

Non-agricultural Pesticide Illness in California, 2007-2015

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Pesticide Illness Surveillance Program (PISP)

Worker Health & Safety Branch

California Department of Pesticide Regulation



DPR's Mission

Our mission is **to protect human health** and the **environment** by regulating pesticide sale and use, and by fostering reduced-risk pest management.

California Environmental
Protection Agency

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graph TD; A[California Environmental Protection Agency] --> B[Department of Pesticide Regulation]; B --> C[Worker Health & Safety Branch]; C --> D[Pesticide Illness Surveillance Program];
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Department of Pesticide
Regulation

Worker Health & Safety Branch

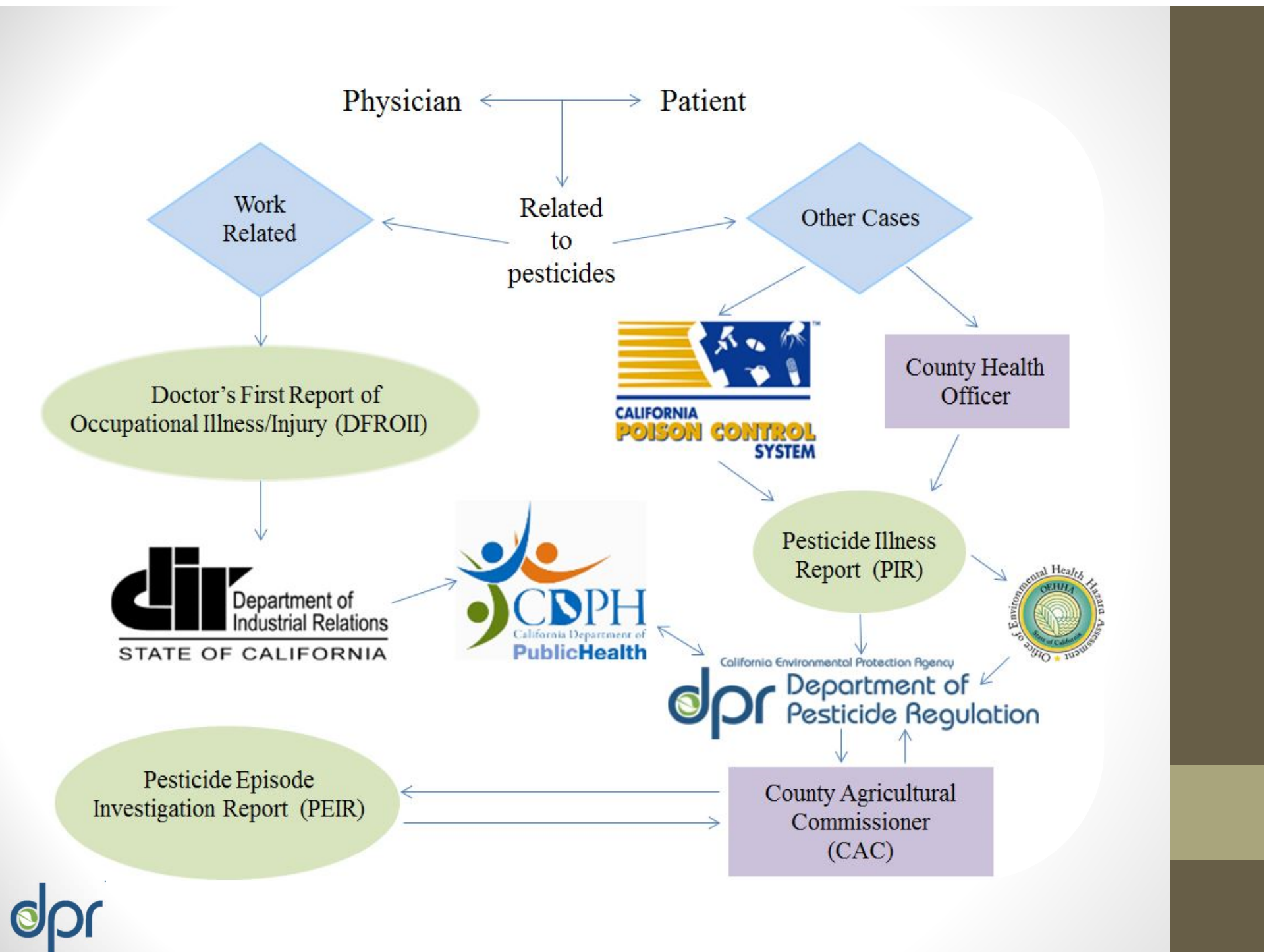
Pesticide Illness Surveillance
Program

DPR's Authority

- California Health and Safety Code §105200 & Title 17 California Code of Regulations §2500
 - Required California physicians to report any suspected case of pesticide-related illness or injury to the local health officer within 24 hours of examining the patient.
- Title 3 California Code of Regulations §6720-6746
 - Covers employer emergency medical care requirements and the medical supervision program for employees handling cholinesterase inhibiting pesticides.

Pesticide Illness Surveillance Program

- A passive surveillance program
 - Receive reports → investigate → extract → analyze
- Unique – a model for US pesticide programs
 - Oldest and largest program
 - MOU with all County Agricultural Commissioner's



Uses for Illness Data

- Respond to inquiries
- Publish statistical studies & reports
- Cited for research and regulatory purposes by other agencies, universities and stakeholders
- Provides valuable information to DPR
 - Reflects the effectiveness of DPR's pesticide regulatory program
 - Identifies areas for improvement, high risk situations
 - Establish history and trends in pesticide poisoning
 - Identify emerging issues

Agricultural¹ vs. Non-Agricultural Cases² and Episodes³, 2007 - 2015



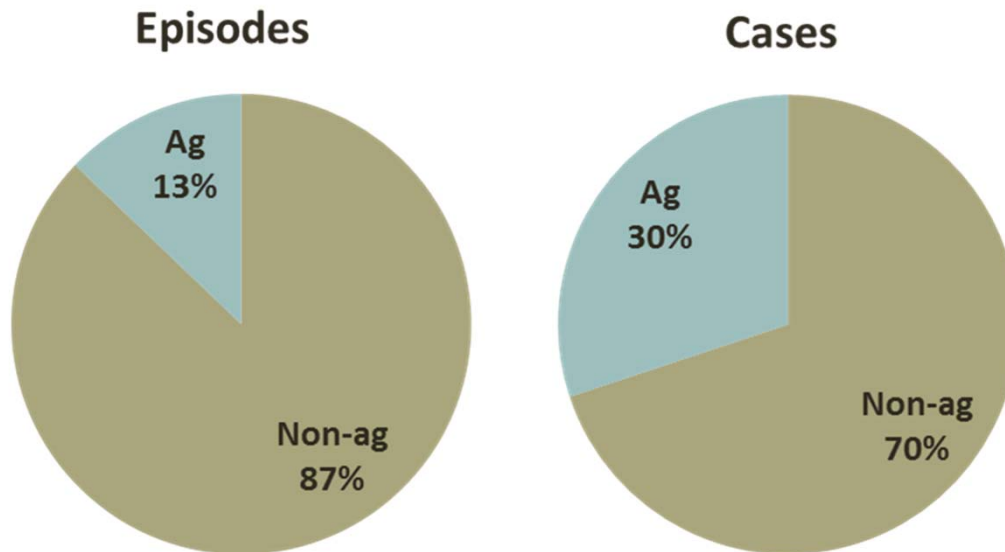
¹ Agricultural cases are those that implicate exposure to pesticide(s) intended to contribute to the production of agricultural commodities.

