

OCCUPATIONAL HEALTH

General description

The CSTE fellow will be assigned to the Occupational Health Branch (OHB) within the Division of Occupational and Environmental Disease Control (DEODC) of the California Department of Public Health. The DEODC is one of the oldest and largest programs for the prevention of occupational and environmental diseases in the country, and is comprised of the OHB, Environmental Health Investigations Branch, Child Lead Poisoning Prevention Program and Environmental Health Laboratory. While the Fellow will be primarily engaged in occupational epidemiology and workplace hazard assessment within the OHB, there is also an opportunity to work collaboratively within DEODC on many related public health issues including biomonitoring, chemical and radiological preparedness, climate change, and chronic disease prevention and the work environment. The fellow may also choose to participate in ongoing studies and investigations with other CDPH programs (Infectious Disease Branch), California Occupational Safety and Health Administration (CalOSHA), California Environmental Protection Agency, University of California, San Francisco, and the UC Berkeley School of Public Health.

The OHB is comprised of three sections that are mandated to prevent work-related injury and disease in California. The **Occupational Health Surveillance and Evaluation Program (OHSEP)** is responsible for the epidemiologic surveillance and investigation of work-related injuries and diseases. Under a longstanding cooperative agreement with NIOSH, ongoing data collection and analysis is conducted of work-related asthma, pesticide poisoning, and workplace fatalities. Multiple data sources including comprehensive electronic workers' compensation records, hospital discharge, emergency room and physician reports enable tracking of other selected occupational injuries and illnesses. Case-based and targeted investigations are conducted under statutory authority for workplace access under the California Health and Safety Code.

The Hazard Evaluation System and Information Services (HESIS) is responsible for the evaluation of chemical hazards in California, makes health-based recommendations for control of exposures, and identifies less toxic alternatives to protect workers against risk of acute and chronic disease. The HESIS program works closely with CalOSHA to provide medical and toxicological expertise on workplace investigations and standards setting.

The **Occupational Lead Poisoning Prevention Program (OLLPP)** is responsible for the surveillance, investigation and prevention of occupational lead poisoning. Utilizing electronic laboratory reporting of all blood levels in California, case management and investigations are routinely conducted for all cases greater than 25 ug/dl. Health-based recommendations for the prevention of both acute and chronic health effects are disseminated via a wide variety of mechanisms to employers, employees and health care providers.

Proposed activities

The primary assignment of the CSTE Fellow will be to participate, depending on interest, in several of the broad range of projects within the three sections of the OHB. The CSTE Fellow will gain epidemiological expertise within the OHB by participating in regular project staff meetings, Division-wide seminars and conferences, case-based and outbreak investigations, CalOSHA consultations, and toxicology risk assessments.

Epidemiological surveillance and data analysis. The CSTE Fellow will identify, in consultation with the Primary Mentor, a high-risk occupation, industry, or vulnerable population that can benefit from detailed analysis of risk factors for work-related injury or disease. Using our available data sources, a multisource analysis will be undertaken that describes the nature and extent of the problem in this population, and makes recommendations for prevention. Hispanic, immigrant and low wage populations are of particular interest. The results of this analysis will be presented at the annual CSTE meeting, and summarized in a written report for CDPH publication. Depending on interest, the CSTE Fellow may also learn GIS techniques and explore mapping as avenues for data display and dissemination. The CSTE Fellow will gain experience in Microsoft Access, Excel, and SAS.

Hazard assessment and toxicology. Under the supervision of the HESIS Chief, the CSTE fellow will be assigned rotating responsibility for routine response to hazard and health inquiries from workers and health care providers. For these cases, the CSTE Fellow will review the relevant toxicology literature and make recommendations for hazard control and medical follow-up, as appropriate. In addition, the CSTE Fellow will participate in assessment of one or more chemicals that have been selected for toxicology review (such as chemicals that cause asthma, cancer or reproductive damage), and help develop scientific and educational materials for publication. The CSTE Fellow will attend meetings of the CalOSHA Health Effects Advisory Committee and, where appropriate, assist HESIS staff in preparation of recommendations for workplace standards. The CSTE Fellow can have the opportunity to engage in recent developments in biomonitoring, workplace pollution prevention, and nanotechnology.

Outbreak investigations. The CSTE Fellow will participate in one or more case-based and/or outbreak investigations of workplace injuries and diseases. Examples of recent in-depth investigations include coccidioidomycosis in construction workers, bronchiolitis obliterans in flavorings workers, and asthma in heart valve manufacturing workers. Recent case-based workplace fatality investigations have included solar roofing installation, pyrophoric laboratory chemicals, and home fumigation. In conjunction with the OHSEP and/or OLPPP physicians, industrial hygienists and health educators, the CSTE Fellow will prepare a data analysis plan, develop questionnaires and surveys for assessment of health effects and risk factors, conduct analysis and prepare results for presentation. Depending on the complexity of the investigation, the CSTE Fellow will be the “lead” epidemiologist responsible for design and implementation of data collection activities. In conjunction with the HESIS physician, the CSTE Fellow will also assist with surveys and data analysis as needed for CalOSHA medical investigations.

Program/surveillance system evaluation. The OHB has multiple options for surveillance system evaluation, including pesticide illness, asthma, workplace fatalities, lead poisoning, and heat-related illness. In addition, relatively new DEODC programs such as biomonitoring, green chemistry initiatives, and worksite chronic disease prevention are opportunities to evaluate the complex programmatic elements related to worker health and safety.

Assignment Location: Richmond, CA

Primary Mentor: Robert Harrison, MD, MPH, Chief
Occupational Health Surveillance and Evaluation Program
Occupational Health Branch
Division of Occupational and Environmental Disease Control
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Advanced Degrees: MPH, University of California, Berkeley (1983)
MD, Albert Einstein College of Medicine (1979)

Secondary Mentor: Dennis Shusterman, MD, MPH