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**NIOSH**

## **Guidelines**

# **Minimum and Comprehensive State-Based Activities in Occupational Safety and Health**

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**U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES**  
Public Health Service  
Centers for Disease Control and Prevention  
National Institute for Occupational Safety and Health

**June 1995**

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DHHS (NIOSH) Publication No. 95-107

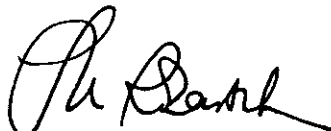
## FOREWORD

The Occupational Safety and Health Act of 1970 established the National Institute for Occupational Safety and Health (NIOSH) and mandated as its goal the assurance that "every working man and woman in the Nation" will have "safe and healthful working conditions."

NIOSH has long recognized that close collaboration with state agencies equally committed to the prevention of work-related disease and injury is key to attaining this goal.

The Council of State and Territorial Epidemiologists (CSTE), composed of representatives from all state and territorial health departments, has a longstanding partnership with the Centers for Disease Control and Prevention (CDC) in disease prevention activities. CSTE has developed these *Guidelines for Minimum and Comprehensive State-Based Activities in Occupational Safety and Health* to foster the development of state and territorial health department efforts to prevent occupational disease and injury.

NIOSH strongly supports this CSTE effort. We look forward to close collaboration with state and territorial health departments and other state agencies as they design, implement, evaluate and augment their programs.



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These guidelines were written by the Occupational and Environmental Health Committee of the Council of State and Territorial Epidemiologists. The purpose of the guidelines is to assist states in implementing activities in occupational safety and health prevention. We are appreciative that the National Institute for Occupational Safety and Health (NIOSH) endorses these guidelines and has agreed to publish and disseminate copies.

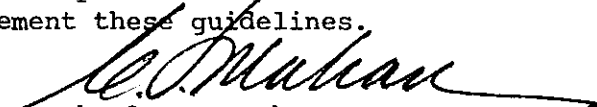
The guidelines were prepared by state health department personnel who were sensitive to the fact that state resources are limited and there are overlapping state and federal jurisdictions in the area of occupational injuries and illnesses. The minimum activity section of the guidelines were written with the intent that they could be performed at a minimal cost using existing staff and databases. Currently, in most states the systematic activity suggested is not being done by any agency.

The more comprehensive guidelines were written to suggest areas for expansion as resources become available. Some of the recommendations in the comprehensive section may overlap with the activity of state agencies other than health departments. In such instances, interagency collaboration should occur. In the opinion of the committee, these were activities that could use more attention and the perspective offered by a public health agency.

Occupational injuries and illnesses are preventable conditions. In some ways they are easier to address than other preventable conditions because often the risk can be controlled through better engineering design and do not require behavior modification. However, like other aspects of public health, there can be complex social interplay that impedes effective prevention.

The first step to prevention is to know the how, why and when of the disease. The minimum aspects of the guidelines place priority on the essential nature of surveillance. State health departments have been doing disease surveillance for the past 75 years. It is something we do well. A National Academy of Science Committee has reported that occupational injury and illness surveillance in this country is woefully inadequate.<sup>1</sup> If we did nothing more than accurately count occupational injuries and illnesses within our states, we would be taking a giant step forward in providing an important public health service.

I wish to personally thank the individual members of the state health departments who took it upon themselves to develop these guidelines. I also wish to thank Dr. Donald Millar who, in his 12 years as the Director of NIOSH, has been very supportive of state public health programs and has been an advocate for increased resources for occupational health at the state level. We will miss him and wish him the best in his retirement years. We hope to work with the next director in identifying the resources to fully implement these guidelines.

  
Charles S. Mahan, M.D.  
President

<sup>1</sup> National Research Council, Counting Injuries and Illnesses in the Workplace. Washington, D.C.: National Academy Press, 1987.