² Non-agricultural cases include all those in which the pesticide was not intended to contribute to production of agricultural commodities.

³ Episodes are defined as an event in which a single source exposed one or more people (cases) to pesticides.

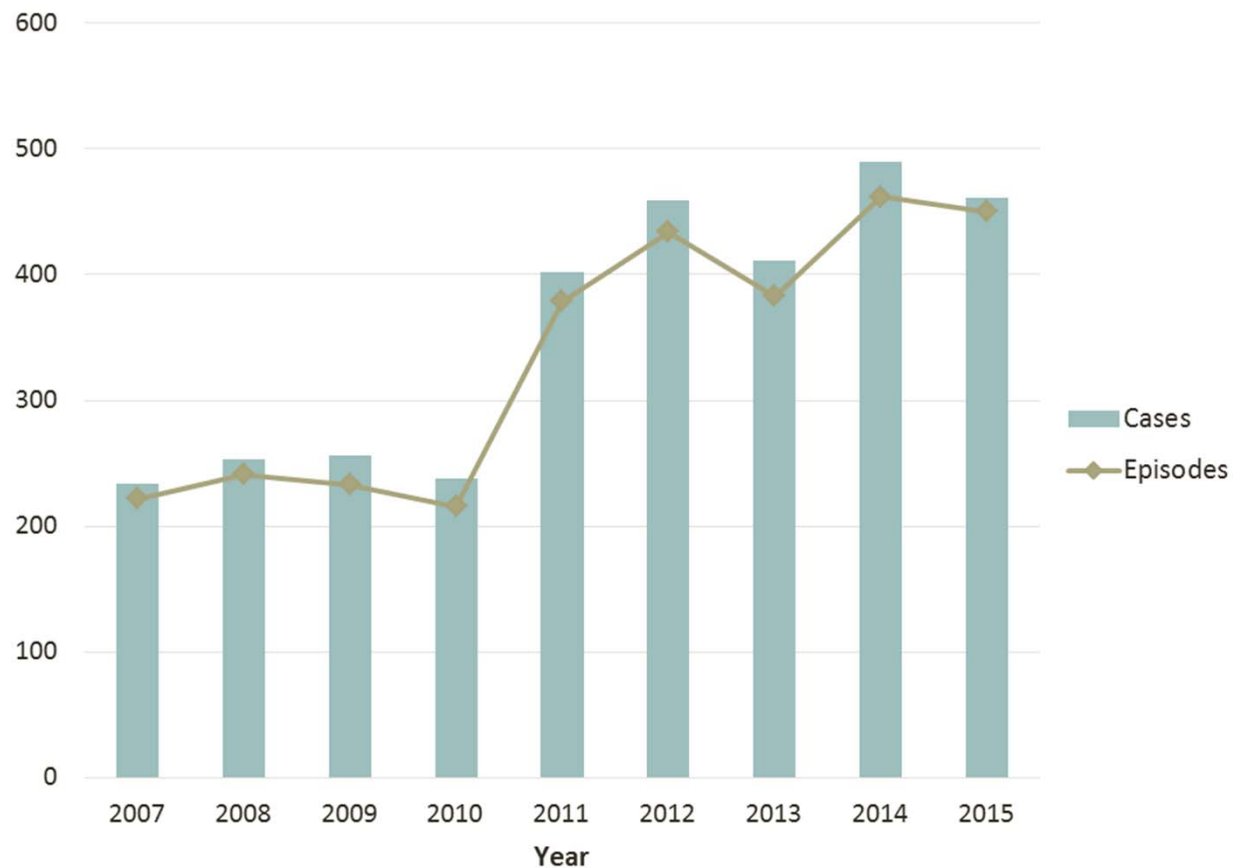
Non-agricultural Illnesses, 2007-2015

- 87% of episodes and 70% of illness cases were related to non-agricultural pesticides.
 - 5,573 episodes resulting in 6,295 cases.
 - 58.7% of exposures were non-occupational
 - 50.9% of exposures occurred in the residential setting



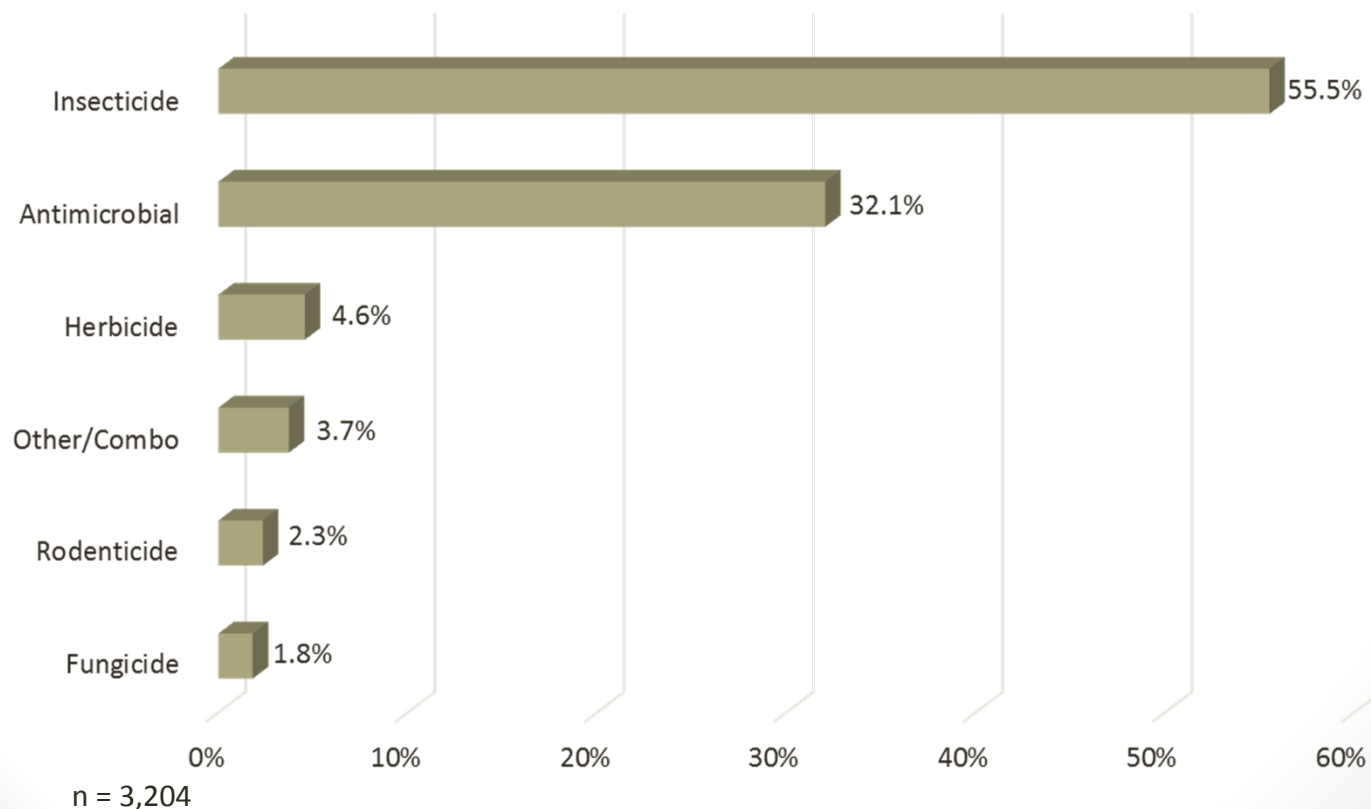
Residential Exposures

- 3,020 episodes resulting in 3,204 illnesses/injuries.

