Pesticide Illness Reporting

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Office of Environmental Health Hazard Assessment
California Environmental Protection Agency
Phone (510) 622-3170
NOTICE OF PESTICIDE APPLICATION

Pesticide Name(s): Roundup Pro
Active Ingredient: Glyphosate
Target Pest: Grass and weeds
Area to be Treated: Reclamation Plot
Date / Time of Application: Jan 9-17 7:00 - 10:00am
Signal Word: CAUTION
EPA Number: 524-475
Re-entry Period: Treated areas will be safe to re-enter once sprays have dried
For Information Call: Mike Hagenhorst 753-7042

San Francisco Recreation and Park Department
Integrated Pest Management 415-703-1266

☐ Application made as scheduled  ☐ Application was responded to ___________
Pesticide Usage in 2013

• California (58 counties)
  – 193,597,806 lbs. of pesticide active ingredients applied (mainly agricultural use)
  – Fresno, Kern, Tulare counties applied the most per county
  – San Diego was 25th with 1,653,180 lbs.
  – Imperial was 12th with 4,311,787 lbs.
Pesticides Sold in California for 2013

- 635,302,883 lbs. of pesticide active ingredients sold
- This includes the amounts used cited on the previous slide as well as sanitizers and anti-microbials
Definition of Pesticide

“Any substance, or mixture of substances which is intended to be used for defoliating plants, regulating plant growth, or for preventing, destroying, or mitigating any pest, ..., which may infest or be detrimental to vegetation, man, animal, or households, or be present in any agricultural or nonagricultural environment whatsoever.

(California Food and Ag code)
Definition of Pest

“Any of the following that is, or liable to become, dangerous or detrimental to the agricultural or nonagricultural environment of the state:

(a) Any insect, predatory animal, rodent, nematode, or weed;

(b) Any form of terrestrial, aquatic, or aerial plant or animal, virus, fungus, bacteria, or other microorganism (except viruses, fungi, bacteria, or other organism on or in living man or other living animals);

(c) Anything that the director, by regulation, declares to be a pest.”

(California Food and Ag code)
Classification of Pesticides

**Target**
- Insecticides: insects
- Herbicides: weeds
- Fungicides: fungi
- Acaricides: mites
- Rodenticides: rodents
- Nematicicides: worms
- Antimicrobials: microbes

**Chemical Groups**
- Organophosphates
- N-methyl carbamates
- Pyrethroids
- Organochlorines
Is pesticide illness a reportable condition?

YES!
Reporting Requirement
California Code of Law, Health and Safety Code Section 105200

- **Who** - “Any physician or surgeon who knows, or has reasonable cause to believe…”
- **What** - “…that a person is suffering from pesticide poisoning or any disease or condition caused by a pesticide…”
- **To whom** - “…shall promptly report that fact to the local health officer…”
- **How** – “…by telephone…”
- **When** – “…within 24 hours…”
Reporting Requirement
California Code of Law, Health and Safety Code Section 105200

- **For the case of a worker** - “...and by a copy of the report required pursuant to subdivision (a) of Section 6409 of the Labor Code within seven days…”

- **Failure to comply** - “...shall be liable for a civil penalty of two hundred and fifty dollars…”

- **Not first aid** - “In no case shall the treatment administered for pesticide poisoning or a condition suspected as pesticide poisoning be deemed to be first aid treatment.”
Why Report Pesticide Illness

- Can serve as an early warning system
- Can get state agencies to assist
- Establishes history and trends in poisonings
- Helps identify problem pesticides
- Assists State in health based investigations
- Assists State in writing pesticide regulations
Why Physicians Don’t Report Pesticide Illness

- People won’t see a physician (esp. if non work related)
- M.D.’s may not recognize pesticide illness
- M.D.’s unaware of reporting requirement or how to report
- Confusion over what is a pesticide
- “Cumbersome reporting process”
- Forms burdened with questions that can’t be answered
- Doubt on when to report
- M.D.’s overburdened with paperwork
- Concern about patient confidentiality
- Loss of capture of California workers who seek medical treatment in Mexico
Pesticide Illness Surveillance Program  
(Department of Pesticide Regulation)  
Number of Pesticide Illness Reports