## **I. Introduction**

**In 1990 the Public Health Service released Healthy People 2000: National Health Promotion and Disease Prevention Objectives, which presents the framework of a national strategy to significantly improve the health of the Nation by the turn of the century. Healthy People 2000 addresses major prevention goals for occupational safety and health. The central role for state-based programs to achieve these goals is recognized in objective 10.10: Implement occupational safety and health plans in 50 states for the identification, management and prevention of leading work-related diseases and injuries within the state.**

**This document proposes minimum and comprehensive approaches that can be taken to implement occupational safety and health objectives in Healthy People 2000. These approaches are presented in three functional areas: surveillance, policy development, and intervention. An infrastructure and resources sufficient to meet the needs of the proposal are described.**

## **II. Surveillance**

**The foundation for public health activity in occupational injury and illness prevention rests on a comprehensive and integrated approach to the collection and analysis of occupational injury and illness data. A surveillance program should be able to: identify specific cases of injury, illness or hazardous exposure requiring a targeted public health response; identify disease and injury patterns that suggest problem areas; monitor trends over time; help evaluate effectiveness of interventions.**

**Monitoring of trends over time can be accomplished at a minimum by accessing existing data bases already collected for other reasons. These include death certificates, hospital discharge data, cancer registry data, workers' compensation records and medical examiners reports. These existing data sources can be supplemented by voluntary or mandatory reporting from: clinical laboratories (heavy metals toxicity); poison control centers (work-related toxic exposures); physician reports of occupational injury and diseases; reporting of sick days used; occupational exposure, industrial hygiene and biological monitoring data obtained from employers or insurance companies. Use of these supplemental data sources would allow for recognition of occupational illness and injury earlier on in the disease/injury process. Their use may also provide opportunities for enhanced case identification and followup, and possibly for prospective study.**

**The data can be used to describe the magnitude of occupational injuries and disease in the state. If occupation and industry descriptions are available in existing data sources, those data sources can be used for hypothesis generating analyses that identify associations between injury, diseases and occupations warranting further investigation. Birth defects registries, mortality and cancer registries are useful for this activity. Most existing data sources for disease or injury and all mandated reporting systems include personal**

**identifiers. Case identification allows for follow-back to the reported patient to identify workplaces where causative exposures occurred and other relevant information. Site specific interventions such as industrial hygiene evaluations can take place at worksites identified from case follow-back.**

**Tabulations of data on the magnitude and distribution of hazardous occupational exposures can complement illness and injury surveillance data by identifying targets for intervention before the disease or injury occurs. Existing data sources useful for this include: workplace inspections reports from state programs or the federal Occupational Safety and Health Administration (OSHA) and the Mine Safety and Health Administration (MSHA); data from state environmental agencies and the Environmental Protection Agency on toxic substances inventories collected under the Superfund Amendments and Reauthorization Act - Title III.**

#### **Recommended approaches for state agencies**

##### **Minimum:**

- \* Assure that existing data systems include the core variables recommended by the CDC Surveillance Coordinating Group and establish procedures to share such data with NIOSH and other states while developing the capacity to systematically use the surveillance data to target interventions and public health programs.**
- \* Annually compile and distribute a report on the magnitude of occupational injuries and illnesses identified in existing data sources.**

##### **Comprehensive: In addition to the above:**

- \* Mandate laboratory reporting beginning with heavy metals and implement physician reporting of occupational injury and diseases.**
- \* Collect/code occupation and industry in all data sources, if missing.**
- \* Maintain computerized registries of all individuals with occupational illness or injury identified from existing data bases and/or from case reports.**
- \* Conduct periodic hypothesis generating analyses of relevant data sets.**
- \* Annually compile and publish a report on the magnitude and distribution of occupational injuries, illnesses and hazards based on epidemiologic analyses of all health and hazard data.**

### **III. Policy development**

**Policy development involves planning and priority setting, regulatory and legislative action, and resource mobilization. Public health policies in occupational health are often intertwined with complex legal and regulatory issues. Leadership to ensure that the public interest in occupational health is served requires not only technical knowledge and professional expertise, but also sensitivity to larger political issues. Specific strategies can be developed to promote comprehensive public health policy making in occupational health. Institutionalized communication with constituencies is essential. Advisory boards should include representatives from other public health agencies, other governmental agencies, labor, industry and health professionals. Regular mailings to interested individuals and agencies also assure an informed public. A comprehensive needs assessment document can serve an important role in promoting legislation and identifying necessary resources. Reports published in New York, Connecticut, New Jersey and Pennsylvania can serve as models for such a document.**

#### **Recommended approaches for state agencies**

##### **Minimum:**

- \* Develop and maintain a mailing list of individuals and agencies in the state with an interest in occupational health. This mailing list should be used to target mailings of materials of interest, including the Occupational Health Surveillance Annual Report.**
- \* Develop working relationships with state and federal agencies conducting occupational health activities for the purpose of sharing data and resources.**
- \* Establish an advisory group that includes representatives from employee groups, employers, public health agencies, other governmental agencies (e.g. state department of labor, OSHA), public health and medical professionals. This group should meet at least twice annually with state health department officials.**