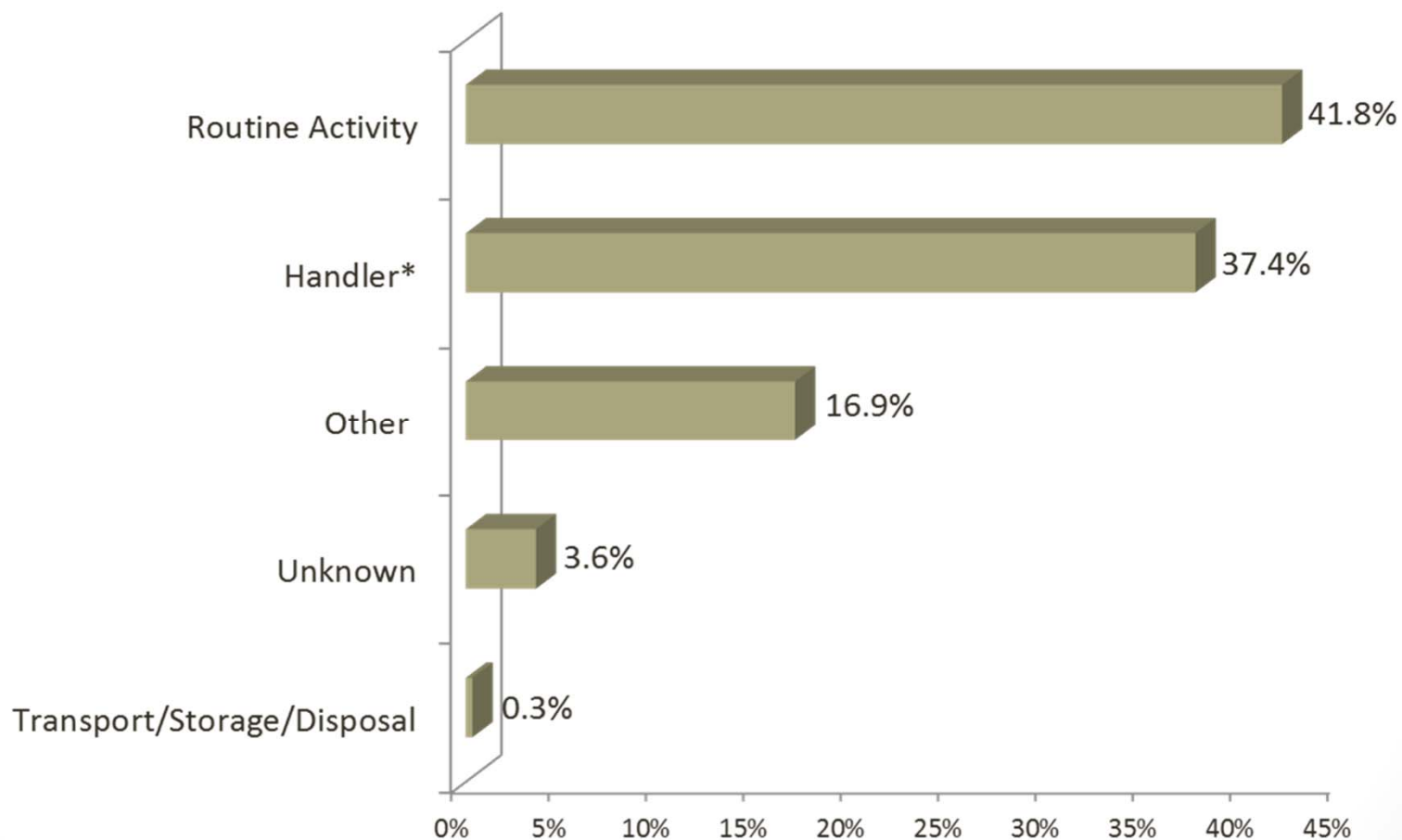


Types of Pesticides Involved in Residential Exposures

- Over half of illnesses/injuries in the residential setting involved insecticides.
 - 1,625 episodes resulting in 1,779 illnesses