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<th>Year</th>
<th>Total</th>
<th>Definite, Probable, Possible</th>
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<tr>
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Which pesticide usually generates the most reports?
# Pesticide Illness Reports from San Diego County

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Pesticide Illness Reports from Imperial County

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<tr>
<td>2013</td>
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Pesticide Illness Surveillance Program

• Physician reporting rates of pesticide illness – 15% to 30% in 1990’s (occupational cases)

• Penalty for not reporting is a fine of $250. enforced by Occupational Safety and Health of the Department of Industrial Relations
Pesticide Illness Surveillance Program of 2013

- Cholinesterase inhibiting pesticides
  - 103 (8%) of 1267 reports classified as possibly, probably, or definitely
  - In past, usually 30-35%
- Antimicrobials
  - 342 of 1267 reports (poss., prob., def.)
  - 137 of 1267 reports from sodium hypochlorite
Pesticide Illness Surveillance Program of 2013

• Occupational cases
  – 627 of 1116 reports classified as possibly, probably, or definitely due to pesticides
  – Fieldworkers (266), applicators (120), routine indoor (58), packaging/processing (32), mixer/loaders (24), emergency response (16)

• Non-occupational cases
  – 489 of 1116 reports
Pesticide Illness Surveillance Program of 2013

- 26 hospitalizations
  - 16 for ingestions
  - 9 intentional ingestions to cause “self harm”
- 8 deaths were reported
  - 6 from intentional ingestions to cause “self harm”
  - 1 due to an inappropriately stored pesticide
  - 1 due to someone ingesting 2 “pills” (aluminum phosphide rodenticide) to get high
Children

• Study of organophosphate and carbamate poisoning from Dallas Children’s Medical Center
  – 37 patients, 1 month to 11 years old
    • 28 (76%) oral ingestion
    • 25 (70%) drank improperly stored OP
    • 6 (16%) dermal absorption
    • 3 (8%) unknown

• 20 patients were transferred from other ER’s
  – 16 of these 20 had incorrect diagnoses
  (Zweiner et al.)
Pesticide Illness Surveillance Program of 2013

• 131 of 685 non-agricultural cases classified definitely, probably, or possibly involved children (less than 18 y. o.)
  – 4 involved hospitalizations
    • 3 resulted from “self harm” attempts
  – 57 (44%) exposed by ingestion
    • 46 less than 6 years old
    • 42 probably due to improperly stored pesticides
• None of these cases involved exposures at school
Reporting Pesticide Illnesses in California

Physicians must report pesticide illnesses using one of these methods:

1. Call or fax the local health officer. Numbers to call for each county can be found at: www.oehha.ca.gov/pesticides/pdf/pestnums.pdf

2. Call the California Poison Control Center at:
   a. For general public: (800) 222-1222
   b. For health care providers: (800) 411-8080


4. In many counties physicians can report electronically using CalREDIE, the California Reportable Disease Information Exchange at: www.cdph.ca.gov/data/informatics/tech/Pages/CalREDIEHelp.aspx

There are additional requirements for reporting work related cases of pesticide illnesses
Reporting Pesticide Illnesses

San Diego County
• Health and Human Services Agency Epidemiology Program
  – Phone (619) 692-8499
  – FAX (619) 715-6458
• County Agric., Wghts, and Measures Dept.
  – Phone (858) 694-8980
• CalREDIE not available

Imperial County
• Call Public Health Depart.
  – Phone (442) 265-1350
  – FAX (442) 265-1477
• Electronic reporting using CalREDIE is available in this county
Reporting Pesticide Illnesses in California

An article on physician pesticide illness reporting requirements can be found in the Summer 2014 edition of the Medical Board of California Newsletter at:

http://www.mbc.ca.gov/Publications/Newsletters/newsletter_2014_08.pdf
Reporting Pesticide Illnesses in California

