

PESTICIDE-RELATED ILLNESS AND INJURY SURVEILLANCE

A HOW-TO GUIDE FOR STATE-BASED PROGRAMS



DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health

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FOREWORD ■

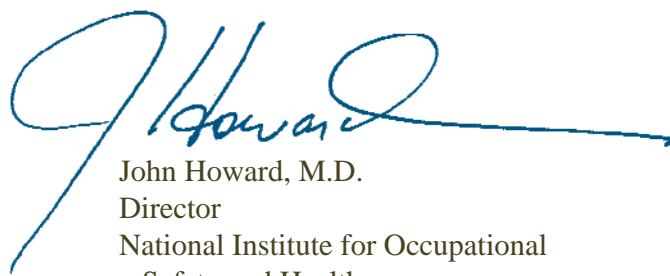
Surveillance data can be used to identify new emerging pesticide problems, estimate the magnitude of pesticide poisoning, and evaluate intervention and prevention efforts. Recognizing this, the National Institute for Occupational Safety and Health (NIOSH) Strategic Surveillance Plan recommends that States conduct surveillance for acute pesticide-related illness and injury.

Since 1987, NIOSH has provided financial and technical support for State-based acute pesticide poisoning surveillance programs. NIOSH is not the only organization that has recommended improved and/or expanded surveillance in this area. Others include the American Medical Association, the Council for State and Territorial Epidemiologists, the United States Government Accountability Office, and the Pew Environmental Health Commission. Despite these recommendations, most States do not conduct acute pesticide-related illness and injury surveillance.

Acute pesticide-related illness is a relatively complex disease. Approximately 16,000 pesticide products are currently registered in the United States. In addition, all organ systems are susceptible to pesticide toxicity. The multitude of pesticide products and associated health effects may act as a barrier to establishing surveillance programs. NIOSH developed this guide to provide standards and principles that can help to master this complexity.

We expect this document will be useful to agencies that are developing an acute pesticide-related illness and injury surveillance program or are interested in maintaining and improving an established surveillance program. The guide provides (1) information about the importance of pesticide poisoning surveillance; (2) mechanisms to improve reporting of cases to surveillance programs; (3) methods to investigate reported cases; (4) guidance on using the case definition; and (5) additional resources on pesticide toxicology, pesticide usage, governmental partners, and surveillance.

To our knowledge, this is the most comprehensive instruction guide for pesticide-related illness and injury surveillance. The goal of this guide is to assist the efforts of our partners to identify pesticide poisoning risk factors. Pesticide poisoning prevention can be achieved by targeting interventions toward these identified risk factors. NIOSH hopes individuals and agencies interested in pesticide poisoning surveillance and prevention (e.g., local, State, and Federal government agencies, community-based organizations, and international agencies) will find this guide useful for identifying and preventing pesticide poisoning.

A handwritten signature in blue ink, appearing to read "J. Howard", with a long horizontal flourish extending to the right.

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ABBREVIATIONS ■

AAPCC	American Association of Poison Control Centers	CSTE	Council of State and Territorial Epidemiologists
AFOP	Association of Farmworker Opportunity Programs	DA	Department of Agriculture
ALT	alanine aminotransferase	DDT	dichloro-diphenyl-trichloroethane
AMA	American Medical Association	DEET	N, N-diethyl-m-toluamide
ANR	Agriculture and Natural Resource	DHHS	U.S. Department of Health and Human Services
ANSI/ASAE	American National Standards Institute/American Society of Agricultural Engineers	DO	doctor of osteopathy
AOEC	Association of Occupational and Environmental Clinics	DOL	U.S. Department of Labor
APHIS	Animal Plant Health Inspection Service	DOT	U.S. Department of Transportation
ASPCA	American Society for the Prevention of Cruelty to Animals	EMT	emergency medical technician
AST	aspartate transaminase	EPA	U.S. Environmental Protection Agency
ATSDR	Agency for Toxic Substances and Disease Registry	EU	European Union
BLS	Bureau of Labor Statistics	EUP	experimental use permit
BOC	U.S. Bureau of the Census	FAA	Federal Aviation Administration
BPHC	Bureau of Primary Health Care	FAQ	frequently asked questions
CCOHS	Canadian Center for Occupational Health and Safety	FBI	Federal Bureau of Investigation
CDC	Centers for Disease Control and Prevention	FDA	U.S. Food and Drug Administration
CDPR	California Department of Pesticide Regulation	FFDCA	Federal Food, Drug, and Cosmetics Act
CFR	Code of Federal Regulations	FGIS	Federal Grain Inspection Service
CIRS	California Institute for Rural Studies	FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
CME	Continuing medical education	FJF	Farmworker Justice Fund
CPS	Current Population Survey	FQPA	Food Quality Protection Act
CPSC	Consumer Product Safety Commission	GAO	U.S. Government Accountability Office (<i>formerly U.S. General Accounting Office</i>)
CSREES	Cooperative State Research Education and Extension System	GIS	geographic information system
		HCP	health care professional
		HDD	hospital discharge data
		HIPAA	Health Insurance Portability and Accountability Act of 1996
		HRSA	Health Resources and Services Administration