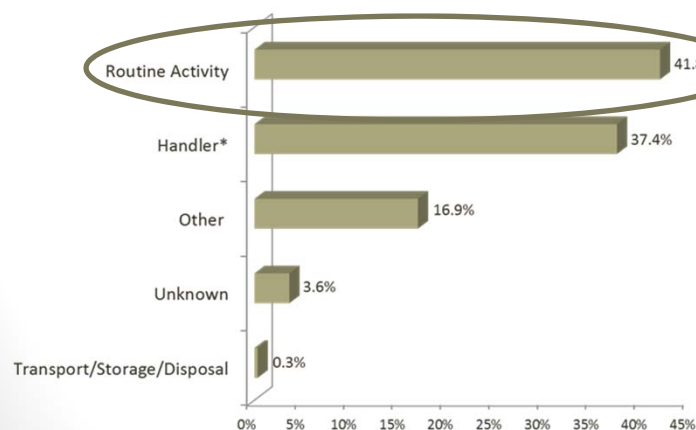


Residential Insecticide Exposures

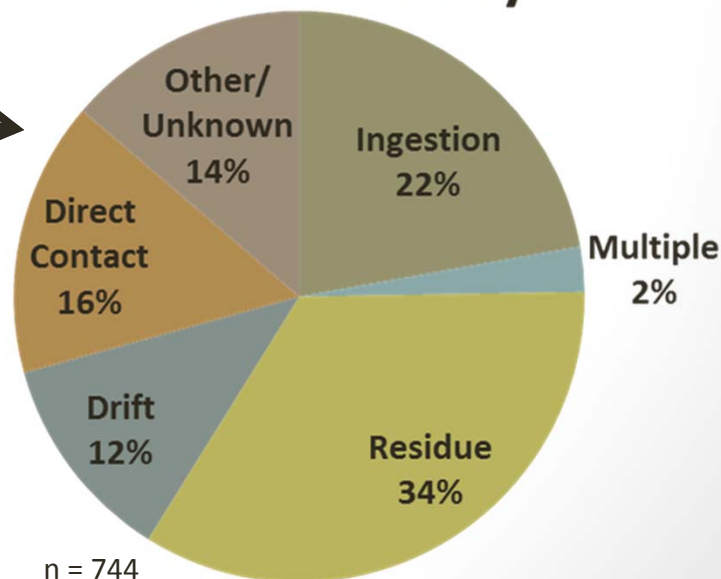


Residential Insecticide Exposures

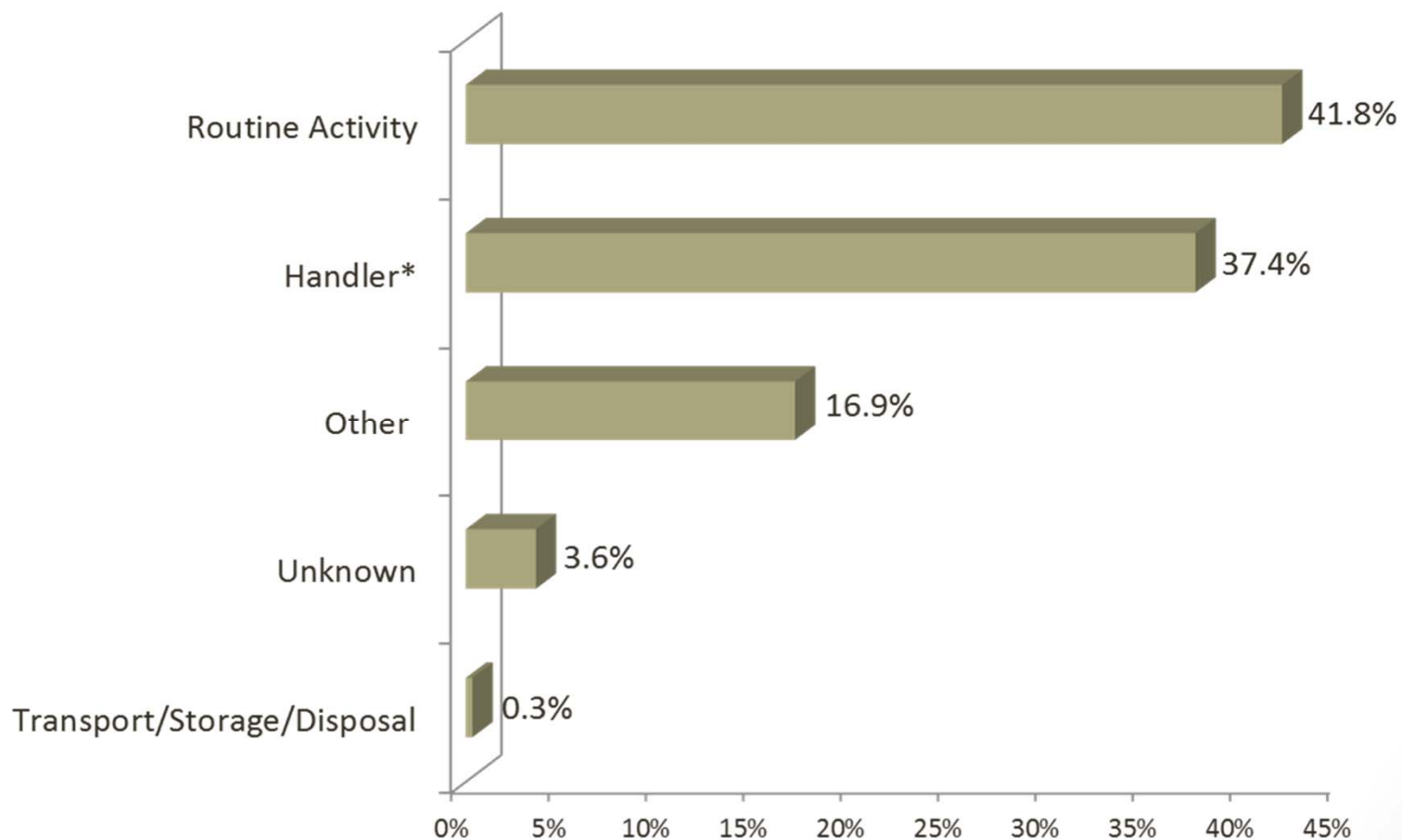
- 744 (41.8%) illness cases were exposed to an insecticide while performing a routine activity.
 - A misuse violation contributed to 57.3% of illnesses.
 - Children accounted for 55.6% of bystander insecticide exposures.



Routine Activity

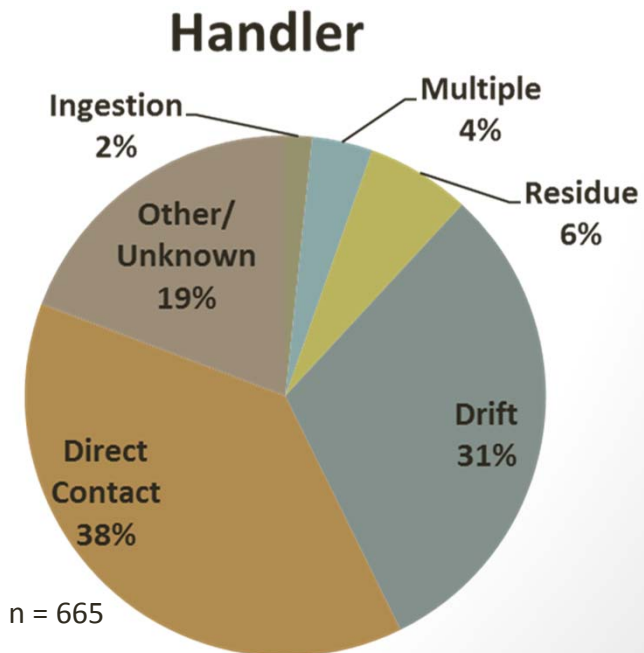
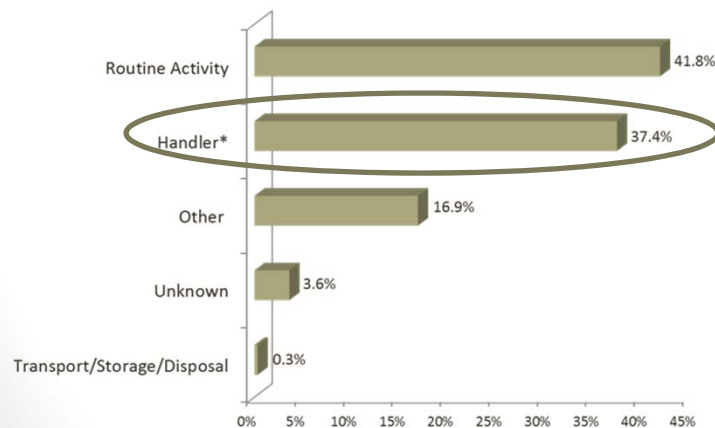