Confidential Morbidity Report Form

• It appears from this that “health care providers” other than physicians are required to report pesticide illnesses.
• Other “health care providers” listed are:
  • veterinarians, podiatrists, nurse practitioners, physician assistants, registered nurses, nurse midwives, school nurses, infection control practitioners, medical examiners, coroners, dentists.
• Penalty for not reporting is a misdemeanor punishable with a fine up to $1000. and/or up to 90 days in jail
Flow Sheet for Patient with Pesticide Illness

- **Patient**
  - **Poison Control Center**
    - **County AG Commissioner**
  - **Physician**
    - 24 hours to phone
    - **Local Health Officer**
      - 7 days to send PIR
      - **OEHHA**
    - Fine $250
      - **DIR**
      - **DPR**
Local Health Officer (LHO)

• “...shall immediately notify the county agricultural commissioner...”  (CCL H&S 105200)

• “…and shall report to the Director of Pesticide Regulation, the Director of Environmental Health Hazard Assessment, and the Director on Industrial Relations, on a form prescribed by the Director of Health Hazard Assessment … within seven days after receipt of the report.”  (CCL H&S 105200)

• Can help with investigation of a pesticide illness
**Pesticide Illness Report (PIR)**

- LHO must send a pesticide illness report form (within 7 days after a physician reports a pesticide illness) to:
  - Department of Pesticide Regulation (DPR)
  - Office of Environmental Health Hazard Assessment (OEHHA)
  - Department of Industrial Relations (DIR)

- Most important information needed from the M.D.
  - Whether others were involved and how to locate them
  - The name of the pesticide and/or active ingredient
  - Person’s activity at time of exposure and how exposed
  - The severity of the illness
County Agricultural Commissioner

- Investigates all cases of pesticide illness identified by PIRs and DPR’s review of DFRs
- Priority investigation cases
  - If a person dies
  - If a person is hospitalized for $\geq 24$ hrs. and is treated
  - If 5 or more symptomatic people seek medical evaluation
- Prepares reports describing the circumstances under which pesticide exposure may have occurred and other relevant information
- Can assess fines and penalties.
Department of Pesticide Regulation (DPR)

• Largest state dept. that regulates pesticides
• Receives and reviews PIR’s
• Reviews the DFR from DIR of cases of occupational pesticide related illness
• Writes, reviews, and updates regulations (with OEHHA)
• Pesticide Illness Surveillance Program
• Can investigate cases and levy fines
Office of Environmental Health Hazard Assessment (OEHHA)

- Receives and reviews PIR’s
- Reviews and updates regulations (with DPR)
- Educates health care providers on the recognition, management, and reporting of pesticide illnesses
Dept. of Industrial Relations (DIR)

• Receives the *Doctor’s First Reports of Occupational Injury or Illness* (DFR) from physicians and the PIRs from LHO

• DFRs are reviewed by the Division of Labor Statistics and Research. Pesticide exposure cases are identified by DPR (by regulation) and DHS-OHB

• Enforcement branch can fine physicians up to $250 for not reporting

• Leads in the investigation involving the death of a worker or if a worker is made ill by the pesticide during the formulation of the pesticide
Poison Control Center

- Very useful and important resource. If called by the M.D. about a pesticide illness, the Poison Control Center can provide information about the pesticide and may remind the M.D. to report the case.

- Can report the case for the treating M.D. to the LHO.
Sources of Information

• Material Safety Data Sheet (MSDS)
• Pesticide label
  – www.cdpr.ca.gov/docs/label/labelque.htm
• Employers
• Agricultural commissioner
• Poison Control Center (800-411-8080)
• U.S. Environmental Protection Agency
  – www.epa.gov/pesticides
Sources of Information

• California Department of Public Health
  – Environmental Health Investigations Branch (510-620-3620)
  – Occupational Health Branch (510-620-5757)
  – www.cdph.ca.gov

• California Department of Pesticide Regulation
  – Worker Health and Safety Branch (916-445-4222)
  – www.cdpr.ca.gov

• California Office of Environmental Health Hazard Assessment
  – (510-622-3200)
  – www.oehha.ca.gov
Sources of Information

- Recognition and Management of Pesticide Poisonings 6th edition by the U.S. EPA
  - Electronic version
  - Info. on how to order free hard copies
  - Link for Spanish version of 5th edition
HAPPY NEW YEAR