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Pesticide-related Illness and Injury, Acute  
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Pesticide-related Illness and Injury, Acute  
2010 Case Definition  
NOTE:  
A surveillance case definition is a set of uniform criteria used to define a disease for public health surveillance. Surveillance case definitions enable public health officials to classify and count cases consistently across reporting jurisdictions. Surveillance case definitions are not intended to be used by healthcare providers for making a clinical diagnosis or determining how to meet an individual patient’s health needs.  
CSTE Position Statement(s)  
09-OH-03  
Clinical Description  
This surveillance case definition refers to any acute adverse health effect resulting from exposure to a pesticide product (defined under the Federal Insecticide Fungicide and Rodenticide Act [FIFRA]3) including health effects due to an unpleasant odor, injury from explosion of a product, inhalation of smoke from a burning product, and allergic reaction. Because public health agencies seek to limit all adverse effects from regulated pesticides, notification is needed even when the responsible ingredient is not the active ingredient.  
A case is characterized by an acute onset of symptoms that are dependent on the formulation of the pesticide product and involve one or more of the following:  
Systemic signs or symptoms (including respiratory, gastrointestinal, allergic and neurological signs/symptoms)  
Dermatologic lesions  
Ocular lesions  
Evidence Supporting a Causal Relationship Between Pesticide Exposure and Health Effects  
Where the findings documented under the clinical description and lab criteria are:  
Characteristic for the pesticide as provided in NIOSH Appendix 2, and the temporal relationship between exposure and health effects is plausible,  
AND  
/  
OR  
Consistent with an exposure-health effect relationship based upon the known toxicology (i.e. exposure dose, symptoms and temporal relationship) of the putative agent (i.e. the agent classified under criteria A) from commonly available toxicology texts, government publications, information supplied by the manufacturer, or two or more case series or positive epidemiologic studies published in the peer-reviewed literature  
Laboratory Criteria For Diagnosis  
If available, the following laboratory data can confirm exposure to a pesticide:  
Biological tests for the presence of, or toxic response to, the pesticide and/or its metabolite (in blood, urine, etc.);  
Measurement of the pesticide and/or its metabolite(s) in the biological specimen;  
Measurement of a biochemical response to the pesticide in a biological specimen (e.g., cholinesterase levels);  
Environmental tests for the pesticide (e.g., foliage residue, analysis of suspect liquid);  
Pesticide detection on clothing or equipment used by the case subject.  
Exposure  
Laboratory, clinical, or environmental evidence to corroborate exposure:  
Analytical results from foliage residue, clothing residue, air, soil, water or biologic samples;  
Observation of residue and/or contamination (including damage to plant material from herbicides) by a trained professional [Note: a trained professional may be a plant pathologist, agricultural inspector, agricultural extension agent, industrial hygienist or any other licensed or academically trained specialist with expertise in plant pathology and/or environmental effects of pesticides. A licensed pesticide applicator not directly involved with the application may also be considered a trained professional.];  
Biologic evidence of exposure (e.g., response to administration of an antidote such as 2-PAM, Vitamin K1, or repeated doses of atropine);  
Documentation by a licensed health care professional of a characteristic eye injury or dermatologic effects at the site of direct exposure to a pesticide product known to produce such effects;  
Clinical description by a licensed health care professional of two or more postexposure health effects (at least one of which is a sign) characteristic for the pesticide as provided in NIOSH Appendix 2.  
Evidence of exposure based solely upon written or verbal report:  
Report by case;  
Report by witness;  
Written records of application;  
Observation of residue and/or contamination (including damage to plant material from herbicides) by other than a trained professional;  
Other evidence suggesting that an exposure occurred.  
Case Classification  
Suspected  
Insufficient toxicologic information is available to determine causal relationship between exposure and health effects  
Case meets one of the exposure criteria:  
At least one laboratory, clinical, or environmental evidence found to corroborate exposure,  
OR  
There is evidence of exposure based solely upon written or verbal report  
AND  
Case meets one or more criteria:  
Two or more new post-exposure abnormal symptoms;  
OR  
Two or more new post-exposure abnormal signs;  
OR  
Two or more laboratory findings reported by a licensed health care professional;  
OR  
One or more new post-exposure abnormal symptoms or signs  
AND  
one or more laboratory findings reported by a licensed health care professional.  
Possible  
There is evidence to support a causal relationship between pesticide exposure and health effects,  
AND  
There is evidence of exposure based solely upon written or verbal report,  
AND  
Case meets one or both criteria:  
Two or more new post-exposure abnormal symptoms;  
OR  
Any new illness or exacerbation of pre-existing illness diagnosed by a licensed physician  
Probable  
There is evidence to support a causal relationship between pesticide exposure and health effects,  
AND  
At least one laboratory, clinical, or environmental evidence found to corroborate exposure,  
AND  
Case meets one or both criteria:  
Two or more new post-exposure abnormal symptoms;  
OR  
Any new illness or exacerbation of pre-existing illness diagnosed by a licensed physician  
OR  
There is evidence to support a causal relationship between pesticide exposure and health effects,  
AND  
There is evidence of exposure based solely upon written or verbal report,  
AND  
Case meets one or both criteria:  
Two or more new post-exposure abnormal signs;  
OR  
Two or more laboratory findings reported by a licensed health care professional;  
OR  
One or more new post-exposure abnormal signs  
AND  
one or more laboratory findings reported by a licensed health care professional  
Confirmed  
There is evidence to support a causal relationship between pesticide exposure and health effects,  
AND  
At least one laboratory, clinical, or environmental evidence found to corroborate exposure,  
AND  
Case meets one or both criteria:  
Two or more new post-exposure abnormal signs;  
AND  
/  
OR  
Two or more laboratory findings reported by a licensed health care professional;  
OR  
One or more new post-exposure abnormal symptoms or signs  
AND  
one or more laboratory findings reported by a licensed health care professional  
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NNDSS receives and shares case data from state, local, and territorial health departments to help public health monitor, control, and prevent serious diseases.  
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