Residential Insecticide Exposures



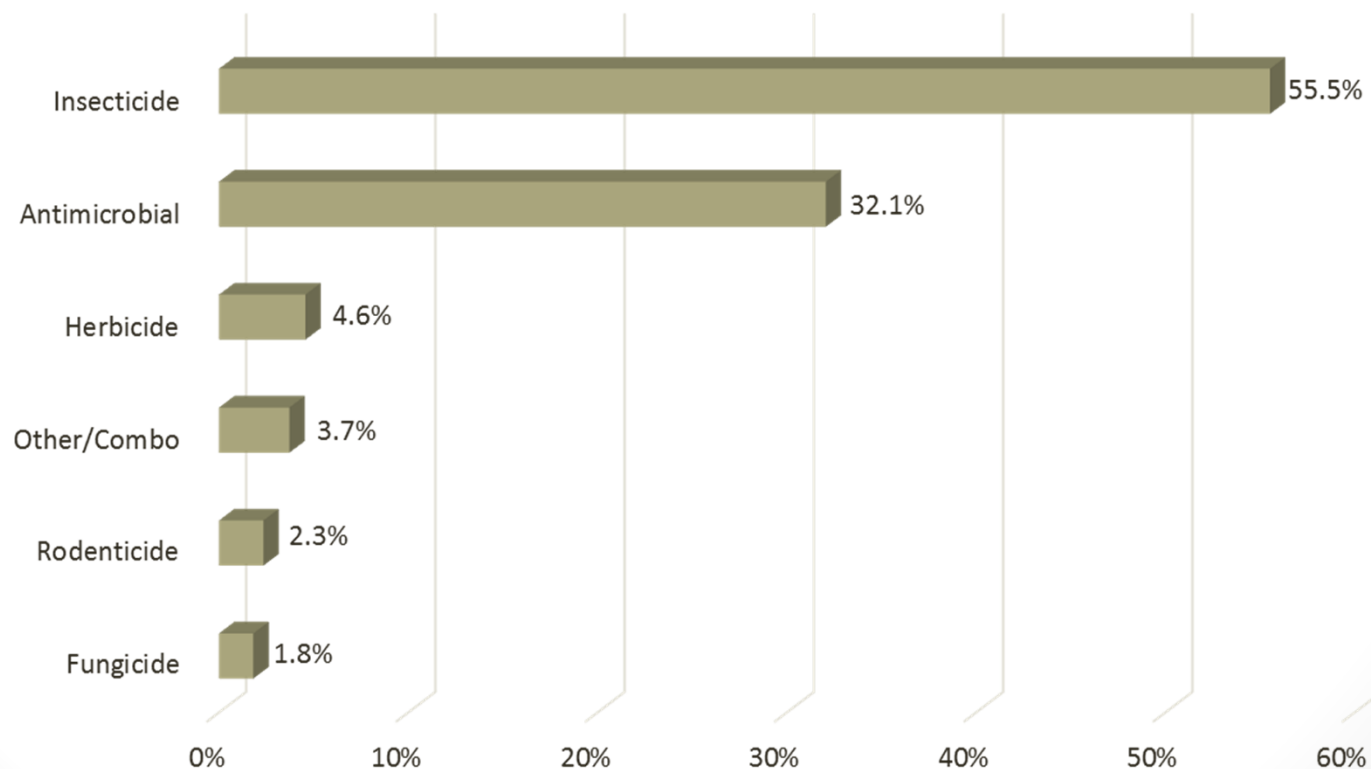
Residential Insecticide Exposures

- 665 (37.4%) illness cases were exposed to an insecticide while acting as a handler.
 - A violation was noted in 37.7% of illness cases.
 - Foggers were involved in 174 cases, 100 (57.5%) resulted in contributory violations.



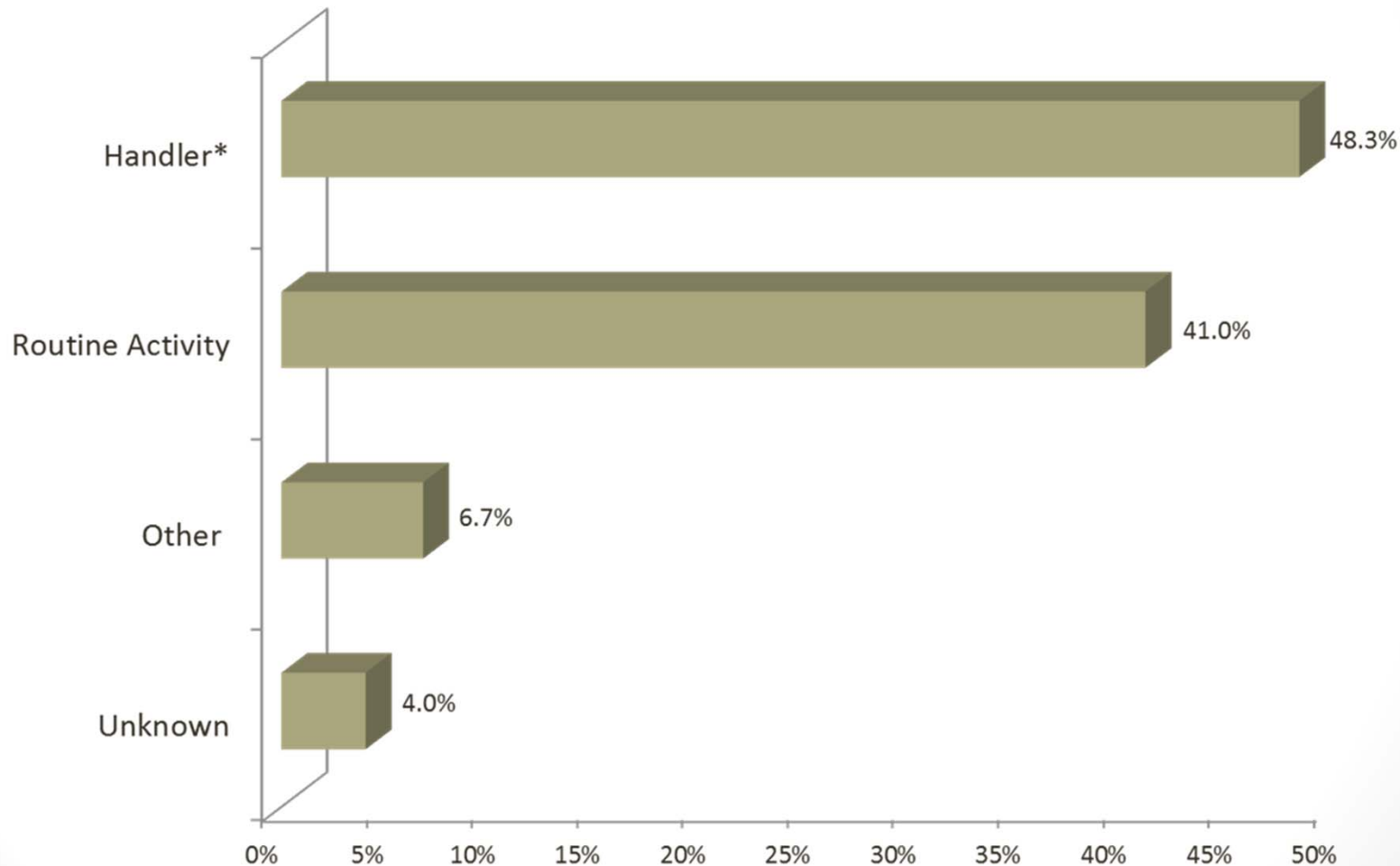
Types of Pesticides Involved in Residential Exposures

- Antimicrobials accounted for 32.1% of illnesses/injuries in the residential setting.
 - 1,027 illnesses resulting from 998 separate episodes.