##### **Comprehensive: In addition to the above:**

- \* Conduct a statewide needs assessment that includes, in addition to surveillance data, data on occupational health resources, status of relevant legislation, population assessments, and projections of future needs in primary, secondary and tertiary prevention.**
- \* Compile and disseminate a planning document that utilizes needs assessment data in conjunction with state and federal health priorities (e.g. Healthy People 2000 objectives). This document should establish long range goals and**

**objectives in occupational safety and health for the state, set priority areas for surveillance and intervention, and propose resource allocation.**

- \* Disseminate prevention oriented materials as part of an information and education program.**

#### **IV. Intervention**

**Interventions to assure that identified needs and problems in occupational health are addressed can include: professional and worker education; technical consultation on design of health and safety programs, hazard reduction activities such as ventilation design and ergonomics; enforcement of applicable laws and regulations; and delivery of medical services. In some instances it may be appropriate to undertake or contract for research to answer etiologic questions. The state occupational health program should be responsible for assuring that public health agencies in local governments have sufficient expertise and resources to meet at least some of the occupational health needs of their constituencies and be aware of the procedures to access federal consultation assistance such as that available from NIOSH. Evaluations of interventions should be conducted to determine if interventions have achieved the desired impact.**

##### **Recommended approaches for state agencies**

###### **Minimum:**

- \* Distribute the Occupational Health Surveillance Annual Report to concerned individuals and agencies on the mailing list.**
- \* Have sufficient expertise, written materials, and lists of resources so that telephone inquiries from employees, employers, health professional and others about the nature, causes and control of adverse health effects of occupational hazards can be addressed or referred appropriately.**

###### **Comprehensive: In addition to the above:**

- \* Develop and implement necessary regulations and statutes. These may include, for example, establishment of an occupational health program, right-of-entry to workplaces, minimum standards in occupational health for local health departments, extension of federal Occupational Safety and Health regulations to public employees, or provisions for state funded occupational clinic services.**
- \* Compile a comprehensive library of up-to date educational materials and technical resources and publicize its availability to appropriate constituents throughout the State. This library should include access to computerized**



medical and toxicologic data bases.

- \* **Conduct followback to worksites identified from occupational disease and injury surveillance case follow-up as sources of hazardous exposures. This activity includes assessment of exposure and hazardous conditions. If appropriate, screening for occupational disease in co-workers of reported cases should be undertaken. A report should be generated and widely disseminated and include recommendations to prevent additional adverse health effects from developing and effective interventions publicized.**
- \* **Develop educational strategies for high-risk industries identified from data on occupational hazards.**
- \* **Develop programmatic linkages with academic medical centers to promote medical education and research in occupational safety and health and the development of hazard control strategies.**

#### **V. Infrastructure and resources**

**State based occupational health programs should be established. Epidemiologic and statistical expertise are the foundation for the program. As the program expands in scope other disciplines will be needed, including: industrial hygiene; engineering safety; ergonomics; behavioral sciences; health education; occupational health nursing; occupational medicine; and toxicology. While having the expanded disciplines represented within the designated program is most efficient, initially it will be useful to identify staff with the expanded discipline expertise in other agency programs and arrange for them to assist and participate.**

#### **Recommended approaches for state agencies**

##### **Minimum:**

- \* **Assign one epidemiologist with a chronic disease orientation and clerical support to function as the occupational health epidemiologist and designate that person to serve as liaison with NIOSH and the other state occupational epidemiologists.**
- \* **Provide software and hardware for computer analysis of existing data and sufficient statistical consultation support for the epidemiologist to assure efficient, defensible and correct data analysis.**
- \* **Provide sufficient discretionary funds to access existing data bases, to print and mail the Occupational Health Surveillance Annual Report, and to attend an annual meeting with other state occupational epidemiologists.**

**Comprehensive: In addition to the above:**

- \* **Assign one or more professionals in the disciplines of industrial hygiene, health education, engineering safety, occupational medicine, occupational health nursing, and toxicology.**
- \* **Provide sufficient data entry and data management support to process data from existing sources and disease and injury data generated by reporting regulations.**
- \* **Provide necessary support staff and discretionary funds for staff to conduct field investigations, attend professional training courses and participate in professional organizations.**