the pesticide exposure occurred in Washington; and 5) the pesticide exposure was neither a suicide nor a homicide attempt.

The Pesticide Illness Dashboard content include:

- Coverage: events occurring in Washington from 2010 – 2021.
- Variables: Total Number of Pesticide Illnesses, Exposure Type, Route of Entry, Severity, Pesticide Classes, Symptoms, Age, Race, Ethnicity, Sex, Use of Personal Protective Equipment (PPE), Percentage Occupational, Percentage Agricultural, Label Use, Target Crops, and Method of Application
- Years: 2010–most recent year available; updated annually
- Geography: State, Accountable Communities of Health (ACH) County Groups, County
- Age: Under 5, 5-14, 15-34, 35-64, 65 and Over
- Sex: Female, Male
- Ethnicity: Hispanic, Non-Hispanic
- Race: Asian and Pacific Islander (AAPI), American Indians and Alaska Natives (AIAN), Black, Mixed Race, White

## Caveats

- The pesticide illness data are included only when there is sufficient level of evidence from the investigation process to associate the illness experienced with the exposure described. Only cases classified as definite, probable, or possible are included in the Dashboard.
- The data provided in this dashboard is likely to underestimate of acute pesticide-related illness and injury in Washington due to various reasons such as underreporting, lack of sufficient environmental data on exposure, and difficulty in diagnosing pesticide-related illnesses. Furthermore, the level of reporting may be biased by demographics including but not limited to sex, race, and immigration status.

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