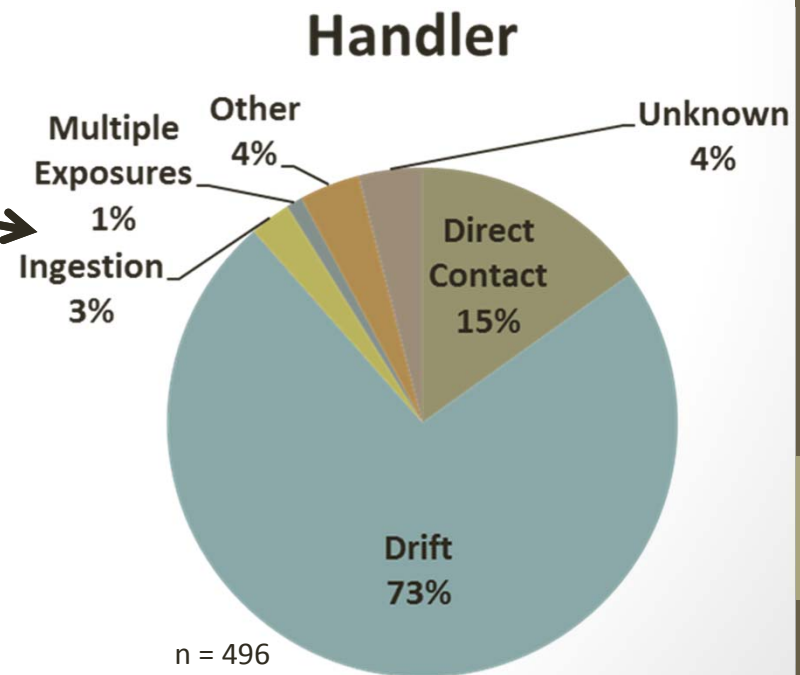
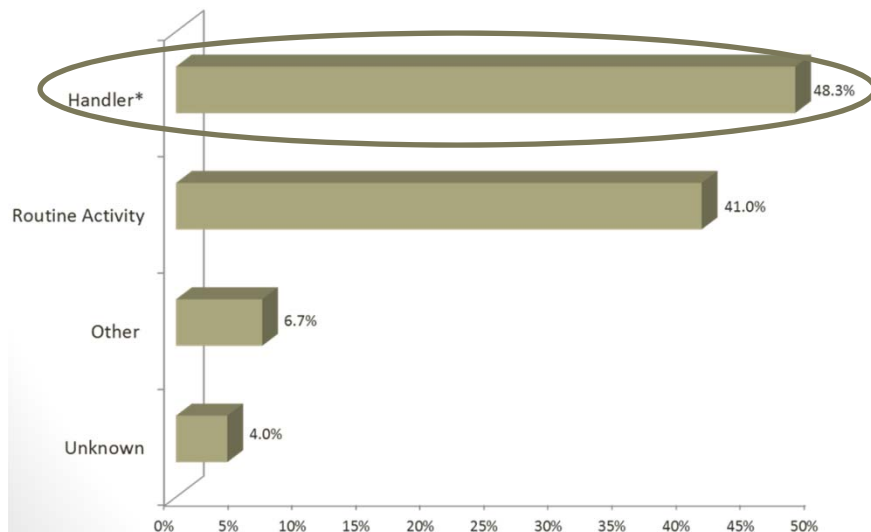
n = 3,204

Residential Antimicrobial Exposures

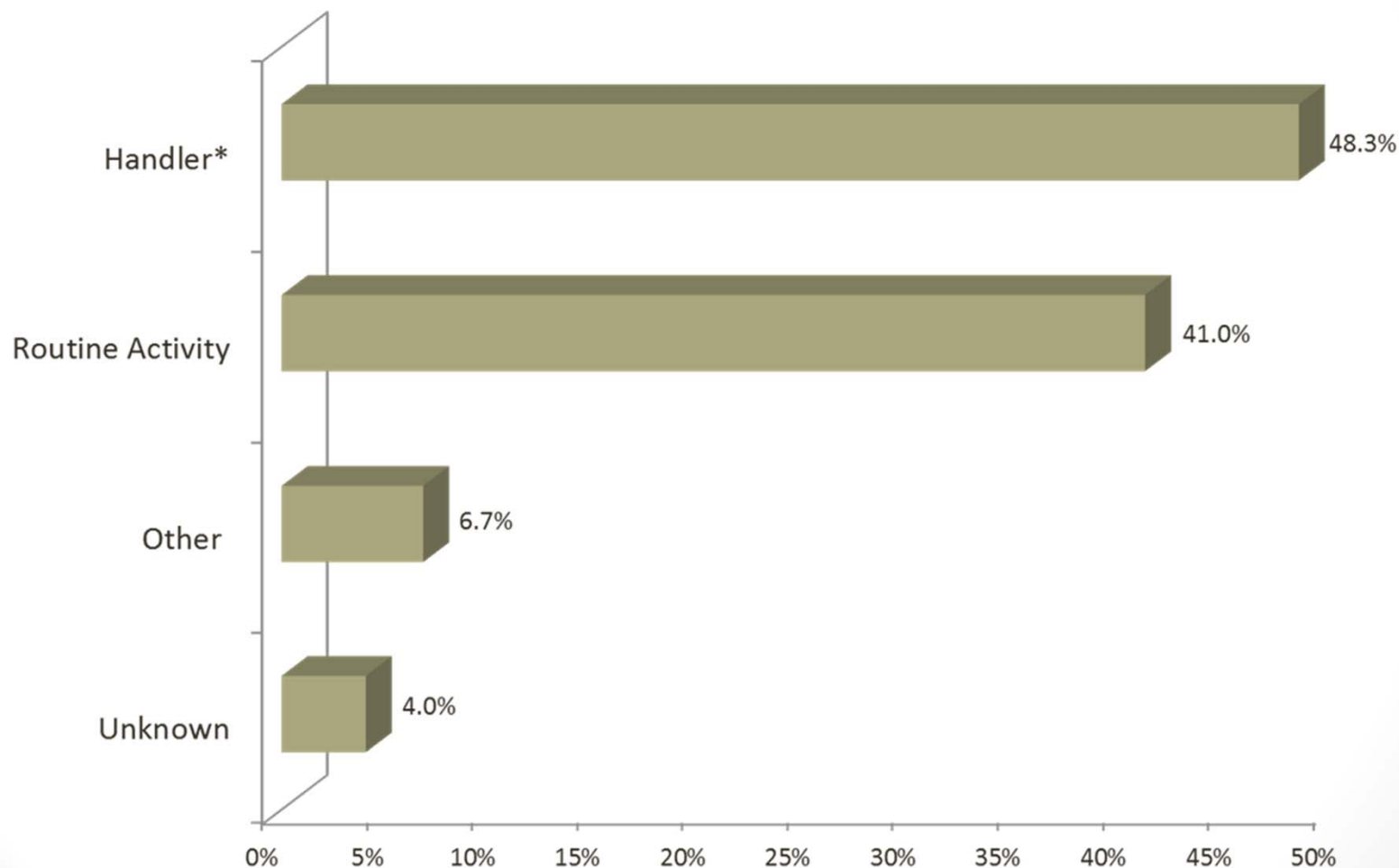


Residential Antimicrobial Exposures

- 496 (48.3%) illness cases were exposed to an antimicrobial while acting as a handler.
 - 76.8% of handlers reported respiratory symptoms.
 - A violation was noted in 62.5% of illness cases.