HSDB	Hazardous Substances Data Bank	NCFH	National Center for Farmworker Health
HSEES	Hazardous Substances Emergency Events Surveillance System	NCHS	National Center for Health Statistics
IARC	International Agency for Research on Cancer	NEETF	National Environmental Education & Training Foundation
IATP	Institute for Agriculture and Trade Policy	NIH	National Institutes of Health
ICD	international classification of disease codes	NIOSH	National Institute for Occupational Safety and Health
ICU	intensive care unit	NPHSS	National Public Health Surveillance System
ILO	International Labor Organization	NPIC	National Pesticide Information Center
IPCS	International Programme on Chemical Safety	NPMMP	National Pesticide Medical Monitoring Program
IPM	integrated pest management	NSCEP	National Service Center for Environmental Publications
IRIS	Integrated Risk Information System	NTP	National Toxicology Program
LAN	local area network	NTSB	National Transportation Safety Board
LDH	lactate dehydrogenase	NUBC	National Uniform Billing Committee
LSC	Legal Services Corporation	NYDEC	New York Department of Environmental Conservation
MD	medical doctor	ODA	Oregon Department of Agriculture
MCN	Migrant Clinicians Network	OEHHA	Office of Environmental Health Hazard Assessment
MHP	Migrant Health Program, Bureau of Primary Health Care	OHSU	Oregon Health Sciences University
MMWR	Morbidity and Mortality Weekly Report	OPP	U.S. EPA Office of Pesticide Programs
MSDS	material safety data sheet	OSHA	Occupational Safety and Health Administration
MSPA	Migrant and Seasonal Agricultural Worker Protection Act	OSH Act	Occupational Safety and Health Act
NAICS	North American Industry Classification System	OSU	Oregon State University
NAIN	National Antimicrobial Information Network	PA	physician's assistant
NAS	National Academy of Sciences	PANNA	Pesticide Action Network North America
NASS	National Agricultural Statistics Service	PAPR	powered air purifying respirator
NAWS	National Agricultural Worker Survey		
NCEH	National Center for Environmental Health		

PARC	Pesticide Analytical and Response Center	SENSOR	Sentinel Event Notification System for Occupational Risks
PCC	poison control center	SOC	standard occupational classification
PHI	protected health information	SPIDER	SENSOR Pesticide Incident Data Entry and Reporting
PIRT	Pesticide Incident Reporting and Tracking Review Panel	SPPC	SENSOR Pesticide Poisoning California
PISP	Pesticide Illness Surveillance Program	TBTO	Bis(tributyltin)oxide
PPE	personal protective equipment	TESS	Toxic Exposure Surveillance System
PPIS	Pesticide Product Information System	UB	uniform bill
PPSP	Pesticide Poisoning Surveillance Program	UNEP	United Nations Environment Programme
PVC	polyvinyl chloride	USDA	U.S. Department of Agriculture
RCW	Revised Code of Washington	WHO	World Health Organization
REDs	Reregistration Eligibility Decision Documents	WHS	Worker Safety & Health
RN	registered nurse	WSDA	Washington State Department of Agriculture
SAS	statistical analysis software	WSDOH	Washington State Department of Health
SDWA	Safe Drinking Water Act	WPS	Worker Protection Standard

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