

Committee: Environmental/Occupational/Injury

Title State-level Occupational Illness and Injury Epidemiology Capacity

Statement of the Problem:

CSTE has long recognized that occupational illnesses and injuries are important causes of morbidity and mortality in the US. Approximately 6500 job-related deaths from injury, 13.2 million nonfatal injuries, 60,300 deaths from disease, and 862,200 illnesses are estimated to occur annually in the civilian workforce. The total direct (\$65 billion) plus indirect (\$106 billion) costs have been estimated to be \$171 billion.¹

Epidemiology, as the core science of public health, is the basis for public health surveillance and, as such, is essential for the detection, control and prevention of occupational illnesses and injuries. In spite of the magnitude of occupational illness and injury, relatively few states employ occupational epidemiologists in part because of the perception that public health surveillance for occupational diseases and injuries is being addressed adequately by the annual occupational injury and illness survey conducted by the Bureau of Labor Statistics (BLS). Recently published studies have continued to document the inadequacy of the BLS survey for surveillance of occupational injuries and illnesses.^{2,3,4} These studies demonstrate the importance of alternate and complementary occupational disease and injury surveillance systems that are integrated into traditional public health systems. It is also noteworthy that occupational epidemiology has a place in a variety of public health surveillance programs, including infectious disease (e.g., blood borne pathogens, needlestick injuries), chronic disease (e.g., work-related asthma), injury control, cancer, and others.

The CSTE 2006 National Assessment of Epidemiologic Capacity found that 42% of state health departments had no epidemiologic capacity at all in occupational health and only 13% had substantial or almost full capacity. By contrast, 33% reported substantial or almost full capacity in environmental health epidemiology, and all states reported partial to full capacity in infectious disease.⁵ CSTE concluded that there was a 192% gap between current and needed capacity for occupational epidemiologists.⁸

In 1995, the National Institute for Occupational Safety and Health (NIOSH), an agency in the Centers for Disease Control and Prevention (CDC), recommended that, at a minimum, every state should have one epidemiologist assigned to occupational health to carry out public health surveillance functions.⁶ A CSTE Workgroup then developed a strategic plan for state-based public health surveillance of occupational illnesses and injuries. One outcome of that planning process was a document entitled *The Role of the States in a Nationwide, Comprehensive Surveillance system for Work-Related Diseases, Injuries, and Hazards*.⁷ This document reinforced the fundamental importance of public health surveillance, based on principles of epidemiology, to the practice of occupational disease and injury prevention.

Statement of the desired action(s) to be taken:

CSTE will work with CDC/NIOSH, the Association of State and Territorial Health Officials (ASTHO) and other partner organizations to advocate on behalf of states in their efforts to recruit and retain adequate numbers of trained and experienced occupational epidemiologists to carry out the functions described by NIOSH⁶ and CSTE.⁷

States should identify state resources to support occupational epidemiology capacity. They should deploy occupational epidemiologists in an organizational structure that maximizes their ability to coordinate occupational health activities throughout their agency and among other agencies.

Specific steps to achieve these outcomes should include the following:

- CDC/NIOSH should encourage all states to achieve the recommended minimum occupational epidemiology workforce through establishment and expansion of cooperative agreements to fund state occupational health surveillance programs.
- CDC should include language in other/related cooperative agreements that explicitly encourages support for occupational epidemiologists and provides mechanisms and opportunities to give states greater flexibility in using categorical funding, including resources from multiple grants, to support these positions. In particular, CDC should encourage collaboration between state occupational health surveillance, Environmental Public Health Tracking, and Public Health Preparedness programs.
- CDC/NIOSH should establish performance measures such that, by 2012, 20 state programs will meet the minimum workforce requirement of one occupational epidemiologist for state based activities in occupational public health⁶ and by 2020 all states will meet this minimum workforce requirement.
- ASTHO and its affiliates (e.g., CSTE) should work for and with states to ensure hiring of needed occupational epidemiologists by promoting and maximizing use of funding flexibility and other resources.
- CDC/NIOSH should continue to support CSTE to continue the work of the CSTE Occupational Health Surveillance Workgroup so that states can advance the programmatic goals set by CDC/NIOSH for state-based occupational health surveillance.
- CDC/NIOSH should continue to support surveillance research efforts to generate information for state-based occupational epidemiologists to apply to public health practice.
- CSTE should disseminate standards for and strongly encourage the development of competency-based Epidemiology Job series in state personnel systems.
- Mechanisms for capacity development such as the CDC/CSTE Applied Epidemiology Fellowship Program, Epidemic Intelligence Service, Public Health Prevention Service, and state-based epidemiology training programs should be supported as part of grant programs using both direct assistance and financial assistance to accomplish the objective of minimum epidemiology workforce in each state within five years.
- The voluntary national accreditation program for state and local health departments under development by the Public Health Accreditation Board (www.exploringaccreditation.org/index.html) should address occupational epidemiology capacity.

Public Health Impact:

Support of occupational epidemiology functions will enhance the ability of states to prioritize, plan, promote, implement and evaluate evidence-based interventions. This will prevent development of and reduce disability from work-related conditions.

References

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