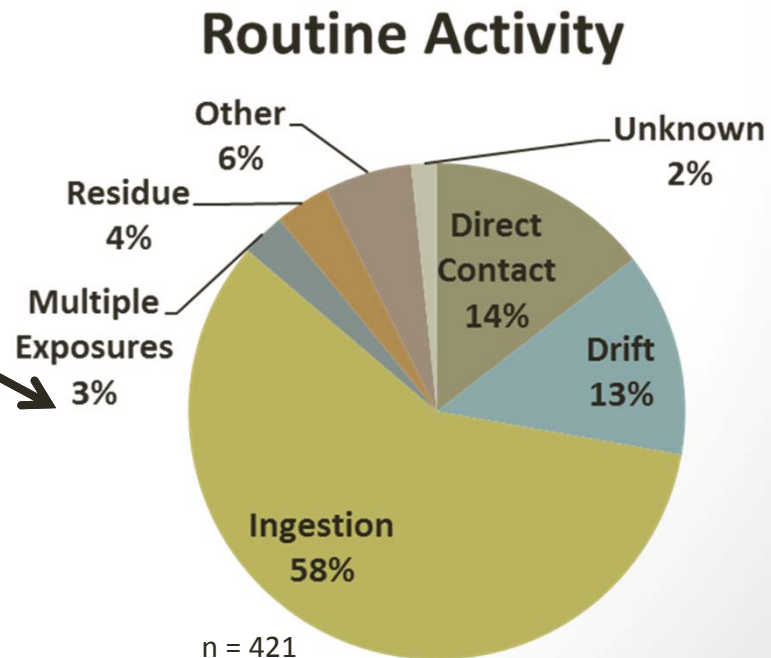
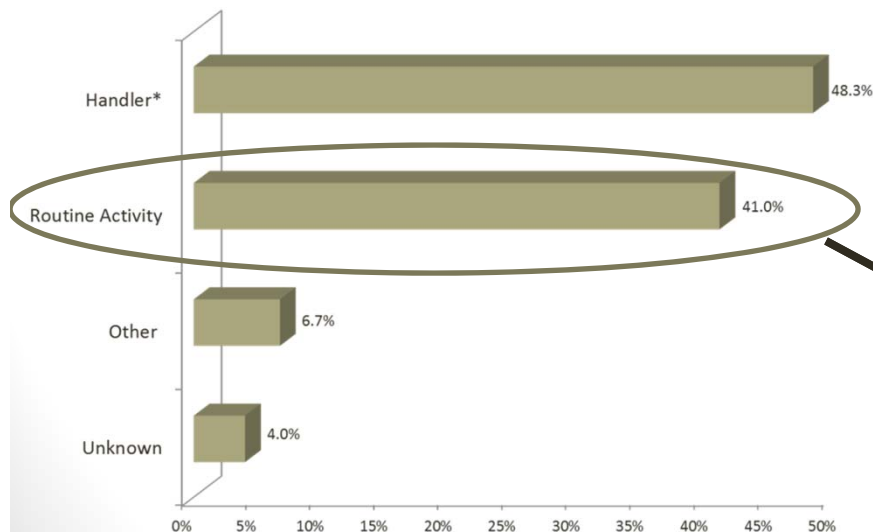


Residential Antimicrobial Exposures



Residential Antimicrobial Exposures

- 421 (40.9%) of illness cases were exposed to an antimicrobial while performing a routine activity.
 - A violation contributed to 82.2% of illnesses
 - 301 (71.4%) of illnesses/injuries involved children aged 12 or younger, with 54% exposed via ingestion.

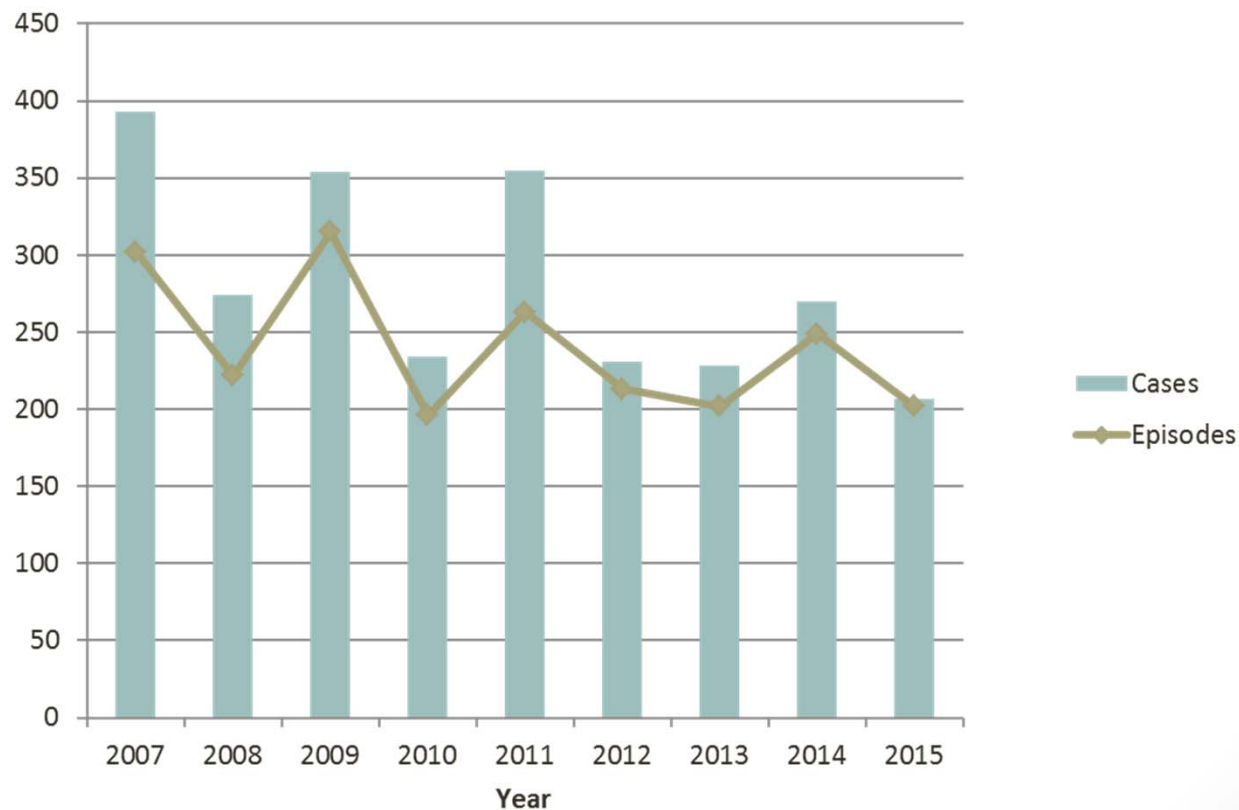


Common Pesticide Violations in the Residential Setting

- Early reentry
- Improper ventilation
- Using product(s) in excess
- Not wearing label-required equipment
- Mixing incompatible chemicals
- Storing pesticides in unlabeled or secondary containers (e.g., soda bottles, food containers)
- Products easily accessible to children

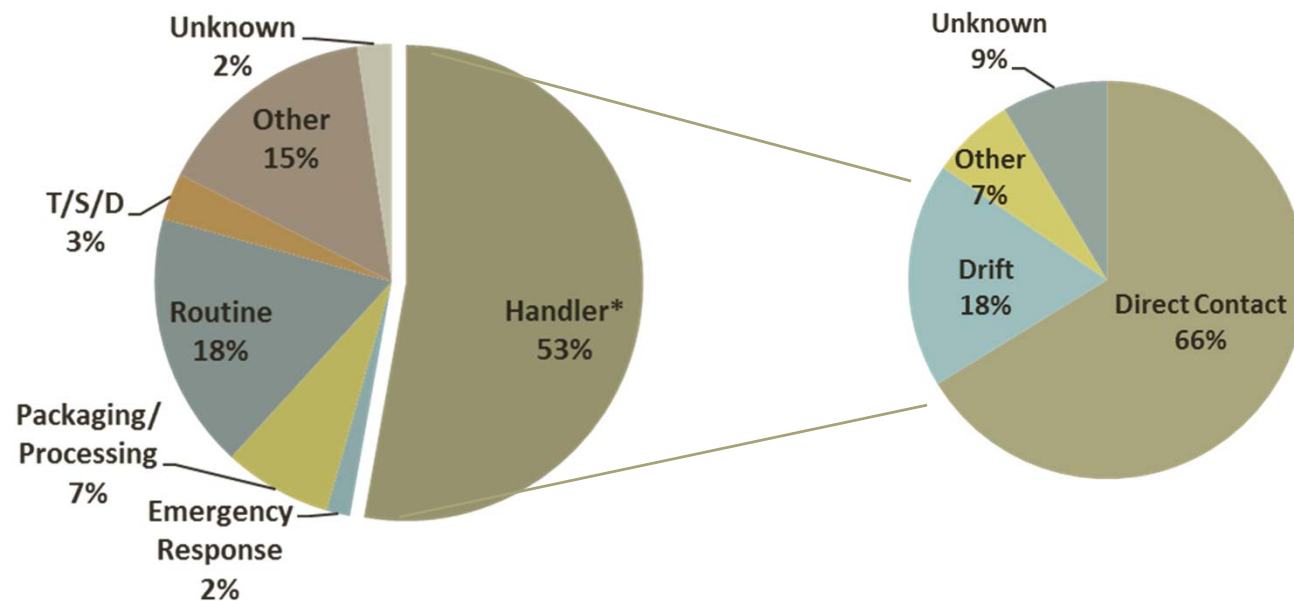
Occupational Exposures

- 2,546 illnesses/injuries related to non-agricultural pesticides.
- Accounted for 40% of the non-agricultural illnesses



Occupational Exposures

- Handlers accounted for 1,345 (53%) of the illnesses/injuries.
 - 59% of handlers reported eye symptoms.
 - Approximately 17% of handlers lost at least 1 work day due to illness/injury related to a pesticide exposure.



n = 2,546

*Handlers are defined as applicator, mixer/loader or mechanical activity.

T/S/D = transport/storage/disposal

Occupational Exposures

- Top 5 incident settings:

Incident Setting	%
Service/Retail Establishment	26%
Hospital/Medical	16%
Crop/Livestock Processing Facility	12%
Office/Business	8%
School	8%

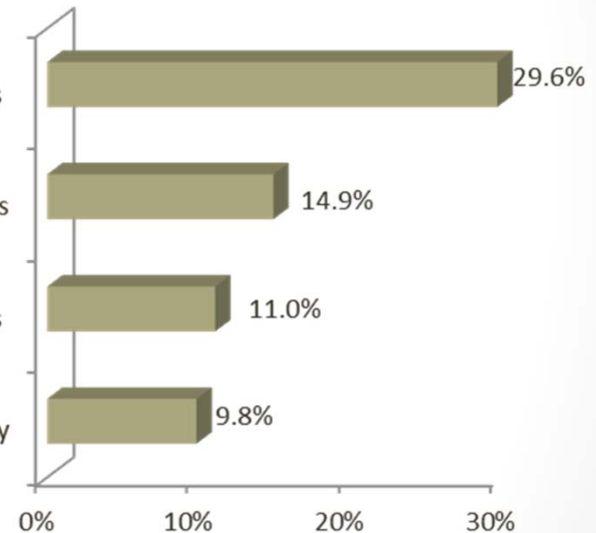
n = 2,546

Food Service Facilities

Physical Fitness Centers/Clubs

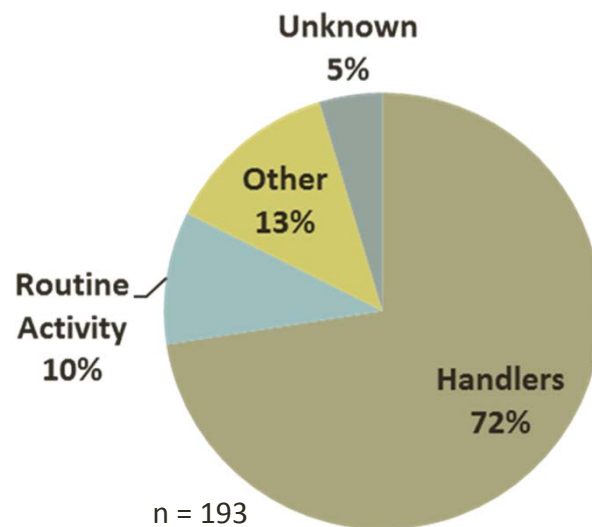
Hotels and Motels

Grocery



Food Service Facilities

- 193 illness/injury cases occurred in food service facilities
 - For 93% of the cases, an antimicrobial contributed to the illness/injury



- 140 illness/injury cases involved handlers
 - Among handlers, 98% (n=137) of illnesses/injuries involved an antimicrobial.
 - A violation contributed to illness/injury in 64% of cases
 - Failure to use required PPE was noted in 53% of cases

Case Studies: Food Service Facilities

- An employee splashed sanitizer in her eye while washing dishes.
 - Restaurant provided gloves but not the label required eye protection.
 - She was diagnosed with chemical abrasion and reported 2 days lost from work.
- An employee developed a rash on his wrist after repeated use of sanitizer without protective equipment.
 - Employer did not provide PPE or training.
 - He was diagnosed with contact dermatitis and reported 5 days lost from work.

Outreach Project

- DPR created flyers to educate food facility operators and employees on safe use of sanitizers.
- Obtained feedback from DIR, EH agencies, restaurant associations, and restaurants.
- Distribute to food facilities by EHS.
- Survey counties for “measurement of success”.

Sanitizer Safety Outreach Project

Prevent Sanitizer Injuries!



Always Read The Label

The label provides information on how to safely use the product.



Always Wear Personal Protective Equipment!

Wear safety glasses or goggles, rubber gloves, and work clothes.*



Never Store Sanitizer in a Food or Beverage Container



What is a Sanitizer?

A sanitizer is a type of pesticide used to kill germs. A pesticide is any substance intended to control, destroy, repel, or attract a pest, and also includes insecticides and rodenticides.

42% 42% of injury/illness occurred when personal protective equipment should have been worn, but was not.¹

91% 91% of the products involved in pesticide injury/illness at food facilities were sanitizers.²

A Safe Workplace

California employers are required to provide a safe workplace and training to workers in a language they can understand. To file a workplace complaint, contact Cal/OSHA at:

www.dir.ca.gov/dosh/complaint.htm
or call (510) 286-7000

For injury or illness, call the California Poison Control Hotline at: 1 (800) 222-1222

* Specific personal protection equipment requirements are indicated on product label.

¹ Based on 875 recorded pesticide-related illnesses that occurred at food facilities, 2006-2014 Pesticide Worker Surveillance Program Data.

OSF 16 000000

Pesticide Safety Information: www.cdpr.ca.gov



¿Empleado de saneamiento?
Evite accidentes:
ponga siempre su equipo de protección personal (PPE)

California Department of
Pesticide Regulation

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Online Resources for Illness Data

- Past reports summarizing data starting in 1996 are available online:
 - <http://www.cdpr.ca.gov/docs/whs/pisp.htm>
- California Pesticide Illness Query (CalPIQ)
 - <http://apps.cdpr.ca.gov/calpiq/>
- Restaurant Worker Outreach
 - <http://www.cdpr.ca.gov/docs/whs/sanitizersafety/>

Questions?

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